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Witness: Jenkins

REPORT ON  
OPERATIONS, FACILITIES, ORGANIZATION, FINANCIAL STATUS  
 AND  
MODERNIZATION PROGRAM  
 OF  
PACIFIC ELECTRIC RAILWAY COMPANY  
LOS ANGELES, CALIFORNIA

TO  
 MR. O. A. SMITH, PRESIDENT

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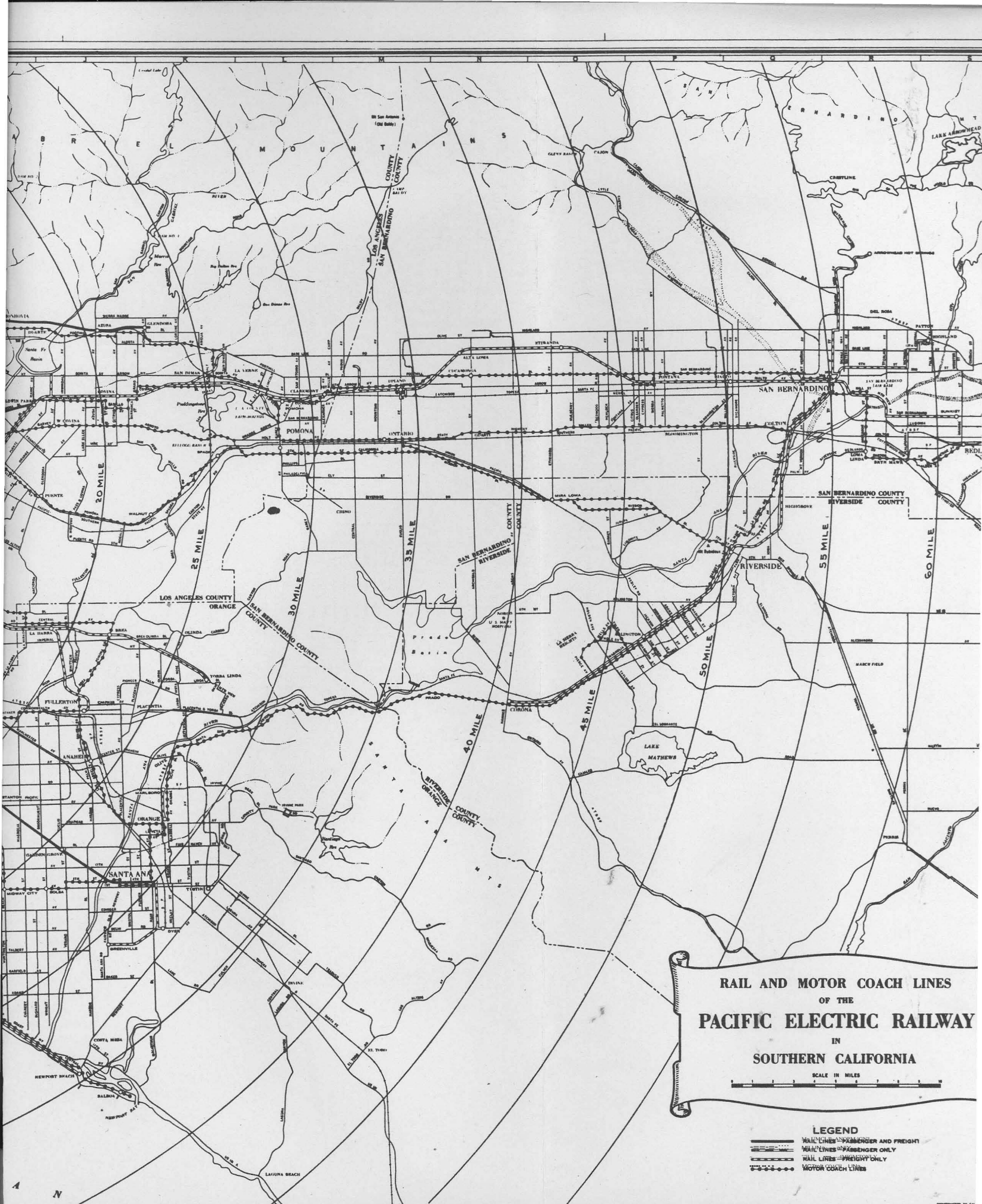
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UNIVERSITY OF CALIFORNIA  
INSTITUTE OF  
TRANSPORTATION STUDIES

February 28, 1949

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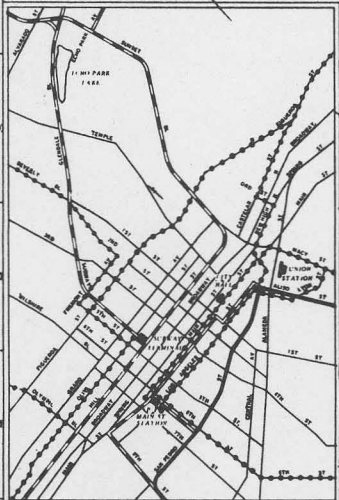
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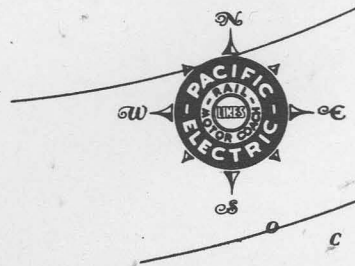
**RAIL AND MOTOR COACH LINES**  
 OF THE  
**PACIFIC ELECTRIC RAILWAY**  
 IN  
**SOUTHERN CALIFORNIA**

SCALE IN MILES

- LEGEND**
- MAIN LINES - PASSENGER AND FREIGHT
  - MAIN LINES - PASSENGER ONLY
  - MAIN LINES - FREIGHT ONLY
  - MOTOR COACH LINES



August 1927



REPORT ON  
OPERATIONS, FACILITIES, ORGANIZATION, FINANCIAL STATUS  
AND  
MODERNIZATION PROGRAM

I - PRELIMINARY CONSIDERATIONS

NATURE OF THE PROBLEM

One feature of this thesis with which no exception will probably be taken, regardless of the divergence of thought and extent of controversy relative to others, is the contention that a real transportation problem of extensive proportions and serious portent confronts not only Pacific Electric Railway Company, but also the general public of the many cities and communities served by the widespread rail and motor coach lines of the system. It is a mistake in evaluating the seriousness of the issue to confine its scope exclusively to passenger transportation or to propound the theory that financial losses on passenger service should be borne by freight operations.

This operator is a common carrier dependent for its existence upon the revenues it derives from services rendered to the public. That portion of the public making use of freight services is equally entitled to just and non-discriminatory rates as that portion using passenger service and it is no more reasonable to expect freight operations to support losing passenger lines than it is to contend that if conditions were reversed passenger fares should be established at a sufficiently high level to offset losses from freight operation. It must be kept in mind that the problem extends to the whole public served, to all communities whether large cities or small hamlets, and that the principle of just, reasonable and non-discriminatory rates, rules, practices and procedures must be extended with equal consideration to all.

Basically there is only one fundamental issue involved and that is the question as to whether or not Pacific Electric Railway Company should be permitted to follow the course already established throughout the Country, of modernizing its system by replacing obsolete rail passenger service that incurs heavy financial losses, with commonly accepted motor coaches that have good prospects of profitable operation. There is no other major issue.

If the conversion program is not permitted and continued rail service is directed, even with continued use of present facilities, it would be mandatory that drastic curtailment in service be exercised which would probably leave many of the smaller communities at remote locations without service, in order that the more populous areas might enjoy the plushness of unjustified rail service.

There is no logical argument against the contention that rail service has certain advantages over motor coaches--that may be taken for granted. On the other hand, there is real basis for vigorous argument as to the weight that should be accorded them. Similarly, there are certain unquestionable advantages possessed by the motor coach when compared with rail cars and these too

must be weighed without bias or prejudice in seeking the course of action that will preserve a reasonable service to all, at rates that are not prohibitive.

To dwell a little further upon the shortsighted and discriminatory theory propounded by some quarters, that freight service should bear the burden of passenger losses, it is of interest to note that for the year of 1947 it would have been necessary to increase freight rates by 32 per cent to produce enough additional revenue to offset the loss on passenger rail operations with no net profit, and assuming no freight traffic loss. To produce a reasonable net income would have required an increase in freight rates of 49.5 per cent. In view of the competition of other major railroads in the area served by Pacific Electric freight operations, it is obvious that no such increases could be enforced even if the theory should be accepted.

To assist in demonstrating the magnitude of the problem and its implications, reference should be made to the system map included herein as a frontispiece, the statistical data contained in the appendix and the brief description that follows.

The Company conducts joint freight and passenger operations over a widespread network of electrified rail lines supplemented by an extensive grid of passenger motor coach service, all of which radiates from the City of Los Angeles as a center and extends from Santa Monica on the ocean front, easterly to San Bernardino, a distance of 75 miles; and from San Fernando a distance of 20 miles to the north of Los Angeles, to Santa Ana and Balboa, 35 miles to the south.

Gross annual combined revenue for the year of 1948 was \$34,300,000 and total annual operating expenses were approximately \$31,000,000, exclusive of taxes which amounted to \$2,400,000. Approximately 124,000,000 passengers are carried annually over 433 miles of railway and 853 miles of motor coach routes. About 8,800,000 car miles are operated annually in freight service; 20,900,000 vehicle miles in passenger motor coach service; and 14,500,000 miles in electric passenger car service. The Company operates 412 motor coaches and 445 passenger rail cars, 1,384 freight cars, 51 freight locomotives, and employs approximately 5,460 persons.

Over a period of many years extending beyond 1916, the combined operations of the Company have been conducted at a net loss with exception of the year 1923, and four years during World War II from 1942 to 1945, inclusive. The trend of income is shown by Table 4 of the Appendix. Due to the continuously poor earning status of the Company, which has been attributable to passenger operations, there has been a gradual replacement of electrified passenger rail lines, by motor coaches operating over the highways throughout Southern California.

Prior to World War II, the Company's financial status was becoming increasingly serious and in an effort to stem the tide of losses, a major rehabilitation program was embarked upon. That program contemplated a wide-scale replacement of losing passenger rail lines with highway motor coach service, but was interrupted by commencement of the war.

Wartime prosperity declined abruptly in 1944 and 1945, and a net loss of \$218,879 was experienced for the year of 1946. To compensate for the losses, application for increased fares in passenger service was filed with the Public Utilities Commission during the first half of 1946 and by its order of July 31, 1946, increases were granted. As of that same date the Commission instituted an investigation of the Company's operations. With the continued downward

trend of net earnings, another application was filed with the Commission on June 23, 1947, seeking further increase in fares to cover increased costs of labor, material, and other essential items. During the year of 1947, the Company experienced a loss to net income in amount of \$1,760,073. Hearings were held jointly on the fare application and the Commission's investigation during October and November of 1947 and a decision was issued on January 19, 1948, permitting increased fares to become effective February 1, 1948.

In the same decision that granted increased fares, the Commission prescribed a program of property rehabilitation which the Company was ordered to carry out within specified time limits. The program was based upon a series of 43 recommendations made by the Commission's engineering staff, and in anticipation of continued rail passenger operation, were directed primarily toward rehabilitation of rail facilities.

The Company, in reviewing the large scale expenditures entailed by the Commission's order and weighing the program against the continuing adverse financial trend which persisted despite the increases in passenger fares, concluded that steps should be taken to conduct a comprehensive study of its entire system to determine the prospects of profitable operation and to test the wisdom of attempting to remain in the passenger transportation business. To provide the necessary time to conduct the studies, the Commission was petitioned to postpone the effective dates of compliance with the various provisions of its order. The request was granted in part and the Company was ordered to submit its program on or before March 1, 1949.

Modernization studies have now been completed and Application No. 30095 was filed with the Commission on February 25, 1949, requesting authority to proceed with the first major phase of the long range plan.

#### PURPOSE AND SCOPE OF REPORT

A report preliminary to this report was submitted to the Company on July 15, 1948, setting forth the results of an initial analysis of the economic, operational and organization phases of the business and laying out a recommended program for conducting special studies related to the systemwide modernization plan and the financial deficit.

The purpose of this report is to present the final results obtained from a continuation of the preliminary studies and to set forth the findings, in summarized form, derived from the several individual reports covering the economic status and operational characteristics of the several highly non-profitable passenger rail lines of the system. The scope of those reports will be briefly described in subsequent sections.

In addition to summarizing the results of the several separate reports, this report also covers accomplishments in other phases of the Company's operations and discusses the several controlling fundamental issues.

It is not intended that this report will provide a detailed outline of procedure to cover all phases of the Company's activities during the future, but only to serve as a guide in following a comprehensive modernization and financial rehabilitation program that will ultimately result in the proper balance between net profit to the Company and the maximum standard of service to the public, all within the limitations imposed upon the transit industry

under present-day conditions of automobile competition, high labor and material costs, and general economic trends.

#### FUNDAMENTAL PREMISE

In view of the manner in which the several phases of the modernization program have been developed and the necessity for submitting a number of independent exhibits and reports, repetition of basic theories and principles, to some extent, is unavoidable. To make each document self-sufficient, certain basic theories have been incorporated in all of them. To round out this report, which summarizes and brings together the salient features of the various other studies, reference must also be made to such theories. Much data pertinent to the issues involved and of vital importance in giving due weight to the equities concerned, is contained in testimony and exhibits submitted by Company witnesses at the preliminary hearings before the Commission in this matter on October 13 and 21, 1948. Specific reference is made to that data in a later portion of this report under Section II.

The primary motivating factors behind the entire modernization program are the financial deficiencies experienced by the Company in passenger transportation, the extremely large reconstruction expenditures that would be required for continued rail operation, and the absence of any hope that rail passenger service can ever be made profitable in the future.

There are a variety of causes for the unfavorable condition confronting the Company and the effects are exemplified by numerous manifestations. Unfortunately, due to the cumulative effect of the many facets of the problem upon service and facilities, the Company is subjected to criticism from numerous sources and, to some extent, the general public attributes the shortcomings to the failure of management to take proper cognizance of public requirements and past experiences. Hindsight is, of course, always a better guide than foresight and looking back over the Company's history there is no question but what different action on the part of management with respect to numerous isolated incidents would have brought about more favorable results. It is obvious that if losing rail lines had been converted to motor coach service earlier, the present magnitude of deficit would have been avoided. On the other hand, a fair and unbiased appraisal cannot fail to give due recognition to the natural trend of economic and scientific developments that have been largely responsible for the present condition and over which management has had no control.

Various phases of the studies that are the foundation of this report, have been based upon the theory of dual obligation and premised upon the assumption that the two cannot be separated. One of these obligations is that of the Company to recognize the convenience and necessity of the traveling public and to utilize the most modern developments available and maintain the highest standard of service commensurate with its earning ability and the restrictions imposed upon it as a private industry. The other is the obligation of the public to pay in return for the service received, an amount sufficient to cover the costs of production and a reasonable margin of profit.

In analyzing the problem it would be highly unfair to the carrier to completely disregard its underlying rights and to attempt to direct its activities at present and for the future, solely upon the basis of what may appear to be the maximum desired comfort and convenience of passengers, without giving

appropriate consideration to earnings. Although judicious management is a highly important ingredient in the discharge of any business enterprise, it is not a panacea that can forestall the inevitable forces of nature. In coping with a problem of the magnitude confronting Pacific Electric and the public it serves, the scope of vision must be sufficiently divergent to encompass the greater and more basic segments without undue concentration upon the minutia of personalities and minor incidents. True, there are no doubt certain economies that can yet be effected by the Company in its operations, but they are of very small magnitude when compared with the magnitude of financial improvement required.

Based upon evidence submitted in the formal proceedings relating to this program, and upon experiences of the industry within California itself, as well as all other large population centers of the Country, there is only one obvious conclusion as to the underlying causes of the predicament. The public has been supplied with another means of transportation which it prefers over mass transit vehicles. This has been a natural trend of events in the transportation field that has brought about the necessity for transit operators to eliminate the more costly modes of rail mass transportation and adopt a more economic conveyance that can be supported by the depleted earnings. This has not been by choice, but inevitable in the wake of the inroads of private automobiles upon traffic, and ever ascending costs upon economic balance.

The condition of financial distress with which Pacific Electric finds itself confronted is not new and is not unique to this Company. Neither is it due to the effects of mismanagement, nor can it be corrected by good management without a radical departure from the means that are primarily contributory. The mere expression of a desire on behalf of the public for transportation by rail does not mean that the operating Company must be obligated to continue to perform such service. Actually it should not be at liberty to do so if it should so choose, when the results would obviously mean financial losses that would require a calculated program of deferred maintenance and liquidation of capital that ultimately could react in no other way than as a burden upon the public.

#### PRELIMINARY ANALYSIS AND REPORT

On July 15, 1948 there was submitted to the Company a Preliminary Report on engineering and economic analysis of operations, facilities, organization, and financial status of Pacific Electric Railway Company. That report was prepared as the first project under the systemwide rehabilitation program and set forth the results of preliminary analyses and observations conducted over a period from March of 1948.

It was the purpose of the Preliminary Report to bring to the attention of the Company certain conclusions and recommendations as of that date, relative to the nature of the detailed studies considered desirable and certain changes that appeared to be immediately advisable in connection with various phases of operations, service, and organization. It was contemplated upon submission of the Preliminary Report that several individual studies would be immediately gotten under way and their results submitted at the earliest possible date. In another section of this report the various elements of recommended procedure set forth in the Preliminary Report are commented upon as to their stage of completion.

As indicated above, one of the impelling factors in launching the com-



prehensive modernization studies was the order in Applications Nos. 23053 and 27466, and Case 4843, wherein the Commission ordered Pacific Electric to carry out the provisions of a number of recommendations made by its engineering staff, most of which were directed toward the expenditure of large sums in rehabilitation, reconstruction, and expansion of passenger rail facilities. As one of the first phases of the project herein, an analysis was made of the requirements of the Commission's order, the financial status and ability of the Company, the prospects of the future, and the wisdom of carrying out any further passenger rail preservation projects involving heavy capital expenditures and reconstruction expense. It became apparent after initial analysis of those elements that in view of present conditions the earning prospects of rail passenger operations held no support for a profitable future and that instead of proceeding with improvements in rail facilities, there should be immediately launched a program looking toward elimination of unjustified rail lines.

#### SUMMARIZED RESULTS OF STUDIES

Summarizing the results of the various studies that have been completed relating to the major rehabilitation program, it is estimated that on a systemwide basis, losses presently incurred on passenger rail lines and certain of the Western District motor coach lines amounting to \$2,017,500 annually, can be converted into a profit of \$750,000, or a net improvement of \$2,767,500 annually. Along with this improvement in earnings there would be required an investment in facilities of about \$4,500,000. Whereas continued rail operations would incur an annual loss of more than \$2,000,000 and would require, in accordance with the order of the Public Utilities Commission, an expenditure for reconstruction and expansion in amount of approximately \$11,000,000 with no improvement in earnings, the nominal investment of \$4,500,000 in motor coach operations will result in a net improvement of more than \$2,700,000 and an annual net operating income of \$750,000, on the lines involved.

It is estimated that some further financial improvement can be realized as a result of carefully conducted studies of the existing motor coach operations, which for the year of 1948 resulted in a net operating profit of only \$51,006 from a gross revenue of approximately \$8,200,000. Table No. I of the Appendix shows the results of the modernization plan in summary form. Other tables therein show various other features of the plan.

#### PROSPECTS FOR THE FUTURE

Careful analysis of present motor coach operations combined with the results obtained from the studies of rail line conversion, indicates that the carrying out of this proposed modernization program will place the passenger operations of Pacific Electric upon a profitable basis and will justify the expenditure of the necessary capital funds to provide a modern plant utilizing the latest developments in efficiency and procedure.

Consummation of the program provides a means of revitalization to this Company financially, physically, and personally. It will afford the Company an opportunity to keep pace with the future development of the Los Angeles Metropolitan Area and Southern California generally, which appears to be destined as one of the greatest population centers of the Country.

It is highly important that this entire program be recognized as a co-

herent package that must be put into effect in all of its phases, if the full measure of benefit to which the Company and the public are entitled is to materialize. To do anything other than carry out the complete program will unquestionably result in only a prolongation of the ultimate elimination of all passenger rail operations and possibly elimination of other essential motor coach services, that might otherwise be preserved if attached to a main supporting body of profitable lines.

In considering the ultimate disposition of this problem we must recognize without question the trend in passenger mass transportation throughout the country as has been fully demonstrated in exhibits and testimony submitted in this proceeding. Individual preferences or personalities should not be permitted to becloud the real issue, which is that of public interest. The theory so often propounded that retention of rail lines enhances public values and adds intrinsic importance to the community served is as obsolete as the rail equipment itself. We are confronted with a normal and natural transformation in the course of events in the field of transportation that is parallel directly with the changes that have automatically taken place as a result of rapid strides forward in other fields of scientific development, all of which have been for the over-all good of the people as a whole.

In any stage of progress which brings into being a new medium of meeting public requirements, there are always some persons who are harmed because the product they have previously been dealing in may be rendered obsolete and undesirable when something more useful to the public is made available to it. This is accepted universally as a natural course of events.

There is no other industry to my knowledge, which is and has been so consistently and so persistently beset with militant opposition in its efforts to follow the natural course that good business judgment dictates, in attempting to maintain a reasonable margin between revenue and cost of providing service. It is inconceivable that anyone could advocate the preservation of outmoded facilities whose cost of operation far exceeds the revenues earned and insist upon further heavy capital investment to insure the preservation of such a losing project. The true economic picture is not cloaked in mystery. It evolves from a simple and fundamental economic formula which demands that costs of production must be less than revenue from sales and if the means are not available whereby such can be accomplished, the industry dies.

If any semblance of reliable public transportation is to be preserved, there must be developed a new approach to the problem and a more complete understanding of the difficulties confronting the industry. Under present conditions, and in the past, the public has considered mass transportation as one problem and private transportation as another, entirely unrelated. As mass transportation has been forced into the discard by the acute competitive effect of private automobiles, its costs have increased, and its profits have disappeared. The automobile, to the contrary, has forged ahead taking away the erstwhile profitable traffic and leaving mass transportation to cope with the costly peak hour travel which becomes progressively more serious.

Whereas, due to reduced net earnings, it was impossible for transportation operations, in many instances, to obtain the necessary capital for expansion and preservation of their facilities, by joint effort, automobile users pooled their resources at high individual cost through state or other tax collecting agencies, and financed the construction of magnificent paved highways and

elevated freeways in a network of traffic arteries of a magnitude and cost never dreamed of before the automobile. Any expenditure for improvement of facilities for mass transportation of passengers must come from the companies themselves and every dollar invested is an obligation that must be repaid, not out of public funds, but out of earnings.

During the past few decades, along with human progress has come a definite trend toward shorter working hours and the desire on behalf of a majority of the people to commence their working day at virtually the same time, and to conclude it within a very narrow time band. This has thrown upon the transit operators one of the burdens that has been responsible for forcing the industry to its financial knees. This condition is one that brings about much misunderstanding on behalf of the public generally as to the problems of the transportation companies. The large masses of people riding during the peak hours in the morning and in the evening observe cars and coaches that are filled with passengers. The individual passenger cannot understand how it could be possible with such loads for a company to be losing money. They fail to realize, however, that the vehicle on which they are riding may very likely, upon finishing that trip, be returned to the garage or carhouse to set there for the remainder of the day until that passenger is ready to go home at night. A large percentage of passenger-carrying equipment makes only one round trip per day in productive service, but the man who operates that vehicle must be paid for a full day's work. The investment in the equipment stands idle and non-productive during a large part of each day, when it could be in productive use if traffic were available.

Contrary to this situation, the individual who uses his private automobile looks out for his own convenience. If he finds that by leaving his home at a certain time in the morning he is confronted with intolerable traffic congestion, he shifts his time to an earlier start or a later one, thereby automatically spreading out the peak. He will do that when it is the result of his own will. However, the same person, if when using mass transportation, finds it difficult to board a vehicle at the time he wishes to travel, he condemns the company, but will not submit willingly to a change in his hour of departure. Mass transportation naturally does not possess the advantages of speed that are available by use of private transportation. It is an inherent part of the industry that stops must be made to pick up and discharge passengers. Taxicab service cannot be performed.

Upon the basis of the average occupancy of automobiles using the streets and highways of California, which is the surprisingly low figure of about  $1\frac{1}{2}$  passengers, one motor coach will carry the same number of persons seated that 30 automobiles will carry, and with a reasonable standing load, will equal 40 automobiles. This is an important consideration when weighing the merits of objection to use of the highways and streets by motor coaches. No objection is ever raised to the increased number of automobiles and trucks on the street. As they increase in volume more roadways are constructed to accommodate them, apparently without any upper limit. Weighed upon their relative merits, persons using mass transit vehicles should be accorded greater consideration than those traveling in private automobiles, as the former makes by far the greater and more effective use of public streets.

Mr. G. F. Squires, Assistant to President

Status of PUC Recommendations

Exhibit 44 - Status of Compliance with Recommendations.

Mr. Jno. J. Suman, Auditor

Financial Statements

Exhibit 45 - Balance Sheet, Income Account, Profit and Loss Account, Net Results of Operations, Gross Charges to Investment.

Mr. Arthur C. Jenkins, Consulting Engineer

General Status of Industry and Rehabilitation Program

Exhibit 46 - Summary of Recommended Procedure from Preliminary Report.

Exhibit 47 - Condensed Excerpts from Preliminary Report.

Exhibit 48 - Report on Statistical Data and Trends of Transportation Industry.

Exhibit 49 - Passenger Loading Standards, General Analysis and Specific Application.

#### (B) OPERATIONS AND SERVICE

##### Service Standards and Load Factor-(PR3-B1)

1. Proper standing distance in time and miles - Extensive analysis was made in an effort to determine the proper standing distance in time and miles as it relates to establishment of proper loading standards. In the absence of specific and concrete data on the subject much effort was devoted to this analysis. Detailed traffic checks were made on a considerable number of representative rail and motor coach lines and the results were set up in tabulated form and plotted in the form of graphic charts to indicate the relationship between passengers, seats, time, and mileage. The results of these studies were set forth in considerable detail in Exhibit No. 49 and also are included in certain of the individual passenger rail line rehabilitation reports that will be described later.

2. Load factor as it effects schedule speed, earnings, equipment requirements and cost of operations - These elements have been carefully analyzed in connection with the loading standard survey referred to above and the results are set forth in Exhibit No. 49. Briefly summarizing the end results of that exhibit, the figures are as follows:

##### Application of More Lenient Load Factors Would:

- (a) Reduce annual operating expense by \$597,000
- (b) Reduce rail equipment requirements by thirty-three cars
- (c) Reduce motor coach equipment requirements by 21 per cent
- (d) Eliminate a corresponding amount of peak hour equipment and man power which represents the most costly period of operation during the day due to many single round trips at full guaranteed pay.
- (e) On basis of detailed analysis rather than general observation, more lenient load standards would not inconvenience passengers to any greater extent, if as much, as presently is experienced on many of the lines of like character in the area.

3. Relationship between load factor and profit - There is, of course, a definite relationship between load factor and profit. As indicated above, Exhibit No. 46 shows a possible reduction in cost of \$597,000 per year which would reduce the passenger transportation deficits by a corresponding amount. As indicated in that exhibit, determination of proper load factors for application to any system should take into consideration not only what appears to be a reasonably convenient service but also the financial ability of the carrier to perform the service. It should be the fundamental assumption that the carrier is entitled to a reasonable profit.

The elements entering into profit or loss are revenues earned and cost of operation. Revenue is controlled by rates of fare and volume of traffic; costs are controlled by prevailing rates of labor, material, and services; over traffic volume the Company has no control; the level of fares is largely determined by the point of diminishing returns; cost of material is beyond control of Company; and labor rates are no longer under the Company's control. By process of elimination this leaves only the element of service to which the Company can look for financial relief.

In the transit industry, more so than any other enterprise, there is a tendency to tenaciously adhere to traditional practices, procedures, and line of thought. This probably is to a large extent responsible for the failure to establish loading standards as a vitally important element in the formula of net return.

4. Reaction of passengers to restrictive load factor - There is much more emphasis placed upon the assumed reaction of passengers to loading standards than actual conditions justify. The public reaction in this regard is of course, to a large extent, controlled by dissemination of opinions to the public through the press and by other means.

In many instances high loading standards are recognized as basically an inherent part of a transportation operation. High standing volume of the subways in the large cities of the East is common knowledge to all and it is further common knowledge that the subway cars themselves are designed to contain a minimum of seats and a maximum of floor area for standing passengers. This same theory applies to design of local transit cars where every effort is exerted to attain the highest possible width of aisle to permit larger standing loads. This is evident in every city of any size throughout the country and particularly so in Los Angeles itself.

The public when properly informed of the true state of affairs is inclined to be sympathetic to the problems of the transit industry. On the other hand, continual agitation and belittling by persons who represent an extreme minority of riders and in many instances persons who never ride regularly, tends to break down the morale of the organization attempting to perform the service, and hinders rather than helps the Company to overcome the effects of financial adversity.

The matter of load factor resolves itself to the question of how many passengers should be permitted to stand in a transportation vehicle and for how long a period of time. Public reaction to convenience and comfort can be no greater than the reaction of a single individual. Increasing the number of persons only increases the number of individual personal reactions.

5. Other considerations of load factor - Exhibit No. 49 goes into considerable detail as to other considerations involving the establishment of loading standards, particularly as they effect the non-profitable operations of Pacific Electric as compared with the operations of a profitable service.

Service Standards and Traffic Volume-(PR3-B2)

1. Maximum load points and traffic volume - Field traffic checks have been made on all passenger lines that have been under survey in connection with this modernization program. The relationship between passengers and seats at maximum load points have been established on all major lines. Rearrangement of the Schedule Bureau will permit continuous and systematic field checking after the pressure of the present special studies work is relieved.

2. Express service and turnbacks - In designing the recommended motor coach operation in replacement of existing railway passenger service, every effort has been exerted to incorporate in the service the fullest measure of express service and turnback operations that traffic conditions and earnings will justify. This feature is also one that will be accorded concerted attention by the Schedule Bureau and the Research Bureau as soon as the pressure of immediate special studies has been relieved. It is, of course, difficult and in many instances impossible to effect turnbacks on rail passenger lines. Express service can be operated only on those lines where headways are long enough to permit express operation or where track layout is such as to provide a means of passing.

3. Staggered stops for local and motor coach service - In a number of instances on the system, limited and express service is already in effect. Due to the fact that motor coach stops along a given route are all made at the same points there is confusion and loss of time due to the necessity of each coach assuming that a waiting passenger desires that vehicle although he may actually be waiting for another. This is a matter that should be given careful study by the Research and Schedule Bureaus in an attempt to work out a more satisfactory solution.

4. Delay of passenger rail service by freight operation - Actual checks have been made at critical points on the system to determine the extent to which freight operations interfere with passenger rail service. These checks have included the individual incident as to time, place, and cause. The appropriate departments have been instructed to take necessary steps to eliminate to the greatest extent possible all such delays and experience indicates that beneficial results have been obtained.

5. Theoretical cost due to delays - This feature is one that does not require immediate attention and can be studied at such time as the Research Bureau is free to do so.

6. Use of rear exit doors of motor coaches - This is a very important consideration in connection with Pacific Electric's motor coach service. There are certain motor coach lines that are inherently interurban in character with relatively long hauls. Typical of this type is the line between Los Angeles and San Bernardino. The character of traffic on such a line is different from that on shorter local or suburban lines where the length of ride is relatively short and traffic volume is relatively high.

Where the character of service is largely urban, and it would be reasonable to apply urban loading standards, it is highly desirable that the type of equipment used be designed for local service, which normally includes rear exit doors. On the Pacific Electric system many of the motor coaches are equipped with rear exit doors for operation in the conventional fashion but under the present method of operation use is not made of them. They are all rendered non-operative and the stairwell is boarded up.

On certain of the motor coach lines it is necessary that these rear doors be put into operation if the Company is to be consistent in its request for application of local loading standards. There appears to be no real obstacle to arranging for use of rear exit doors. It will affect the problem of fare collection, but this is not insurmountable. As to the long-haul operation such as between Los Angeles and San Bernardino, Riverside and Santa Ana, a more deluxe type of interurban coach should be used.

### (C) ORGANIZATION, PERSONNEL AND PROCEDURE

#### Revision of Schedule Bureau-(PR3-C1)

Each of the nine items contained under this heading in the Preliminary Report has either been satisfactorily disposed of or is in process at this time. This is one of the important steps in the modernization program. The key to the financial success of any operation that has profitable potentialities is the Schedule Bureau. It is this bureau that actually controls the expenditure of money necessary in the operation of service and the maintenance of equipment. If close check is not maintained upon schedules and service, and man power assignments, a company that could otherwise operate profitably can easily be thrown into a deficit. Subsequent to date of the Preliminary Report a number of changes have been made in the Schedule Bureau as to personnel organization and procedure as follows:

- (a) Control elevated from operating organization to Executive Department.
- (b) Schedule Bureau placed on same level with Research Bureau.
- (c) Both bureaus placed under jurisdiction of Engineering Assistant to the President.
- (d) Staff increased by necessary number of persons to function more effectively.
- (e) Traffic checkers added to force to supply necessary field information.
- (f) All special studies involving cost estimates based upon actual schedules and man power assignments to meet requirements of existing traffic as indicated by field traffic checks.
- (g) Cost determining work of Research Bureau tied in directly with functions of the Schedule Bureau with no intermediate channels of authority.
- (h) Steps are presently under way to further improve the Schedule Bureau's functioning by assignment of a technically qualified engineer in charge of the Bureau to develop modern scientific technical procedure of control and field information.

The full benefit of the reorganized Schedule Bureau has not been felt by normal system operations to the fullest extent as yet, due to the extremely heavy load placed upon the bureau in connection with the special studies required by the modernization program that has been under way during the past several months. At such time as these special studies are completed, then the

full attention of the Schedule Bureau should be directed toward bringing all existing motor coach operations into proper alignment with the traffic pattern and service requirements. The progress made in connection with the bureau is highly satisfactory.

#### Field Supervision and Dispatching-(PR3-C2)

The function of field supervision is one of great importance and is second in importance only to the Schedule Bureau in effecting economic and efficient operation. Management determines general policy. The Schedule Bureau designs the machinery of operation to fit the established policy and traffic requirements. It is the responsibility of the operating organization to see that the machine which has been properly designed, is properly operated in accordance with the policies established by management.

The full potentialities of efficiency and profit that may be possible through properly designed schedules cannot be realized unless proper field supervision is exercised. There has been a definite weakness in this branch of the service as is evident by personal observation. The way has now been cleared for elimination of deficiencies that have existed in field supervision by rearrangement of the supervisory organization and change of authority.

Passenger and freight operations have been separated with a general superintendent being placed in charge of each, with full responsibility for carrying out the responsibilities of his particular phase of operations, whereas formerly passenger and freight operations were the joint responsibility of the General Superintendent and Assistant General Superintendent with no direct head in charge of passenger service exclusively. They are now under separate jurisdiction and a General Superintendent of passenger operations is in charge of passenger service. His entire responsibility is passenger operation with no divided attention involving freight. A man of recognized ability has been placed in this position and he has already taken steps to reorganize the passenger transportation organization to the extent necessary to effect improved functioning of all phases including field supervision.

It is not considered that the functioning of the field supervision and dispatching are at the maximum ultimate standard of perfection. This could not possibly be accomplished within the short period of time since the change in organization became effective. It is a task of large magnitude involving many ramifications but the present organization is now designed such as to bring about the desired results in due course.

#### Division Superintendence and Procedure-(PR3-C3)

Improvement in this division is likewise dependent upon the effects of the general revision of organization in the passenger operating department. In all phases of the passenger operation in the past there has been a noticeable lack of direction and supervision. This has been primarily due to the fact that no one person prior to the reorganization was held responsible for the passenger branch of the service. The organization lacked a definite head. Invariably, when there are defects in management organization they are reflected through the lower echelons of organization. This condition would, of course, naturally result in a standard of service below par. Here again the ultimate steps taken to correct the situation depend upon the final disposition of the matters presently under consideration relative to elimination of certain passenger rail operations and establishment of wide scale motor coach service together with the organizational requirements at the Division Superintendent's level.



There is need for modernization of antiquated personnel convenience facilities, many of which date back scores of years to the time when rail service was established. At Divisional Headquarters there is need for careful scientific methods of analysis and procedure which, if not being productive of economies, will at least develop a greater interest of the personnel involved in the jobs they are doing. As stated above, the complete benefits of organizational revision cannot be realized within a short period of time and the extent to which deficiencies may exist in this branch of service should not be considered as a criticism of the present managerial organization. The mechanism has now been established by which the necessary corrections can be established in due course.

#### Shop Personnel and Procedure-(PR3-C4)

Although no specific action has been taken on a large scale with respect to shop personnel and procedure, the reorganization has made it possible to effect certain improvements in isolated instances in advance of a complete survey of the entire problem. Establishment of a General Manager whose jurisdiction extends over operations, maintenance and engineering, provides the necessary means by which the proper coordination of effort can be effected. Furthermore, in laying out the program of procedure in connection with the rehabilitation plan, the most important items were concentrated upon first and those of lesser importance were deferred for future action. In this connection the ultimate benefits from study of shop personnel and procedure on a general scale is directly dependent upon the final results with respect to replacement of passenger rail operation with motor coach service.

Observations and inspection indicate conclusively that there are economies and improvements that can be effected in conducting the functions of the shops. However, to enter upon a comprehensive survey at this time other than to eliminate obvious inconsistencies, might involve the expenditure of much time and effort that would be wasted when it becomes necessary to redesign the shop organization for motor coach operation of large magnitude. Nevertheless, the major changes in top management organization has established the means by which this objective can be attained at the proper time.

#### Torrance Personnel and Procedure-PR3-C5)

Comments made above with respect to shop personnel and procedure apply generally to the Torrance facilities. It is obvious that there would be material benefit derived from a greater concentration of shop repair and stores activities at a location more near the center of gravity of operations than the site at Torrance. Being the principal center of heavy repair and overhaul Torrance shop is much too far from the center of need than it should be. Such a remote location results in abnormally high costs and wasted miles of equipment.

In the event that approval is received for abandonment of rail passenger service on the several lines as recommended in this report, the necessity for rail shop facilities will be materially reduced and with elimination of rail functions at the Macy Street shop, it should be possible to relocate all passenger repair, overhaul, and stores facilities from Torrance to Macy Street, thereby effecting greater utilization of man power, equipment, and facilities.

#### Operational Personnel and Procedure-(PR3-C6)

Comments made above relative to field supervision and Division Superintendents generally apply to this heading of operational personnel and procedure. With the changes that have been made in the top management and particularly in

consideration of the ability and experience of the man who has been placed in charge as General Superintendent of passenger operations there will be unquestionably a material improvement in the functioning of passenger operating personnel on a systemwide basis. There is already substantial evidence of progress in this regard. The fullest ultimate progress cannot be realized however, until after it has been determined whether or not rail passenger service is to be superseded by motor coach operation.

It has been evident on the basis of personal field observations and inspections that there is a real need for strengthening the operational organization in all phases. This includes the maintenance of a higher standard of discipline on the part of all operating personnel. In the absence of a reasonable head of the passenger transportation service there has been a tendency toward deterioration in discipline and conduct, and correspondingly in service. In view of the large number of persons involved in this branch of operation and the many levels of authority the necessary changes cannot be made immediately. That will take time and must be handled cautiously so as to preserve to the fullest extent possible the loyalty and dependability of the personnel involved.

In this phase of the service as well as in the supervision, dispatching, and division superintendence, one of the essential features is the need for a carefully planned and executed system of employee training. This is highly important and should apply all the way from the operator in the field on up through the various stages of supervision.

A plan of progression should be established whereby each individual in responsible authority can be replaced immediately by an understudy at such time as it may become necessary. Furthermore, each position should carry with it a distinct program of training so that when a man is elevated to a position of higher authority he knows definitely the extent of his responsibilities, the nature of the duties he is to perform, the chain of command under which he is to function and the extent of his authority.

There may have been a day when an employee by virtue of his years of service could move upward through the various stages of authority solely by exposure to the responsibilities along his course of travel. To cope with conditions of today, that method no longer suffices. To realize the maximum benefit of any industrial function under present day conditions, full consideration must be given to the advantages and necessities of scientific approach, procedure and training.

A comprehensive review should be made of all existing operating rule books and manuals to bring them up to date and to eliminate many rules that are obsolete, cumbersome, unnecessary and in many instances interfere with service. Many of the rules were designed to conform with main line railroad practices and are not applicable to modern passenger transit.

#### Executive Personnel and Procedure-(PR3-C7)

As to the executive personnel and procedure, a major change has been made bringing about the revision of organization referred to in the preceding paragraphs. The change provided for creation of position of Vice President, a position of General Manager, and the positions of General Superintendent of Passenger Service and General Superintendent of Freight Service.

It also, as indicated above, relocated the Schedule Bureau on the organization chart and placed the Engineer of Planning and Development on the executive staff instead of under the Engineering Department. The General Manager has jurisdiction over all operational and mechanical features of the business including the Engineering Department and the Equipment Department. All other officers not included on the executive staff, report directly to the Vice President.

This form of organization although considerably improved over that previously in effect is not designed to fulfill to the maximum degree the requirements of an organization chart established on the basis of functional design. The present chart is unbalanced and the allocation of authority on the various executive levels is not ideally arranged.

The fullest measure of efficiency of operation, management and earnings cannot be realized unless an organization chart designed to meet functional requirements instead of personal seniority is established.

The three primary objectives under this heading as set forth in the Preliminary Report have been effected and presently are in operation. Prior and present organization charts are included in the Appendix.

#### Personnel and Procedure of Other Departments-(PR3-C8)

The remarks above with respect to other personnel and organization apply **generally to this heading**. A careful analysis should be made of each department, division, and bureau to determine the fullest extent to which economies and greater efficiency may be possible. A careful study should be made of the use and arrangement of offices and facilities in the general office building at Sixth and Main Streets. General observation in this connection indicates a real need for rearrangement of offices in order to effect a smoother flow of work and greater coordination of effort through natural channels of related activities. As has been mentioned with respect to other branches of the operation, the ultimate benefit cannot be realized until the nature of the final operation is known. It should be pointed out that there has been insufficient time and personnel available to cover this phase of the survey in detail. At the same time the other major modernization studies have been under way.

It has been continuously in mind that the passenger rail operations contributed most heavily to the Company's financial deficiency, the loss from this branch of the operation having been approximately three and one-half million dollars for the year of 1947, and although some improvement has been experienced, there was a loss of \$2,890,000 for the twelve months' period ending October 31, 1948. Therefore, that phase of the operation has been given prior consideration to all others. Although some economies can no doubt be effected through rearrangement of personnel, the aggregate amount involved would be only a small percentage of the loss resulting from passenger rail operations.

#### Labor Time and Cost Studies-(PR3-C9)

This phase of the analysis is also one involving intricate scientific research that can only be fully pursued after the ultimate modernization program has crystallized. At the appropriate time, however, it would be much to the Company's financial advantage to indulge in a scientific analysis

designed to analyze the utilization of labor hours and cost increments. This is highly essential in the passenger transportation industry where an unusually high percentage of cost consists of labor. Under these conditions, and in view of the risks and uncertainty confronting the industry in recent years, such control is absolutely essential.

It has not been contemplated that this type of detailed study would fall within the scope of the major modernization program as set forth in this report and the Preliminary Report. It is one of the projects that should be carried through during the final stages of rehabilitation.

#### Accounting Elements-(PR3-C10)

The various phases of study falling under this heading are similarly effected by the ultimate modernization program, and the fullest benefit of revised methods and procedure cannot be realized until the nature of the final operation is known. When such time has arrived, then concerted effort should be exercised toward taking fullest advantage of most modern and scientific type of office machinery and equipment and the latest developments in procedure efficiency and cost accounting, looking at all times toward the maximum simplification and corresponding reduction of cost of labor.

#### Public Relations-(PR3-C11)

This is a highly important feature in realizing the fullest measure of benefit from the modernization program contemplated. Unfortunately the Company has suffered a large measure of adverse criticism as a result of misunderstanding on behalf of the public of its real problems, its policies and its actions. Establishment and maintenance of proper public relations means only one thing and that is a systematic, honest, effective method of disseminating public information and education in such fashion as to convey to the public and its patrons, the real problems of the Company.

Within the ranks of the organization the magnitude of the obstacles standing in the way of progress, the extent of the limitations imposed by legal and other restrictions, the relationship between earnings and cost of living, and other important aspects are recognized and understood. This alone is not enough. Channels should be established through which this information can be passed on to the public, which is normally understanding and sympathetic when properly informed, on a basis that inspires its confidence. A Company the size of Pacific Electric confronted with the problems inherent with serving many separate cities and communities can justify a carefully planned public relations program. Actually, this phase of activity could probably better be described as a public information office.

Under the present arrangement there is no definite source of information to which the press can go in securing data relative to the Company's programming or attitude toward matters of public interest that arise from time to time. The responsibility of releasing such information should be vested in one office and the responsibility delegated to one individual through whom all such public information should pass. It should not be possible for the press to get conflicting stories as to Company policy and programming by approaching different individuals for statements.

It may be desirable that statements be issued as emanating from specific individuals to the extent that they may be authorized to speak officially for the Company. But even so, the release or statement should pass through the

delegated information office so that all public conflict and erroneous interpretation may be avoided.

#### Economies through Personnel Reduction-(PR3-C12)

During the past eighteen months a considerable measure of economy has been effected by a reduction in personnel throughout the various departments in accordance with a program of eliminating unnecessary functions, consolidating others, and improving upon procedure. In view of the extremely heavy deficits incurred in the passenger transportation operations there is relatively a small amount of relief that could be realized through this procedure. The volume of loss is so great that to compensate by reduction in pay roll would completely cripple the operation. This method of procedure is not a logical solution. It should, of course, be followed to the fullest extent that efficiency and economy can be realized to the maximum degree without seriously interfering with normal functions.

It would not be possible to effect a flat rate reduction in operating personnel without a corresponding reduction in the amount of service rendered, as it is presumed that effective man power assignment is being accomplished within a reasonable degree of satisfaction under present conditions. To effect a flat rate reduction in personnel in the shops and maintenance centers would probably not be felt immediately, but within a relatively short length of time under-maintenance of equipment would be reflected in breakdown of service through breakdown of equipment.

Financial balance through arbitrary reduction of personnel to a point below the level required for efficient operation, cannot be considered as a prudent move nor one that would result in anything eventually except a worsened condition. If through other logical means the proper financial balance cannot be reached, then it is axiomatic that both service and employment will have to be curtailed if any operations are to be continued.

#### (D) MODIFICATION OF PHYSICAL FACILITIES AND OPERATIONS

##### Substitution of Motor Coaches for Rail Cars-(PR3-D1)

This phase of the studies is by far the most important when considering the possibilities of converting the Company's heavy losses from passenger operations into a profit. As indicated heretofore and in the Preliminary Report at considerable length, the principal source of loss is through the interurban passenger rail lines which for the year of 1947 contributed approximately \$2,500,000 in deficits at the operating income level. For the twelve months' period ending December 31, 1948, rail lines in the aggregate, incurred an operating loss of \$2,363,000.

Not one of the interurban rail lines or the local rail lines is operated at a profit. The situation with respect to motor coach lines is relatively not much better. Out of twenty-five motor coach lines operating during the first six months of 1948, only eight operated at a profit, before bond interest and other income deductions.

The monthly loss on rail lines has been consistently increasing except for December, from a low of \$93,837 in June to a high of \$280,396 in November. Although Pacific Electric motor coach lines operated in the aggregate at a profit from March through September, the operations were thrown

into increasingly heavy deficits during the last three months of the year.

Conversion of these motor coach operations from a profit to a loss was contributed to in substantial measure by the necessity of decreasing the loading standard which required the assignment of 25 additional coaches into the service, with no appreciable increase in passengers. This condition demonstrates the effect of load factor upon operations of this character when the margin of profit is small. If this carrier had no other source of financial relief it could not survive.

Therefore, it is obvious that the first point of attack in seeking a solution was to explore the financial benefits that would accrue from eliminating these losing rail lines and replacing them with motor coach service with its attendant lower cost in proportion to traffic carried.

With this realization, most of the rehabilitation activity thus far has been devoted to this subject and several reports have been prepared setting forth the findings. These reports are identified as follows:

- (a) Venice Short Line, PR3-D1(8)(a)
- (b) Northern District Lines Including Pasadena Short Line, Pasadena Oak Knoll Line, Monrovia-Glendora Line, Sierra Madre Line, Sierra Vista Local Line, Baldwin Park Line, PR3-D1(8)(d,e,f,g).
- (c) Southern District Lines Including Santa Ana Line, Newport Beach Line, Long Beach Line, San Pedro Line, Watts Local Line, PR3-D1(8)(SD).
- (d) Western District Lines Including Hollywood Boulevard-Vineyard-Santa Monica Boulevard Line, San Fernando Valley Line, PR3-D1(8)(b,c,h).

The summary of financial results under present operation of the rail lines considered for conversion and as estimated under motor coach operation, as included in these four reports, is as follows:

	<u>Annual Net Operating Income</u>		<u>Net Improvement</u>
	<u>**Present Rail Operations</u>	<u>Proposed Motor Coach Operation</u>	
Venice Short Line	**\$ (166,322)	\$159,714	\$ 326,036
Northern District	(973,424)	304,862	1,278,286
Southern District	(225,646)	(5,626)	220,020
Western District	** (652,112)	291,069	943,181
	<u>(2,017,504)</u>	<u>\$750,019</u>	<u>\$2,767,523</u>

(RED FIGURES)

\*-Includes LA-Santa Monica Motor Coach Line

\*\* -Includes San Fernando Valley Local Motor Coach Lines

In the reports above referred to, complete data has been included relative to the various elements of finance involved, including cost of replacement, equipment, estimate of rehabilitation to be avoided, release of usable rail equipment for other lines, downtown off-street terminals, and routes and service.

The estimates set out above have been carefully prepared and in all instances reflect true conditions and facts to the fullest extent possible to develop them, and with the maximum degree of accuracy obtainable. There has been no effort whatsoever to shade these figures so as to make motor coach operation appear more favorable than the true conditions would indicate. Actually the tendency has been in the other direction, toward conservatism, in the comparison. No cost has been included in the estimates to represent the increase in wages of non-operating employees which is imminent, will be substantial, and retroactive to October of 1948.

Depreciation of motor coach equipment has been taken into expense on the basis of a seven year service life whereas the Public Utilities Commission of the State of California has authorized a life of ten years.

As to the element of revenue that would be derived from rail operation as compared with new P.C.C. type cars or new motor coaches, no estimates have been made of stimulation increments. Such estimates are usually highly controversial and difficult to substantiate. With the wide divergence of earning possibilities between present rail operation and proposed motor coach operations, to take into consideration a small increment of induced traffic if there be one, would not materially affect the ratio of differential.

#### One-Man Car Operation-(PR3-D2)

Application has already been filed with the Public Utilities Commission requesting authority to establish one-man car operation on the Glendale-Burbank Line and steps are being taken to develop a conversion program to one-man car operation using 600 Class cars on the local rail lines that will remain after the modernization program has been placed into effect, if approved by the Commission.

The financial possibilities of one-man car operation with new P.C.C. type cars have been explored thoroughly in connection with each of the rail lines considered for replacement in the several modernization reports referred to above. In each instance it developed that motor coach operation was far more advantageous financially.

The 5000 Class cars presently used in the Glendale-Burbank service were designed for one-man operation and can be made ready for that type of service very quickly. The 600 Class cars were designed for two-man operation but with minor alterations can be converted satisfactorily to one-man operation. The only alterations required will be to install a fare box bracket at the front entrance, install treadle door operating mechanism at the center entrance with interlock control, and rearrange the verticle stanchions in the center of the car to provide more support for passengers. Although these cars do not possess some of the refinements of the more modern P.C.C. type streamliner, they are exceptionally well constructed and satisfactorily designed for local service. However, in view of their age conversion expenditures should be held to a minimum.

One of the important features to be kept in mind when considering the substitution of new P.C.C. type cars for existing rail equipment is the large expenditure that would be required for track and roadway rehabilitation. This cost would be necessary of course, whether present rail service is continued or P.C.C. type cars should be substituted. Due to the greater sensitivity

of P.C.C. cars to poor track the cost would be greater in preparing track for their use.

In no instance did the studies indicate that P.C.C. type cars could be operated profitably on any of the lines except local service in the Western District. In addition to the losses that would be incurred by P.C.C. operation there would be the heavy expenditure for rehabilitation which could not possibly be justified.

#### Rail Trunk and Motor Coach Feeder Lines-(PR3-D3)

Consideration was given to the possible advantages of retaining rail lines for trunk service between the downtown Los Angeles area and outlying points reasonably close to the thickly populated residential area, feeding to them by a network of motor coach service radiating through the residential section. Two principal installations were considered, one in connection with the rail service between Los Angeles and Sierra Vista and the other, rail service between Los Angeles and El Monte, with connecting motor coach lines. The results of these surveys in each instance indicated this type of operation to be unsatisfactory both from the point of view of net earnings and the physical problems that would be involved. The advantages of straight replacement of rail lines by motor coach service were far greater and would provide a through direct service from the outlying area into Los Angeles without transfer, whereas under the other type of service each passenger destined to points beyond the railhead would be required to transfer, in both directions.

#### Off-Street Terminals-(PR3-D4)

As a part of the general studies of the passenger rail lines it has, of course, been necessary when considering replacement of rail service by motor coach operation to anticipate terminal requirements on both ends of the lines involved. At their extremities there is no problem as in most instances suitable facilities were already available or can be made usable by relatively minor alterations or modification. The real problem exists with respect to terminal arrangements in Los Angeles. In going from rail cars to motor coaches, due to the smaller capacity of the vehicle there will be a greater number required and the effect upon traffic congestion and terminal routing is important. With the thought in mind of keeping congestion at a minimum and providing the most convenient arrangement for the passengers, routing and terminal facilities of the new motor coach lines have been patterned as nearly as possible after the existing rail operations. Each of the individual reports relating to the various districts contains a description of the proposed Los Angeles terminal layout.

As to the Venice Short Line, it is proposed to make use of the Olive Street motor coach terminal in Los Angeles, expanded to include an area to the east of Olive Street almost directly opposite the present motor coach terminal. The Venice Short Line rail service now operates on Hill Street and terminates at the surface tracks of the Subway Terminal. The proposed motor coach operation will make use of Olive Street, making it possible to eliminate all rail service from Hill Street.

As to the Northern District Lines, it is intended that replacement motor coach service will be routed over San Pedro Street directly parallel to present interurban rail lines. An expanded motor coach terminal will be located between Los Angeles and Maple Streets underneath the present elevated



storage tracks, transfer tables, spurs and various other track layout required for a rail repair shop are not needed for motor coach operation. Therefore, it appears that together with the proposed replacement of passenger rail operations by motor coach service under this present program, there should be a major redesign of shop facilities to more nearly meet present day requirements and to take advantage of the real financial benefits that would be forthcoming.

If the Company is permitted to establish motor coach operation in replacement of the rail lines considered in this study, then the logical procedure would be to divorce all motor coach shop and store facilities from Torrance and relocate them in a new shop facility of modern design and construction at the Macy Street property. All rail repair and service activities presently conducted at Macy Street shops should be completely eliminated and Macy Street converted into an exclusively motor coach facility. As to the passenger rail lines that would continue in the Western District, namely the Glendale-Burbank Line and the Hollywood-San Fernando Valley Lines, servicing and repair of rail cars should be done at West Hollywood Shops. The only remaining passenger rail lines that would use the Torrance Shops would be the Long Beach and San Pedro Lines. Even as to those lines, the only justification for use of Torrance is that freight repairs would probably be continued there. The magnitude of facilities at Torrance is far too great for support of Pacific Electric under present conditions, including both freight and passenger requirements. Under the proposed plan it should be disposed of entirely and a new facility of proper size established.

In addition to the main motor coach shops that would be located at Macy Street there would be the Ocean Park shop and other light servicing and repair shops located at other strategic points more remote from the center of gravity of motor coach operations.

It is highly important in looking toward the future that great care be exercised in laying out the motor coach garage and servicing facilities so as to incorporate in their design the most modern machinery, equipment, and work flow patterns so as to utilize to the maximum extent the developments that have taken place in this industry during recent years. Whereas motor coach operation in its early beginning and to a considerable extent during recent years, has been considered as an unimportant fringe type of operation requiring only backyard facilities, it has now grown into one of the most important industries of the country and demands full recognition as such in its management, operation and maintenance. Economies cannot be effected by stinting in the design of motor coach maintenance facilities.

In view of the greater risk that is inherent in this business and the usually low margin of profit, it is necessary that every possible means be followed to control all phases of the operations and service with the highest degree of precision that can practicably be applied. Much advantage can be obtained from securing outside assistance in the design and construction of new motor coach facilities and modification of those that now exist.

#### Maintenance and Painting of Equipment and Facilities-(PR3-D8)

There is a real need for an expedited program of painting and maintenance of equipment and facilities. Much of the rail and motor coach equipment of the Company has been allowed to deteriorate as to interior and exterior appearance. Public reaction to appearance of equipment is highly important.

Well painted and clean equipment also has a definite effect upon the morale of the operators and the organization as a whole. There is always a certain amount of pride taken in a piece of mechanical equipment that is kept in good repair and appearance. The existing shortcomings in this regard can, to a considerable extent, be attributed to the inadequacy of present shop and servicing facilities.

With the recent changes that have been made in organization, delegating more specific authority to individuals, there should be a resultant improvement in appearance of equipment. The General Superintendent of passenger service and his subordinants should consider it their personal responsibility to insist upon proper maintenance and appearance of the equipment for which they are responsible on the road, and likewise the General Manager acting as coordinator should insist that the reasonable requests of the operating department be carried out by the mechanical and service organizations.

Even with this improved organization the maximum benefits will not be derived until such time as the over-all program has definitely crystalized and the expanded motor coach facilities have been made available. If and when the motor coach replacement program recommended herein is authorized by the Public Utilities Commission and the necessary facilities to conduct the type of operation contemplated are constructed, then there should be no excuse for anything less than the highest standard of equipment maintenance and servicing.

#### Operating Division Headquarters-(PR3-D9)

Inspection of existing Division Headquarters indicates a definite need for modernization of both facilities and procedure. In most instances the facilities made available for operating personnel are dingy, dull, improperly furnished and in general, not conducive to the maximum spirit that should be expected from operating employees. It is only natural that the personal appearance and conduct of employees will largely be influenced by the character of surroundings in which they are required to work. High morale is exceedingly important especially in this line of business where the real public relations organization of the Company consists of the individual operators on the equipment who come in contact with the public each hour of their working day.

Normal daily procedure at the Division Headquarters is also much in need of study and modernization. Study of procedure, forms, paper work and records at the Division Headquarters should be delegated as the responsibility of the Research Bureau closely assisted by the Operating Department and the Accounting Department. It is highly essential that in proceeding with such technical studies, the major load be carried by persons who do not normally carry the regular load of responsibility that goes with a permanent operating position. In this field as in many other branches of studies and analyses that must be made as time goes on, full utilization should be made of the ability and specialized training of the Company's Research Bureau.

#### Operating Procedure at Los Angeles Terminals-(PR3-D10)

Field inspection and study of the terminal situation in Los Angeles indicates the real need for technical study to effect improvements in facilities, methods, and procedure. Arrangement of passenger terminal facilities and treatment of passengers is highly important. At concentration points where large groups of passengers are waiting for their vehicles there is always a certain atmosphere of apprehension and a tendency to be super-critical of anything that is contrary to their comfort and convenience. Every effort should be

made to treat the passengers with the utmost of courtesy and consideration, and to arrange all facilities so as to simplify to the maximum extent the problems with which they are confronted. Their inconvenience should be reduced to a bare minimum by installation of suitable directing devices, channel devices, and public information.

Both at the Main Street Terminal and the Subway Terminal as well as the Olive Street motor coach deck, there is obvious lack of proper design and control, and absence of uniformity in procedure and facilities. This condition is one that should be corrected through the exercise of concentrated effort on behalf of persons delegated with the specific responsibility of working out the deficiencies and developing methods of improvement. These matters have largely been left under the control and supervision of employees of the Operating Department whose level of authority and experience has not been such as to qualify them technically to develop required procedures. Due to the experience and background in their line of work they are no doubt eminently qualified to carry out instructions after appropriate procedures have been developed by higher technical qualifications and authority.

Numerous instances of complaint exist at the Subway Terminal, particularly as to the lack of uniformity and failure to accord proper consideration to the comfort and convenience of passengers. It is hoped that to a considerable extent these deficiencies will be decreased as a result of the recent change in personnel organization. This is another of the specialized fields wherein the Research Bureau can be of real value in working out as special projects on a full time basis, the proper procedure, practices, facilities and devices that will assist to the maximum degree in meeting the comfort and convenience requirements of the passengers, as well as in improving operations.

It should be possible to develop at the Main Street motor coach loading concourse a system of spotting motor coaches in specified stalls with some form of overhead electric indicator that would flash the stall designating number, and through use of public address devices, intending passengers could be directed to the proper stall for boarding. Under the present arrangement much confusion exists particularly during peak hours of the evening.

Similarly on the train deck to the rear of the station there is field for much improvement in the manner of using electric indicating devices and public address systems for directing passengers. Entirely too much in this regard is left up to individual trainmen and other persons who usually are found in abundance on the loading areas but who probably through lack of proper instruction or training, sometimes tend to confuse rather than simplify the problems of the passengers.

It should be considered just as important to properly design a loading and passenger waiting area as it is to properly design the mechanical and physical characteristics of a motor coach itself or the shops in which it is repaired and maintained. After all, it is the passenger upon whom the financial success of the Company depends and every consideration within practical limitations should be given him.

Inspection of the dispatching facilities at the Main Street Terminal indicates the real need for modernization of both facilities and arrangement. The area devoted to this function is laid out without any apparent systematic study, the surroundings are dark and gloomy and the whole atmosphere of the

circuitous entrances and interior arrangement is depressing to persons required to work there. Along with the modernization program recommended herein there should be modernization of working facilities of this character.

#### Rail Equipment Assignments--(PR3-D11)

In connection with this subject the studies thus far conducted have very completely covered the issues involved. The principal element of controversy has been the use of antiquated wooden body cars which have been ruled out of service by the Public Utilities Commission a number of years ago but through subsequent chain of circumstances have been permitted to remain temporarily in operation. Under the modernization program and as covered in detail by the individual reports prepared with respect to the various passenger rail lines, it will be possible to eliminate all of the wooden body cars promptly upon replacement of operation on the Venice Short Line by motor coaches. If the replacement program on other passenger rail lines of the system as covered in these studies is authorized by the Public Utilities Commission, many of the more recently constructed steel passenger rail cars will be retired from service leaving essentially only the 600 Class cars, the 5000 Class, and the 300 and 400 Classes.

The 600 Class cars are of relatively recent manufacture, are well designed for local operation and will probably give a considerable number of years more of satisfactory service. Plans are under way now to convert these two-man cars for one-man operation. The 5000 Class cars are the most recent equipment acquired by the Company and are of the P.C.C. streamlined design, modern in all respects and suitable for many years of satisfactory service. These cars although of double end construction, were designed for one-man operation and will be placed in that character of service within the near future if the necessary approvals are obtained. The 300 and 400 Class cars are large steel equipment formerly used on the Interurban Electric Railway between Oakland and San Francisco, and on the Northwestern Pacific Railway interurban line in Marin County to the North of San Francisco Bay.

Those 300 and 400 Class cars are basically of very heavy and substantial construction and can be operated for many years. They have just recently been completely rehabilitated as to their interiors. Wall and ceiling liners have been installed with new lighting fixtures and new seats, at a considerable expenditure per car. Although the equipment is large and heavy, and probably more costly to operate and maintain than smaller more modern cars, their continued use can be justified in view of the investment that has been made in them and their large capacity which is suitable for long haul heavy volume interurban traffic such as that service on the Long Beach and San Pedro Lines.

No definite program can be developed that will indicate conclusively the ultimate disposition of all passenger carrying equipment until after it has been determined whether or not the Company will be authorized to replace the lines recommended herein with motor coach service. At such time as the final decision in this regard has been issued then it will be possible to set up a comprehensive equipment schedule including both rail cars and motor coaches that will indicate a long range program of assignment, use, and replacement.

Specific service lives should be adopted for each class of equipment and upon a proper basis of depreciation accounting they should be retired on schedule and replaced at the proper time. This sort of a long range equipment program can of course only be laid out on the basis of present conditions. If the

anticipated financial status of the Company materializes, the equipment program can be maintained intact. If, however, unexpected adversities develop then changes in the program would be necessary.

#### (E) PASSENGER FARES, RATES, TARIFFS AND PROCEDURE

##### Application for Increase in Fares-(PR3-E1)

Normally it is accepted as common practice to make application for authority to increase rates of passenger fare when a company's financial condition results in a loss from operations or is reduced to less than a reasonable profit. Assuming all other conditions equal, Pacific Electric Railway Company would certainly be entitled to expect an increase in fares from its passenger operations in view of the extremely heavy losses incurred. It has been the hope in connection with conducting the modernization studies that through modernization of operations by replacement of antiquated and outmoded rail service with modern motor coach operation, it would not be necessary to request increased fares. It would at least require a much lesser increase than would otherwise be the case if the economies of motor coach operation were permitted.

It is a commonly accepted theory in the transportation industry that there is an upper limit to passenger fares above which the point of diminishing returns is reached and the loss of traffic due to the increase more than offsets the gain in revenue per passenger. There is, of course, much conjecture as to the location of that point. Experience indicates, however, that present fares on a flat rate basis may be fairly near the upper limit.

It is therefore highly desirable that the fullest possible economies be effected through other means, particularly those means which involve only a change in the type of vehicle used for transporting passengers, and further, more specifically, in view of the fact that the motor coach has been universally accepted country-wide and in foreign countries, as a standard and basic means of satisfactory passenger transportation. It would not be fair to the traveling public to impose upon them further increases in rates when there are economies of material magnitude that can be realized through modernization of transportation facilities operated over the public streets and highways.

There is no assurance that even if the Company is permitted to make the motor coach replacements recommended herein that a sufficient margin of profit will be forthcoming on a continuing basis. The indications are very favorable, but what the future holds in the way of increases in cost of labor, material, ratio of peak to base, and trend of traffic, we cannot prophesy with certainty.

There are several features of the present rate structure that should be considered for change in the event that fare adjustments are necessary. It has not been considered mandatory, as indicated above, or desirable at this time, to proceed with an application for increased passenger fares and it is hoped that the recommendations of these reports will be approved and the changes in the service put into effect within a reasonably short time in order that the full benefit of the economies that are possible may be realized. If, however, the situation is prolonged, in view of the continuing heavy monthly losses from passenger service and the effects of recent increases of wages, there may be no other alternative but to immediately file an application for increases in fares. The deficits must be made up from some source and the field of selection is restricted to only the economies possible through rail service replacement and the possible advantages of increased fares.

### Adjustment of Rate Structure-(PR3-E2)

This subject is somewhat synonymous with the previous subject and the explanation above will fairly well cover the requirements hereunder. Aside from the basic consideration of whether or not a general increase in passenger fares should be requested, there are certain features of the existing fare structure that should definitely be considered for revision. In the Preliminary Report this subject was discussed at some considerable length and subsequent to date of that report the subject has been given a great deal more thought and it is concluded definitely that at the time when it is decided that adjustment should be made in the fare structure, a part of that adjustment should be to eliminate reduced rate commutation tickets.

Under conditions existing when a property is able to earn a reasonable profit under a fare structure that includes reduced rate commutation tickets, their existence has some justification even though basically the theory is not sound. However, when a property is providing passenger service at a heavy loss, then it is contrary to all proper concepts of business to offer to that group of patrons costing the most to handle during the peak periods of the day, a rate that is lower than the rate charged passengers traveling during off-peak periods when surplus equipment and man power are available. Naturally, any suggestion of this character would meet with disapproval of the passengers and would be opposed by public officials representing them. The public normally opposes increases in the price of anything they purchase for daily requirements whether it be food, clothing or gasoline for the private automobile. They have accepted such increases out of necessity and at much greater percentages of increase than they have been subjected to in rates of passenger transportation.

If considered upon the basis of the merits of the case, this problem resolves itself into the simple economic formula by which all businesses are supposed to be conducted. It is merely an exercise of common sense to conclude that providing service at less than cost is basically unsound.

We are all acquainted with the standard practice of telegraph and telephone companies of charging a higher rate to those persons using their services during periods of peak demand than is charged to persons using it during off-peak periods. In the transit industry the reverse process has been in effect.

Urban operators have been gradually but steadily departing from the theory of reduced rates for quantity sale of fares. The straight 10¢ fare is now almost universal, with a number of carriers exceeding that level. The commutation ticket in interurban service compares with the token rate formerly in effect on many local carriers. The commutation passenger purchasing a quantity of rides at one time was heretofore afforded, and is now on Pacific Electric, a reduction in fare per ride. Together with elimination of commutation rates there should also be eliminated the existing excursion fares which are not in accord with the Company's present earning status and no longer fulfill the requirements for which they were originally intended. Likewise, round trip fares should be discontinued. Their use has been carried over from main line steam railway operations and no longer fit into the modern picture of transportation of an interurban character in relatively short haul service.

Another feature of the Company's fare structure that is highly indefensible is the inter-Company transfer in the cities of Glendale and Pasadena. There is no more reason to maintain such arrangements in these two instances

than there is between lines of Pacific Electric and other local operators in the cities of Santa Ana, Long Beach, San Bernardino, Santa Monica or the several other cities served by the Company. The fares applying to Pacific Electric lines should be separate and distinct from those of other carriers.

Whereas, a passenger originating on a Pacific Electric line in Glendale or Pasadena pays the regular Pacific Electric rate from that point to Los Angeles, another passenger who travels first on the lines of the local carrier and boards Pacific Electric line at the same point as the first passenger, pays a reduced rate for the same service which, in effect, is tantamount to discrimination.

Elimination of these undesirable types of fare will result in a material increase in revenue to the Company and also will bring about some considerable indirect economies through elimination cost of printing, handling, and accounting that go with special types of fare.

#### Elimination of Inter-Company Transfers-(PR3-E3)

The theory with respect to elimination of inter-Company transfers has been covered under the previous section as applies partly to Glendale and Pasadena.

#### Elimination of Inter-Carrier Affiliations-(PR3-E4)

Although the appropriate action in connection with elimination of inter-carrier affiliations will be closely coordinated with action taken relative to other elements of the problem, it appears desirable that in its passenger transportation operations Pacific Electric divest itself of all inter-carrier affiliations including joint tariffs, ticket sales, and baggage handling. The financial returns from these affiliations are not large when compared with other sources of revenue and they do carry with them offsetting disadvantages that are of real moment. They involve additional accounting, stores activity, and personnel. It is difficult to effect an accurate allocation of cost of labor and other elements between Company business and inter-carrier business. The financial benefits are not sufficient to justify the complications that such affiliations carry with them.

In bringing this Company down to its essential elements by large scale motor coach operation, every effort should be exerted toward simplification in all departments and activities.

#### Elimination of Commission Agents and Station Agencies-(PR3-E5)

Under this heading the discussion is largely parallel to that applied to the previous subject. For purpose of paring down the extent of functions to one more readily adaptable to complete control, as to finances and personnel, it is desirable that as many remote field activities be eliminated as is possible. Furthermore, in view of the Company's adverse financial status it cannot afford to share its revenue with others on a commission basis. It might be argued that commission agents generate business that would otherwise not be enjoyed. This does not appear to be a sound argument in view of the protective rights under which Pacific Electric operates in the territory served. There are other means of advertising that are more effective and provide a much greater coverage than through the individual efforts of commission agents. At points where competition exists the most effective means of meeting it is through maintaining high standards of service and equipment. Each Company endeavor will do more to generate new business and hold present patronage than the possible good

will derived from commission agencies.

#### Fare Collection and Ticket Sales-(PR3-E6)

During the past few months there has been a great deal of thought given to improvements in the methods of handling fare collections and the selling of tickets. Some changes have already been made and others are contemplated in connection with the recommendations for elimination of passenger rail service on certain lines of the system. This is a subject that cannot be fully pursued until after a determination has been made as to the ultimate arrangement under the major rehabilitation program. The subject also ties closely in with the action that may ultimately be taken with respect to load factors and a possible request for increased fares.

#### Simplification of Tariffs-(PR3-D7)

This subject falls within the same category of consideration as the previous sections under this chapter. Simplification of the fare structure by elimination of undesirable types of fares and whatever modifications may be made in the basic rate structure will no doubt tend toward a simplification of tariffs. Final study on this subject must necessarily await a determination as to the results of the rehabilitation program and a decision as to the fare structure generally. It is highly desirable that every effort be exerted to condense the tariffs into the most simple form possible, both from the point of view of the advantage that would accrue to the public as well as to the Company.

Equally as important as tariff simplification, if not more so, is the need for a more simple type of timetable for use of the public. Due to the complicated arrangement of some motor coach routes it is extremely difficult for the public to interpret the timetables to meet specific needs.

### (F) REVENUE, COST AND SERVICE ANALYSES

#### Analysis of Prorate Formula-(PR3-F1)

Due to the fact that Pacific Electric conducts both freight and passenger transportation operations, in many instances over the same tracks, and numerous employees devote certain portions of their time to each service, it is necessary for accounting purposes that a procedure be used whereby operating expenses can be segregated between the two services. For this purpose a proration formula was developed several years ago through joint efforts of the staff of the Public Utilities Commission and the Company with participation also by representatives of the City of Los Angeles.

The formula was developed after extensive analysis of the physical characteristics and operational features of the system, giving consideration to those portions that were exclusively in the field of one service or the other, allocating to the fullest extent possible all direct costs and applying proration percentages to the remainder, based upon the nature of service performed. In order to function on the most efficient basis, management must know the relationship between cost and revenue in each branch and subdivision of the business. With respect to passenger transportation operations segregation is made between rail and motor coach service and then each of those divisions is further broken down as between local and interurban lines. It is upon the basis of this formula that a determination can be made of the magnitude of annual losses or profits incurred by each type of service.



As to operating expenses, the present prorated formula affords as nearly an accurate allocation as it is practicable to obtain. The formula is checked periodically by accountants and engineers of the Public Utilities Commission and if basic changes should be deemed necessary they no doubt would bring the matter to the Company's attention. To date the formula appears to meet with general satisfaction. If the proposed modernization plan is adopted the formula will require revision. The process is not difficult, however, and could be done quickly.

As to the element of revenue, there is no problem in segregating between passenger and freight and a reasonably accurate segregation can be made between the four phases of passenger operations. As between individual lines in each of those categories, however, the procedure is somewhat cumbersome and does not provide the degree of refinement that is desirable on the basis of month to month comparisons. To a large degree this difficulty is due to the fare structure and method of collection. Although the Passenger Traffic Analysis statement is prepared monthly, its basic structure is dependent upon a detailed analysis of fares during a restricted period at rather infrequent intervals. A more simplified method of obtaining the basic data should be developed which can be applied on a monthly basis and which will reflect more nearly actual revenue conditions currently.

Under the present method of compiling statistics there is not a fine enough division made of revenues as between lines. A typical example of this situation is the Los Angeles - San Bernardino Line. It is entered upon the passenger traffic analysis statement as a single line and the statistics relating to it are, upon their face, considered to be applicable to a single independent operation. Actually, the figures include the results of operation from three motor coach lines, each one of which serves a different territory throughout the area between Los Angeles and San Bernardino. From data compiled in this fashion it is not possible to determine the earning status of any one of the three lines or any portion of any one. This same condition exists with respect to the two motor coach lines between Los Angeles and Santa Ana that have common terminal points but serve widely divergent intermediate areas. Lines between Los Angeles and Redondo Beach fall in the same category.

Although a line may be indicated upon the present statement as operating profitably it may be that one leg of the line is highly unprofitable and pulling down the other leg. Similarly, this condition could apply in the reverse. In order to keep closely in touch with operations and service, a more refined method of revenue accounting should be used. Such a procedure in conjunction with a proper system of field traffic and service checking, would make it possible to closely control the operations toward a higher degree of financial efficiency and service requirements.

It should be pointed out at this point, however, that the present method is sufficiently accurate for the purpose of the analyses made in connection with the report and others covering individual lines of the system. The development of a new system of recording should be studied in connection with the major analysis of systemwide motor coach operations. The need for this change applies more to motor coach operations than to the rail lines.

#### Comparative Cost Analyses-(PR3-F2)

As has been indicated heretofore, concentrated study has not been devoted to the element of fares as it has been considered that all possible sources of economy by other means than fare increases should be pursued before considering

the need for fare adjustments.

As to the element of load factor vs. average fare this subject has been covered at considerable length in the Venice Short Line report and in exhibits and testimony submitted in Commission hearings. In those same documents, results of analysis have been shown relating to cost and revenue on typical rail and motor coach lines under various conditions of load factor. As to cost analysis, this subject has been very completely and comprehensively studied by the Research Bureau in recent months. The results represent extremely accurate allocation of cost and careful computation as between the various accounts applied to individual lines.

With this data it is possible to develop most any combination of cost desired in connection with the various studies and comparisons required from time to time. The results of that data are reflected in the financial estimates prepared in connection with each of the individual rail line reports. It is important that these computations be continued on a current basis by the Research Bureau.

#### Economies through Service Adjustments-(PR3-F3)

Concerted effort has been exerted toward effecting all possible economies within practicable limits through service adjustments on the various rail and motor coach lines of the system. It must be recognized that due to the very heavy work load thrown upon the Research Bureau and the Schedule Bureau as a result of the modernization studies it has not been possible for them to devote full time to any economy and service measures. They have, however, analyzed conditions on those lines that have come to their attention as being unusually out of line.

The full benefits of such analyses will not be felt until it is possible to enter upon a special study of motor coach operations on a systemwide basis. The organization to accomplish this objective is now established and it should follow in the normal course of events.

As to passenger rail lines the various special modernization studies have included detailed traffic checks and preparation of new or revised schedules. There is, of course, no standard and permanent formula by which schedules can be prepared and perpetuated on any line. Conditions of traffic and riding habit change from day to day and in order that the maximum benefits of service efficiency may be enjoyed it is necessary that a systematic procedure be established for traffic and revenue analyses on each line, at sufficiently short intervals to keep reasonably abreast of changing conditions. One example of a special study that should be made toward economy through service adjustment is the San Pedro-Long Beach rail line. There no doubt can be a considerable economy effected without serious adverse effect upon service by consolidating the Long Beach and San Pedro Lines between Los Angeles and Dominguez Junction during off-peak periods.

#### Consolidation of Local and Interurban Rail Service at Night-(PR3-F4)

The studies contemplated under this heading have been made in connection with the individual rail line reports submitted as a part of the modernization program. The ultimate benefits that may be obtainable through such consolidation with respect to motor coach lines can only be determined in connection with the systemwide motor coach analysis and after a determination has been reached by the Commission as to the proposed replacement of rail lines by motor coach service.

## (G) CORPORATE STRUCTURE AND PROPERTY DISPOSAL

### Formation of Separate Corporations-(PR3-G1)

The subject of separating the present corporations into two operating companies was touched upon in the Preliminary Report. During the interim many phases of the Company's operations have been analyzed and a number of studies completed. Nothing has developed, however, during that time that would tend to render the original suggestion infeasible. There is no question but what the passenger and freight operations, together with subsidiary functions, could continue to be conducted under one corporate entity and with a relatively high degree of efficiency if an ideal form of organization and control could be brought about. If the results of the present modernization program do not prove out as expected, then serious consideration should be given to separating the two functions. There is an inherent difference between freight and passenger operations as conducted on the lines of this Company. Decreased traffic due to increased rates is felt to a much greater extent in passenger operations than in freight. Political attention is focused more sharply and continuously on passenger operations than they are on freight service. Demands of the customer in freight operation to a large extent dictates the policy and the cost of performing service is established upon the basis of costs incurred and rates are set accordingly. Furthermore, due to the nature of the business, freight handling on a large scale cannot be divorced from Interstate Commerce Commission rules and regulations. Passenger operations of the Company on the other hand, are such that they can be divorced from interstate regulation and confined entirely to intrastate jurisdiction. Final action in this matter is, of course, the prerogative of the owners of the property.

### Sale or Division of Los Angeles Motor Coach Company-(PR3-G2)

Subsequent to submission of the Preliminary Report the details of separating Los Angeles Motor Coach Lines between Pacific Electric and Los Angeles Transit Lines have been worked out, a mutually agreeable formula has been consummated and application has been filed with the Public Utilities Commission requesting authority to proceed with final division.

### Sale of Pacific Electric Railway's Los Angeles Local Lines-(PR3-G3)

From the point of view of the maximum benefit to the Company and to the public, it appears that Pacific Electric should continue to divest itself of purely local operations and preserve and concentrate upon urban and interurban passenger transportation service. This policy has been followed out to a considerable extent in the past. The notable examples being disposition of local passenger service in Long Beach, San Bernardino, Riverside, Glendale, and Pasadena. The only local operations remaining consist of a network of local motor coach lines in the San Fernando Valley and service between Los Angeles and the Hollywood, Beverly Hills area.

It would definitely be to the Company's advantage and to the benefit of the public to turn over the local San Fernando Valley operations to Asbury Rapid Transit Lines which already provides service to a portion of the Valley, some of which duplicates that of Pacific Electric as to routes and areas traversed. Due to the competitive conditions existing in San Fernando Valley over a period of many years a network of lines has been established that are not systematically planned and do not meet to the fullest extent the reasonable requirements of the area. Whereas Pacific Electric is incurring substantial operating losses on local operations in the Valley, if they were turned over to the competing carrier and coordinated with its existing services, it no

doubt could perform a profitable operation and afford a better standard of service to the public. There are numerous features of its operations that are less costly than those of the larger corporation, Pacific Electric.

As to the Hollywood, Beverly Hills local service, the territory is restricted to Pacific Electric operation by reason of its prior rights and to a certain degree, the operation is suburban in character. If these lines were turned over to the Los Angeles Transit Lines, the carrier performing major local service in the Los Angeles area, it would no doubt be beneficial to the general public through simplification of routes, fares, and transfer privileges. On the other hand, although these lines are now non-profitable they can be converted into profitable operation by conversion to motor coach operation in part and adoption of one-man rail operation on the remainder.

Under these circumstances they should not be disposed of without financial consideration commensurate with their real value. There is, of course, a connection between the continued use of these lines and the heavy investment Pacific Electric has made in the subway terminal.

#### Disposal of All Passenger Operations-(PR3-G4)

This consideration is parallel to the previous section under formation of separate corporations. Under that section it was contemplated that even though a separate corporation would be set up it would be owned and controlled either by Pacific Electric or its parent Southern Pacific Company.

Under this heading, consideration is given to the outright disposal of all passenger operations to an entirely disassociated entity with no connection between the new passenger corporation and Pacific Electric either corporate or managerial. As indicated above, there is every reason to believe that under the proposed modernization program, operation of passenger service can be conducted on a satisfactory basis from both the point of view of the Company and the public, provided the proper organization and policy are established, and distinct lines of authority and responsibility are laid down and followed.

### IV. INTERIM ACCOMPLISHMENTS

#### ORGANIZATION AND PERSONNEL

One of the principal recommendations in the preliminary report was that changes be effected in the organization chart, the chain of authority, and the functional organization of the Company in order to bring operations more nearly into accord with requirements as they exist today rather than maintain the same features of organization designed to meet requirements as they existed in the past. Prompt action was taken by the Company on this phase of the problem and briefly the accomplishments are described below under the several principal headings of organization. Section III of this report describes in considerable detail the accomplishments in the several departments and offices.

#### DIVISION OF LOS ANGELES MOTOR COACH LINES

For more than a year consideration has been given to the advisability of dissolving the Los Angeles Motor Coach Lines and dividing the operations between the two principal owners, Los Angeles Transit Lines and Pacific Electric.

Negotiations have been underway for several months looking toward that objective and a mutually agreeable basis has now been reached and application has been filed with the Public Utilities Commission for authority to carry the plan into its final stages.

The principal features of the plan consist of dividing the lines between the two companies so that Los Angeles Transit Lines will take over those that fall more nearly within the category of local operation and Pacific Electric will acquire those lines with interurban or suburban characteristics. The lines to be assigned to Pacific Electric are the Wilshire Boulevard Line with exception of local operations, the Fairfax Avenue Line, and the Sunset Boulevard Line. All of the remaining lines will be turned over to Los Angeles Transit Lines.

Accomplishment of this division will bring about a more unified form of operation by eliminating one of the three principal carriers in the Los Angeles Area. Under the present arrangement the operation is performed by an agency jointly formed by the two companies. Motor coaches used in the service are divided as to ownership between the two companies and earnings are shared approximately on a 50 per cent basis. With the division, each Company will take over its own equipment and those facilities that are owned by one but needed by the other in its continued operations will either be sold or made available on an agreeable leasing arrangement.

#### ONE-MAN OPERATION

During the past year arrangements have been completed by the Company for establishing one-man car operation on the Glendale-Burbank Line in connection with use of the 5000 Class P.C.C. cars. Those cars were originally designed for one-man operation and equipped with all of the necessary safety and control devices and appurtenances required by standard practice and regulatory ruling.

It is not intended at the outset that the one-man operation will be extended to the 600 Class and 950 Class cars used on this line, but that application for authority with respect to those units will be filed at a later stage of the modernization program.

Ultimate disposition of the Venice Short Line will have a direct bearing upon further expansion of one-man operation on the Glendale-Burbank Line and also on the local rail lines that will be retained under the proposed modernization program. The Venice Short Line constitutes the key to the rail equipment problem. Under the present operating conditions there are only a sufficient number of 600 Class cars to meet actual operating requirements, with no excess available. To convert the 600 Class cars to one-man operation requires considerable alteration of the mechanical and electrical features of the vehicle, requiring a considerable length of time in the shops for the alteration. Therefore, it will not be possible to carry out this conversion program until such time as surplus equipment becomes available. If the proposal to replace rail cars on the Venice Short Line with motor coaches is approved, then there will be a sufficient number of 600 Class cars available so that all requirements can be met with complete elimination of the wooden bodied cars of the 950 and 1000 Classes. It will also make available enough 600 Class cars so that a shop schedule of alterations can be instituted without interference with regular service.

Under the composite program set forth herein it is contemplated that local rail service will be retained only on lines operating to the west out of the subway to San Fernando Valley and over Hollywood Boulevard to Beverly Hills and on the Watts line from Los Angeles to Watts. It is proposed to operate all of those remaining services with one-man cars eventually, with exception of the Watts Local. This line operates over the four-track route between Los Angeles and Watts together with heavy freight operation and interurban service between Los Angeles and Long Beach and San Pedro. At least at the outset, under the new program one-man operation on this line does not appear to be desirable.

#### MODERNIZATION STUDIES

As will be described in the following chapter, the major studies involved in the modernization program as they relate to elimination of highly non-profitable passenger rail service and establishment of modern motor coach operation have now been completed and reports setting forth findings and recommendations have been prepared. The modernization program at this stage will eliminate all passenger rail service in the Northern District, all passenger rail service in the Southern District with exception of the Watts, Long Beach and San Pedro Lines, and all passenger rail service in the Western District with exception of the subway San Fernando Valley line to North Hollywood and the Los Angeles-Hollywood-Beverly Hills Lines via Hollywood Boulevard.

Along with these rail eliminations will come an extensive expansion of motor coach operation and maintenance facilities including complete revamping of the Macy Street Shops to eliminate all rail service and repair functions, devoting the entire facilities to motor coach requirements.

#### EFFECT UPON EMPLOYMENT

Unfortunately one of the associated manifestations of such a program as proposed in this report of replacing obsolete rail lines with modern vehicles is the consequent reduction in employment. This is one of the inevitable unhappy circumstances that cannot be circumvented.

The facts are obvious however. It is axiomatic that if financial improvement is necessary, and it has been established as a fact that such improvement can be obtained from no other source than reduction of costs of operation, there must be elimination of man hours and that means displacement of persons.

It is only reasonable to expect that those persons affected adversely will exert every possible effort to prevent the carrying out of the modernization program. Their action is only natural and can be fully understood and sympathized with, but this phase of the problem should not be permitted to becloud the real issues involved. This program is not something that is new and revolutionary in the economic history of the country; it is only a repetition of the continuous and unavoidable changes that take place by force of nature and not by personal choosing of the industry.

In this connection, it is of interest to note statistics relative to the number of business failures in Southern California during the year of 1948. Statistics show that during that year in Southern California the highest level in a decade and a half was reached wherein there were 777 business failures as reported by Dunn & Bradstreet. That figure represented a 50 per cent increase

over the year of 1947. Although statistics are not available to indicate the number of persons deprived of employment by these failures, it can be assumed to be substantial. The liabilities involved in connection with these failures amounted to \$29,742,000 and include industries ranging from mining and manufacturing, through wholesale trade, retail trade, construction, and commercial services. When those industries found that earnings were insufficient to defray costs of production and operation, they ceased to exist. No organized pressure was exerted to force them to continue in business. Actually the law provides the specific means by which they terminated their activities.

Despite these indications of unemployment that may appear at first glance to be of serious proportions, actual conditions are much less serious. In a property such as Pacific Electric there is a continuous turnover of labor. Every month there are numerous separations from service and a corresponding increase in employment for replacement purposes. The program contemplated herein cannot take place immediately if approved in its entirety, but will be spread over a considerable period of time. During that time the Company would naturally rely upon its labor turnover to the fullest extent in preserving the employment of its operating organization so as to reduce to a minimum, and eliminate entirely if possible, the actual outright displacement of anyone. Even if this is not possible, however, it should not be considered as controlling in taking final action with respect to the basic problem involved of bringing revenue and cost of operation into proper balance.

#### PUBLIC UTILITIES COMMISSION ORDER ON 43 RECOMMENDATIONS

Much thought and study has been given to the 43 recommendations made by the engineering staff of the Public Utilities Commission of the State of California, certain of which were ordered by the Commission for compliance on specific time bases. Rather extensive correspondence has been exchanged between the Company and the Commission relative to the recommendations and certain formal action has been taken to effect modification, elimination and extension of time in accordance with the anticipated modernization program of the Company.

Those recommendations in which the Company concurred and was able to carry out have either been completed or are in process and the only ones remaining are those that the Company has officially requested the Commission to give further consideration.

Most of the matters embraced by the 43 recommendations related to continued rail passenger operations, and the proposed modernization program, involving extensive elimination of such rail operations, will change to a great extent the consideration that should be given the recommendations.

#### REDUCED OPERATING EXPENSES

During 1948, there have been drastic reductions made in operating expenses as a means of offsetting financial losses. This practice results in deferred maintenance and is only a temporary palliative with a definite limit established by safety requirements and service necessities. Reference to Table VI of the Appendix will indicate that the net improvement in 1948 over 1947 was, to a substantial extent, brought about by reduction in cost of maintaining wages and structures.

A more positive and permanent solution must be adopted that will in all respects meet with standard operating practices. The modernization program will accomplish this.

of units of passenger equipment required, by lines. In direct comparison it also shows the financial results anticipated under the proposed operation.

In total, the rail lines involved and the local motor coach lines in San Fernando Valley, are conducted at an estimated annual operating loss of \$2,017,504. Under the proposed plan of replacing rail lines with motor coach service and eliminating the local motor coach lines in San Fernando Valley, a net annual operating profit of \$750,000 is anticipated. These figures include the results of one-man car operation on the Glendale-Burbank Line. Although this represents a net improvement of more than \$2,750,000, the resulting profit of \$750,000 per year is certainly not an excess earning.

Under the present arrangement on the lines considered herein, 94 motor coaches are used and 330 rail cars. Under the proposed operation as applied to the same line, there would be 293 motor coaches and 96 rail cars. To carry out the proposed modifications in service and operations will require an estimated expenditure of approximately \$4,500,000 for purchase of new equipment, construction of required facilities, and alterations in existing plant. To continue with rail passenger operations on the lines involved would require, in accordance with the program established by the Public Utilities Commission, an expenditure of approximately \$11,000,000 for new rail cars and reconstruction and rehabilitation of track, roadway and facilities. Expenditure of this \$11,000,000 would only partially satisfy the rail equipment problem and would need to be augmented substantially as time passes for the purchase of additional new rail cars in replacement of present vehicles.

The proposed plan will completely eliminate all wooden bodied rail cars and all of the older steel bodied cars, leaving only three classes of rail equipment, namely, the 5000 Class which are a modern P.C.C. type, the 600-700 Class which are highly satisfactory small rail cars with many years of remaining service, and the 300-400 Class steel cars which are of relatively recent manufacture and of substantial and adequate design and construction, with many years of remaining satisfactory service life.

Therefore, briefly comparing the salient features of the two plans, as related to the rail replacement part of the program, the results are as follows:

1. Proposed Operation

- (a) Eliminate annual deficit of \$2,000,000.
- (b) Create annual net operating profit of \$750,000.
- (c) Produce a net financial improvement of \$2,750,000.
- (d) Eliminate all wooden bodied cars and old steel cars.
- (e) Require total expenditure of approximately \$4,500,000.
- (f) Probably avoid the necessity for increases in fares.

2. Continued Rail Operation

- (a) Incur continued net operating deficit of approximately \$2,000,000 annually.
- (b) Require expenditure of \$11,000,000 on track, roadway and equipment.
- (c) Require further expenditure for rail car replacement within a short period of time.
- (d) Necessitate either immediate application for heavy increases in fares or drastic curtailment or elimination of passenger transportation service.



The summarized results of the proposed plan indicate conclusively the necessity of placing it into effect, and standard practice demonstrates its ability to completely comply with the requirements of public convenience and necessity. Under profitable operation it will be possible for the Company to carry on further improvements and to more nearly meet the desires of the public as to service, equipment and fares.

#### INDIVIDUAL STUDIES AND REPORTS

Four separate reports have been prepared setting forth the results of studies made of the three operating rail districts and the Venice Short Line. Each of those reports was completed at a different time and bound separately for presentation as individual exhibits.

To avoid unnecessary repetition, the detailed findings of the several reports will not be reproduced herein, but only a general review will be included. The consolidated results of all lines have been set forth above and briefly the individual reports contemplate changes as described in the following sections.

#### Venice Short Line Report

1. Elimination of passenger rail service between Subway Terminal building in Los Angeles and western terminus at Santa Monica.
2. Establish in replacement of rail service a motor coach line operating from downtown Los Angeles to Venice, Ocean Park and Santa Monica, paralleling as nearly as possible the existing rail route.
3. Connect the proposed Venice Short Line Motor coach operation with the Los Angeles-Santa Monica via Beverly Hills motor coach line, creating a loop operation.
4. Eliminate rail service, repair and storage facilities, as well as substation and electrical distribution structures, at Ocean Park and construct in replacement a modern motor coach garage with adequate maintenance, service, repair and storage facilities to meet requirements of:
  - (a) Venice Short Line-Beverly Hills motor coach loop.
  - (b) Present Santa Monica Boulevard motor coach line.
  - (c) Wilshire Boulevard motor coach line to be taken over from Los Angeles Motor Coach Lines.
5. Discontinuance of local passenger rail service from Subway Terminal in downtown Los Angeles, along Hill Street, Venice Boulevard and San Vicente Boulevard to Genesee Street.

#### Northern District Lines Report

1. Elimination of passenger rail service and establishment of motor coach operation on the following lines:
  - (a) Pasadena Short Line.
  - (b) Pasadena-Oak Knoll Line.

- (c) Sierra Madre Line.
  - (d) Monrovia-Glendora Line.
  - (e) Baldwin Park Line.
  - (f) Sierra Vista Local Line.
2. Construct freight connection between Glendora Line and San Bernardino Line, thereby eliminating freight operation between Arcadia and Los Angeles along Huntington Drive.
  3. Completely eliminate rails on all lines involved except:
    - (a) Monrovia-Glendora Line east of Arcadia.
    - (b) Baldwin Park Line east of Los Angeles River.
  4. Eliminate use of tracks in central Los Angeles between the east shore of the Los Angeles River and the elevated ramp between Sixth and Seventh Streets, including all track along Aliso Street and San Pedro Street, as well as along Main Street north of the **Sixth** Street Terminal.
  5. Establish express or limited motor coach operation during peak hours between Los Angeles and Pasadena over the Arroyo Seco Parkway.
  6. Reconstruct Macy Street Shops to eliminate all rail repairs and service and to incorporate expansion of motor coach facilities to meet requirements of all Northern District motor coach lines.

Southern District Lines Report

1. Eliminate passenger rail service on:
  - (a) Los Angeles-Santa Ana Line.
  - (b) Los Angeles-Newport Beach Line.
2. Absorb traffic presently using rail service between Los Angeles and Santa Ana by establishment of through direct motor coach service on limited schedules.
3. Absorb traffic presently using rail service between Los Angeles and Newport Beach on present Los Angeles-Newport Beach-Balboa motor coach line by augmenting service and schedules to the extent required.
4. Turn over traffic presently handled between Garden Grove and Santa Ana to local Santa Ana operator.
5. Turn over traffic presently handled in the Lynwood-Bellflower area to local operators presently serving that area.
6. Continue freight operation on the Santa Ana **Line** throughout its entire length except through the main business section of Santa Ana.

7. Continue local rail service on the Los Angeles-Watts Line but reroute Los Angeles end so as to operate over San Pedro Street and the elevated ramp to the Sixth Street Terminal, eliminating use of tracks along Ninth Street and Main Street in downtown Los Angeles.
8. Due to the extremely low traffic density and complete absence of parallel adjacent highways, abandon passenger service without motor coach replacement on the Santa Ana Line, except where present local operators can take over.

#### Western District Lines Report

1. Eliminate rail service on Venice Short Line as described above.
2. Continue rail service on Glendale-Burbank Line under one-man operation as described heretofore.
3. Discontinue rail service on San Fernando Valley Line beyond North Hollywood.
4. Eliminate passenger rail service on Santa Monica Boulevard between Sunset Boulevard and Gordon Street and also on Highland Avenue between Santa Monica Boulevard and Hollywood Boulevard.
5. Reroute San Fernando rail line so as to operate from the Subway Terminal over Sunset Boulevard and Hollywood Boulevard to Highland Avenue, thence over present route, eliminating present operation over Santa Monica Boulevard between Sunset Boulevard and Highland Avenue and along Highland Avenue to Hollywood Boulevard.
6. Continue local rail service from Subway Terminal over Sunset Boulevard and Hollywood Boulevard, through Hollywood, thence over Santa Monica Boulevard to Beverly Hills.
7. Eliminate passenger rail service on the Echo Park Avenue Line between Cerro Gordo Street on Echo Park Avenue, and 12th Street on Hill Street.
8. Eliminate local passenger rail service from 12th Street along Hill Street and Sunset Boulevard to Alvarado Street.
9. Establish motor coach operation in replacement of Echo Park Avenue Line from 12th Street along Hill Street, Sunset Boulevard and Echo Park Avenue to Baxter Street.
10. Establish motor coach operation from 12th and Hill Street along Hill Street and Sunset Boulevard to Vermont Avenue.
11. Establish motor coach operation from 12th Street along Hill Street, Sunset Boulevard and Santa Monica Boulevard to West Hollywood.

12. Establish a new branch of the Riverside Drive Motor Coach Line to operate from North Hollywood over Chandler Boulevard and Van Nuys Boulevard to North Sherman Way in Van Nuys to serve in replacement of that portion of the rail line to be abandoned between North Hollywood and Van Nuys.
13. Abandon service on the Ventura Boulevard Motor Coach Line between Tarzana and North Ridge and between Tarzana and Woodland Hills.
14. Establish a branch of the Ventura Boulevard Line to operate from Ventura Boulevard over Van Nuys Boulevard to North Sherman Way in Van Nuys.
15. Turn over all local motor coach lines in San Fernando Valley either to Asbury Rapid Transit Lines or some other carrier who may be interested.
16. Establish one-man car operation on the Los Angeles-San Fernando Valley Line and the Los Angeles-Beverly Hills Line.

#### OTHER CONSIDERATIONS

The above described major changes in operations and facilities constitutes only one phase of the modernization program which is concerned with elimination of non-profitable passenger rail lines and their replacement with motor coach lines that can be operated at a profit.

Other features of the modernization program which cannot readily be converted into a direct comparison as to financial betterment have been described in the previous chapter under Interim Accomplishments.

In addition to those two features, there are other phases of the modernization program that have not as yet been commenced. The major studies falling within this category are the systemwide analysis of freight operations looking toward greater efficiency and economy, systemwide study of existing motor coach operations, and a careful analysis of the functions of each office and department in the interest of developing the maximum efficiency and utilization of manpower.

### VI. FINANCIAL STATUS OF COMPANY

#### TREND OF PAST EARNINGS

As shown by statements attached to the Appendix, the Company has incurred consistently a series of net losses from 1916 to and including 1947, with exception of the year of 1923 and the four war years of 1942 to 1945, inclusive. The net loss reached a peak of \$3,248,384 in 1938 and the maximum year of net profit was in 1943 in amount of \$5,602,315. For the year of 1947 the net loss was \$1,760,073 as compared with a loss of \$218,879 for 1946. Most recently available figures show a net income for the year of 1948, amounting to a profit of \$33,285 for consolidated operations.

For the year 1947 the net railway operating income before deductions was a deficit of \$837,606.72. Breaking this item down into its respective parts shows the earning status of the various phases of operation as follows:

<u>OPERATING INCOME - YEAR 1947</u>		<u>1948</u>
<u>Freight</u>		
P. E. Ry Freight . . . . .	\$2,119,605.59	2,946,945
Harbor Belt Line . . . . .	<u>(268,058.48)</u>	<u>2,641,626</u>
Total Freight . . . . .	\$ 1,851,547.11	<u>308,319</u> 2,641,626
<u>Passenger</u>		
L. A. M. C. Co. . . . .	559,071.58	338,278
P. E. Ry Motor Coach . . . . .	73,241.36	51,006
P. E. Ry Rail . . . . .	<u>(3,426,188.91)</u>	<u>2,363,521</u>
Total Passenger . . . . .	<u>(2,793,875.97)</u>	<u>1,974,237</u>
Pacific Electric Building . . . . .	104,722.14	211,215
TOTAL OPERATING INCOME . . . . .	<u>(\$ 837,606.72)</u>	<u>878,604</u>

(RED FIGURES)

It will be noted from these figures that passenger railway operations contributed almost entirely to the deficit, amounting to a loss of \$3,426,188.91 for the year. Quick reference to the financial showing for the year 1948, Table VI, might indicate a trend of substantial improvement in view of the net betterment in income of \$1,790,000. However, this is not a true indication. Analyzing the various elements entering into the figure of net income discloses that there was an increase of \$515,000 in revenue which was no doubt brought about by the increase in passenger fares effective in February of 1948. Even this, however, is not a satisfactory result as recent analysis of earnings by lines indicates that for the last few months of 1948 passenger revenue was less than for the same months of 1947, in spite of the increase in rates. Actually the increase in passenger revenue for the year was \$494,000, the difference being made up by increases in other types of revenue.

There was a decrease for the year, of \$752,000 in operating expenses and a decrease in taxes of \$449,000. The principal element of decrease in operating expenses was due to reduced cost of maintaining ways and structures. In this group of accounts there was a reduction of \$813,000. Other groups of accounts were substantially unchanged with exception of equipment which increased by approximately \$200,000 for the year.

Although the final net figures for the year of 1948, segregated between the several phases of operation, are not yet available, it is possible to establish the net operation loss from rail operations and for the year of 1948--that figure was \$2,363,520.72. Complete cost and revenue analyses were made for the first six months of 1948 for each rail and motor coach line of the system. Such a statement is not currently carried forward from month to month, but requires special development. For that reason, in view of the great amount of detail involved, the statement has not been brought beyond

June of 1948.

For that six-months' period, Table II, only one of the rail lines was operated at a profit, that being the special service in connection with Catalina Island steamship operations. Interurban rail lines were operated at a loss for the six months of \$896,791, and local rail lines at a loss of \$265,168, or a total for the half year of \$1,161,959 which meant a loss systemwide of 15.63 cents for each car mile operated. On interurban rail lines the loss per car mile was 27.64 cents. The Los Angeles-Sierra Madre Line operated at a loss of 57.68 cents per mile and the Baldwin Park Line at a loss of 55.37 cents. The Santa Ana Line resulted in a loss of 48.97 cents per mile and the Pasadena-Oak Knoll Line, in a loss of 37.26 cents per mile.

For the same period of time, of the 24 motor coach lines operated on the system, only 8 were conducted at a profit. Out of a total revenue collected on motor coach lines, amounting to \$4,056,019 for the six-months' period, a net operating profit systemwide, of only \$98,833 was earned. This analysis does not convey too bright a picture for the entire passenger operations. If the first six months is indicative of the full year, and it appears to be at least with respect to rail lines, passenger operations for the system, including both rail and motor coach, will probably show a net operating loss for the year of approximately \$2,125,000.

#### RATE OF RETURN AND OPERATING RATIO

There is no significance to discussing the matter of rate of return with respect to this operation under present conditions of facilities and earnings. Although a net profit for the year of 1948 was experienced in amount of slightly more than \$33,000, passenger rail service, as shown above, will be conducted at a loss of more than \$2,000,000. Certainly, even including the freight operations, there is no possibility of a reasonable return on the investment or a reasonable earning on any basis.

Based upon the rule of thumb of 10% of gross revenue representing a reasonable net earning, net operating profit for the year of 1948 systemwide should be in excess of \$3,000,000. Based upon the gross operating revenue of \$34,313,462. However, operating expenses amounted to \$31,024,043 and taxes, \$2,410,815.

The estimated valuation of Pacific Electric properties devoted to passenger operations, based upon previous valuations brought to date, indicates the valuation of properties and facilities as of September 30, 1948, in amount of \$32,639,806 devoted exclusively to passenger operations and \$21,620,534 devoted to joint passenger and freight operations. Valuation of leased facilities for exclusive passenger operation amounted to \$2,600,734 and for joint passenger and freight, \$543,062. This would mean a total of \$46,322,339 devoted to passenger operations, assuming 50% of the joint facilities to be chargeable to passenger operations. Assuming only those items of property exclusively devoted to passenger service, the valuation would be \$35,240,540. Based upon actual usage of facilities, the valuation of those chargeable to passenger operations would be \$50,812,280.

On either of these rough bases, without the usual refinement of providing for Materials and Supplies, Working Cash and other elements, a rate of return of only 5% would bring in more than \$2,000,000 annually. Therefore, it can

be seen that from any possible reasonable measurement of earnings the property is not returning an appropriate net. Based upon passenger operations exclusively, what might be considered as a reasonable profit, falls short in excess of \$4,000,000 even on the lowest basis of calculation, and fails to provide a reasonable profit, on the basis of operating ratio, by a margin of about \$4,300,000.

The only feasible means of coming anywhere near the reasonable margin of profit to which the Company is entitled, is to carry out the modernization program as proposed herein, in the individual district reports, and in the Company's application to the Public Utilities Commission. Anything short of the full extent of the program will react harmfully to the ultimate objective and will take away from the Company an increased measure of financial improvement to which it is justly entitled.

#### METROPOLITAN RAIL RAPID TRANSIT

As indicated heretofore in this report, associated reports, testimony and exhibits, the real issue involved in this case is one of determining the extent to which Pacific Electric Railway Company is entitled to financial relief under the laws of the State of California and if such relief is found to be justified, the nature of the means by which it should be accomplished. It is contended that the facts contained in this report and other associated documents establish beyond a doubt that the Company has been, for many years prior to the war and during years subsequent to the war, subjected to a net loss from its combined operations and an extremely heavy loss from its passenger service which has been of such magnitude as to completely wipe out profitable operations from other phases of the business. This showing establishes conclusively that the Company is entitled to a financial adjustment that will bring its revenues and costs of operations into appropriate balance so as to provide it with a reasonable margin of profit.

The next question is to determine the source from which the financial betterment is to be acquired. Either costs of operations must be decreased, revenues must be increased, or a combination of the two must be effected. The magnitude of deficit is such that under continued operation without major change in facilities there is no possible means of reducing costs of operations to a sufficient degree. Careful analysis of the other side of the formula impels the conclusion that the required financial improvement cannot possibly be realized through straight increases of passenger fares without major changes in facilities. These points having been established, then the search must extend more deeply into the functional aspects of the operation. In view of the high level of fares in effect on this property, as well as throughout the industry, extreme caution should be exercised in attempting to effect further increases. All possible means of correction through other channels should be explored first.

It is a process of elementary reasoning that if the passengers presently carried by the lines of this system consider the service to be necessary to their existence, nothing should be done to unreasonably deprive them of service. This means that the same passenger capacity presently provided should be preserved and changed only as the trend of use inclines upward or downward.

Having arrived at this conclusion, in addition to the decision that fares should not be increased if avoidable, then there is only one element of the formula left for consideration and that is the cost of providing service, Analysis of this feature requires no intricate process of mathematical wizardry; it involves only a simple application of arithmetic.

The uniform classification of accounts by which the Company records all expenditures in accordance with the rules and regulations of the Interstate Commerce Commission of the United States and the Public Utilities Commission of the State of California classifies all expenditures into natural segregations which virtually label each dollar spent as to the purpose for which it was spent. A review of the financial statement setting forth the annual costs of operation by primary accounts gives a quick picture of where the bulk of earnings are spent. Reference to charts and tables of the Appendix will give a quick picture, both graphically and in figures, of the disposition of each dollar of revenue earned.

From the analysis thus far it can be resolved that to bring about the proper financial adjustment, curtailment of expenditures must be effected, as for each dollar of revenue taken in, the Company spends more than one dollar to provide service.

Having arrived at this conclusion we must look for those items of cost which are subject to reduction in sufficient proportion to produce the required improvement in balance of cost against revenue. In a properly organized and managed property it can be assumed that all economies of major proportions have already been effected and with the plant in its existing condition as to facilities and physical requirements of service, there can be no further substantial reduction in cost without serious interference with safety, service and employees' welfare.

Therefore, having established the need for financial improvement, the inability to obtain it from increased fares or reduction of operating costs, and the fact that the service is essential and should not be eliminated, there remains only one source from which the desired result can be forthcoming and that is to take advantage of the economies that can be effected by changing the physical characteristics of the operations to meet modern standards and practices throughout the industry. This reduces the entire problem to one element and that is replacement of obsolete rail passenger facilities that have become increasingly more costly to operate and less capable of providing the highest standard of service, with modern rubber-tired vehicles routed over the paved streets and highways that provide a diversified and extensive coverage of the populated area requiring service.

Aside from the immediate financial requirements as they involve current earnings and cost of providing service, there is a more basic economic aspect of the problem that should not be overlooked and that is the investment in facilities that are to be abandoned in carrying out this program. There is an inclination on the part of certain members of the public to look upon this proposal as one designed selfishly for the sole purpose of producing a profit for the Company. This is not the case. In placing this program into effect the owners of this property are making a tremendous financial sacrifice. Exhibit No. 45 in this proceeding presents a balance sheet as of June 30, 1948, showing an investment in road and equipment, which includes all physical properties required for conducting the service under the Interstate Commerce Commission classification of accounts, amounting to \$98,825,949. After deducting accrued depreciation as recorded on the books, the remaining investment



is \$78,071,470 which the owners are presumably entitled to recover under the fundamental processes of business and economics.

To expel the contention that may be raised as to the validity of book figures as compared with actual valuation, an estimate has been made of the valuation of operating properties and facilities as of September 30, 1948, and an amount of \$84,762,753 determined as the historical reproduction cost. This figure has been developed by bringing forward an official valuation of the property established a number of years ago by the Railroad Commission of the State of California, by adding thereto actual additions and betterments and deducting therefrom actual retirements.

Stepping now to the current problem, the ledger value of the properties that are to be abandoned under this program amounts to \$10,263,300. Applying the accrued depreciation percentage to this figure develops that in the program proposed herein the owners of this property will abandon completely, without recovery except to the extent of salvage value, \$7,950,000 of their investment. This is not a fictitious investment but actual dollars spent to construct or purchase the facilities presently in use that have become obsolete and non-profitable due to unforeseen changes in the economic status of the industry.

It is a distinct display of confidence on behalf of the owners of this property, in the future of its operations under the program set forth herein when they are willing to cast aside without recovery \$7,950,000 and at the same time pour into the property another \$4,500,000. Indeed this should be an indisputable demonstration of the sincerity of the owners of this property to carry on the essential passenger transportation operations that are considered of vital necessity to the many communities served.

We should now analyze the merits of the contentions of those parties who insist that the Company is obligated to continue operating its defunct rail lines and in addition to suffering continued losses from current operations, should invest an additional \$11,000,000 to reconstruct and build up the rail facilities without any prospect of bringing about an improvement in the net earning position of the Company. Such a position cannot be based upon a sound foundation of reasoning when taking into consideration all of the financial and physical considerations that are controlling in shaping the future of this operation. They can only be based upon personal desires and misunderstanding of the actual will of the people as a whole. The entire thesis reduces down to one of insisting upon the public being provided with a deluxe form of transportation service by a private corporation at a cost greater than the revenue that can ever be realized even under the most optimistic estimates.

Another faction of the proponents for preservation of existing passenger rail lines is motivated in its endeavors by the desire to create a Metropolitan Rail Rapid Transit System to be operated by a duly constituted Transportation District. It is this group that brings to bear the greater amount of opposition to the proposed replacement of existing non-profitable passenger rail lines by profitable motor coach operations. They insist that development of a publicly owned Rail Rapid Transit System is largely dependent upon preservation of existing tracks and rights-of-way of Pacific Electric Railway Company.

It is true that the rail lines of the Company were originally laid out in such fashion as to provide the most beneficial and effective coverage of the area from a transportation point of view. At least it must be conceded that the Company did exercise judicious foresight in its early engineering of facilities to meet future requirements. This fact alone, however, cannot possibly under the greatest stretch of the intent of the law or common sense be construed as an obligation upon the Company to preserve these rail lines at heavy financial losses to itself for the benefit of the public, to the extent that they may ultimately be considered desirable for incorporation into a publicly owned Rail Rapid Transit Program, if such should ever develop. There is absolutely no connection between the two from the point of view of the real equities involved.

It has been to a large extent due to the preliminary negotiations toward development of a Metropolitan Rail Rapid Transit District that Pacific Electric has deferred action in connection with a modernization program. The Company management has been most receptive throughout the development of this plan to the ultimate advantages it might bring and has actively participated to the extent of contributing substantially of both funds and manpower in an effort to promote and expedite this project which was considered to be in the interest of the general public, despite the inevitable effect it might have upon forcing Pacific Electric out of the transportation field.

The time has now long since passed when the Company should proceed independently upon a course designed to insure its own financial future. It cannot wait longer upon final development of the Metropolitan Rail Rapid Transit System.

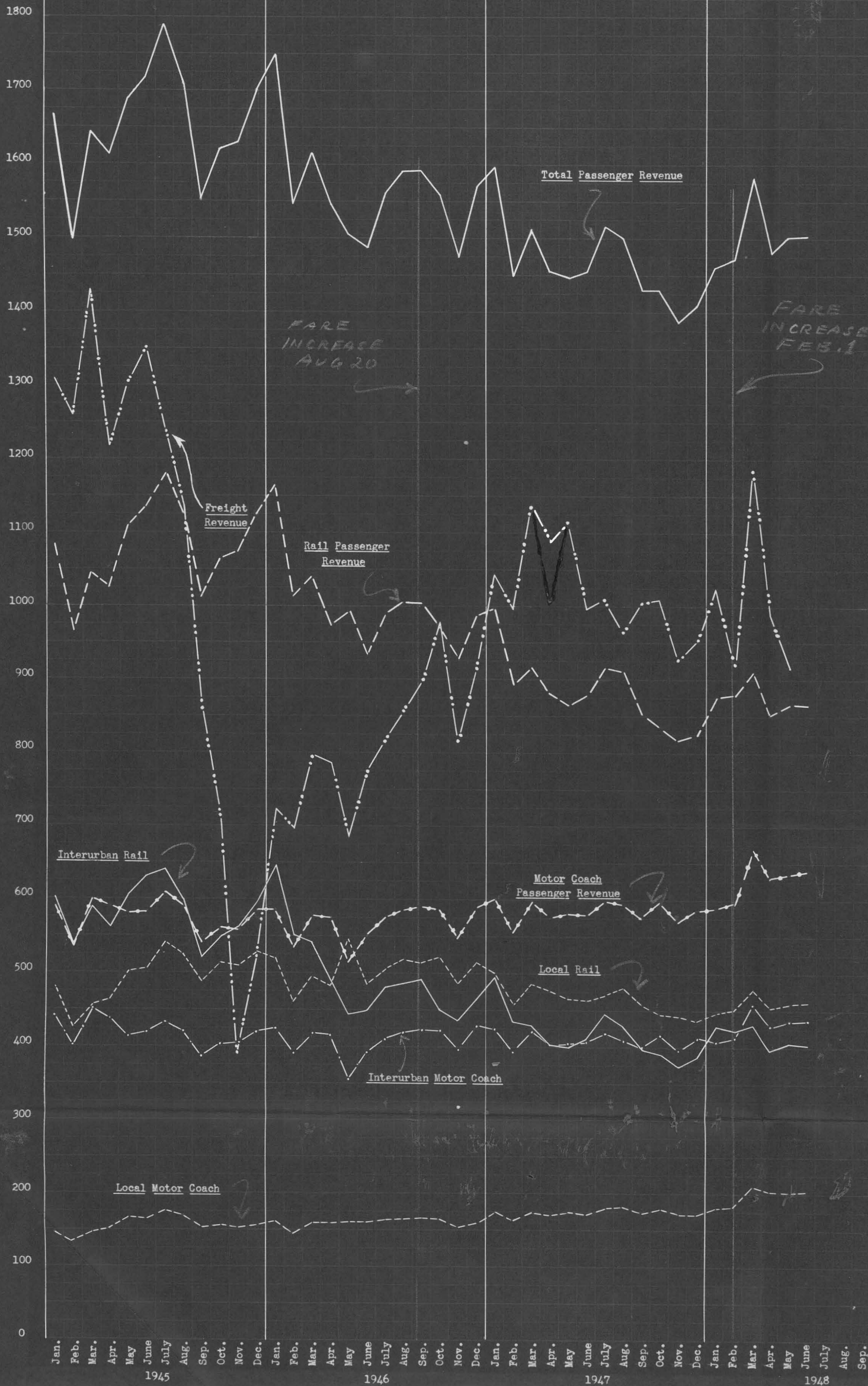
Action in connection with the formation of the Rail Rapid Transit District commenced more than four years ago. Much time and effort was exerted by many influential persons, businesses, public agencies and civic groups to the development of a framework that could be placed before the people for their support. Draft of an enabling act was prepared and submitted for consideration of the State Legislature in 1948. It was the hope at that time that the matter could be brought to a sufficiently quick conclusion to permit incorporation of certain of the rapid transit lines in the system of automobile freeways contemplated for immediate construction by the State of California. The Legislature did not act upon the proposal. Subsequently the matter has been reconsidered, reviewed and modified by its proponents and a proposed act is now again before the State Legislature in the hope that it will take favorable action.

This proposed act is only preliminary to the final realization of the ultimate objective. It will only provide the legal means by which a District can be formed. The District will then be obligated to prepare a detailed plan of rail rapid transit as to all of its technical, financial and physical characteristics which must then be submitted to a vote of the people and the cities embraced within the District. There is no assurance whatever that, even if the enabling act is passed, the District formed and a plan prepared, that it will be favorably acted upon by the people. To the contrary, there is evidence of much opposition to the plan on the part of certain of the cities that would be included within the District. Unanimity of thought and desire is difficult of accomplishment in any enterprise that involves so many communities with such diversity of interests. Even if the way were paved completely so that immediate action could be started toward ultimate constr-

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PACIFIC ELECTRIC RAILWAY COMPANY  
PASSENGER AND FREIGHT REVENUE - BY MONTHS  
YEARS 1945, 1946, 1947, AND 1948

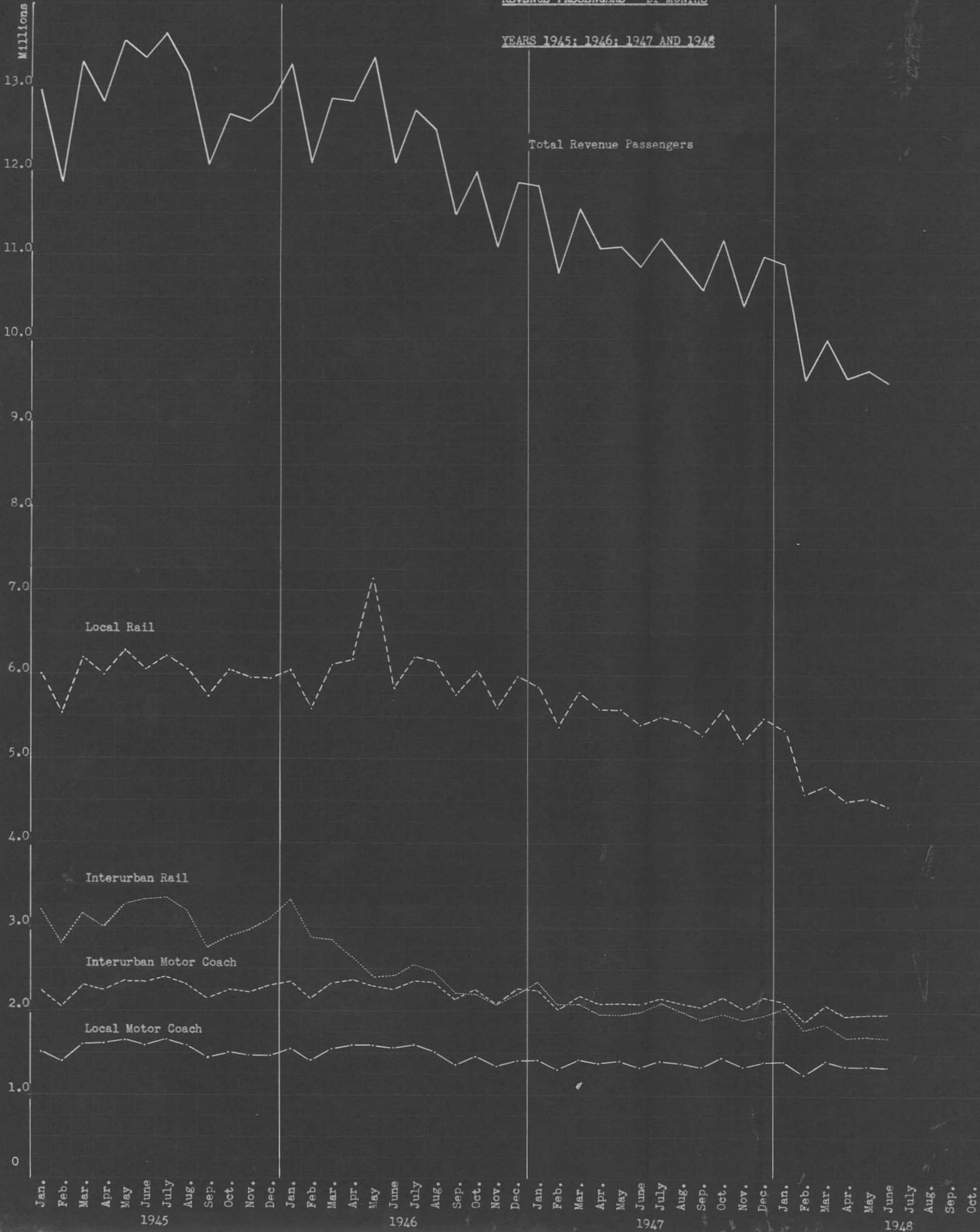
Revenue  
Dollars  
(Thousands)



PACIFIC ELECTRIC RAILWAY COMPANY

REVENUE PASSENGERS - BY MONTHS

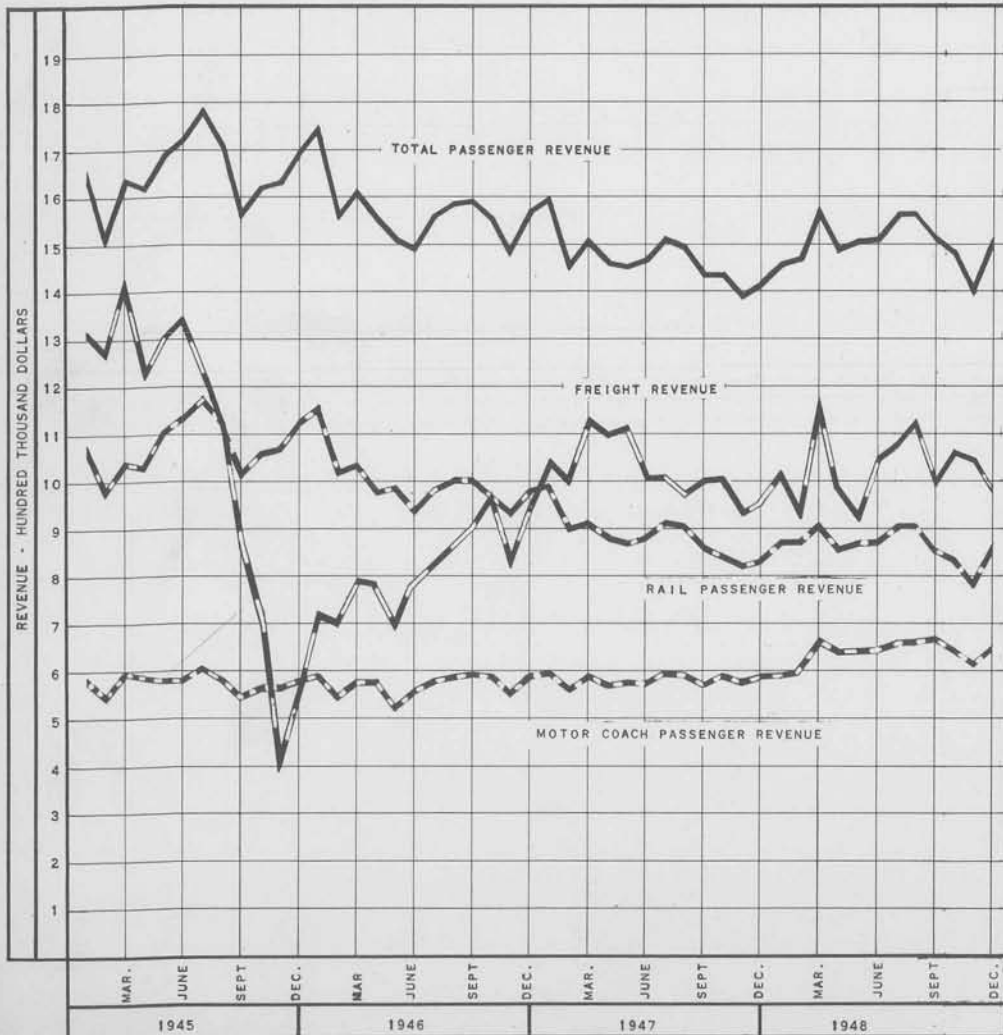
YEARS 1945; 1946; 1947 AND 1948



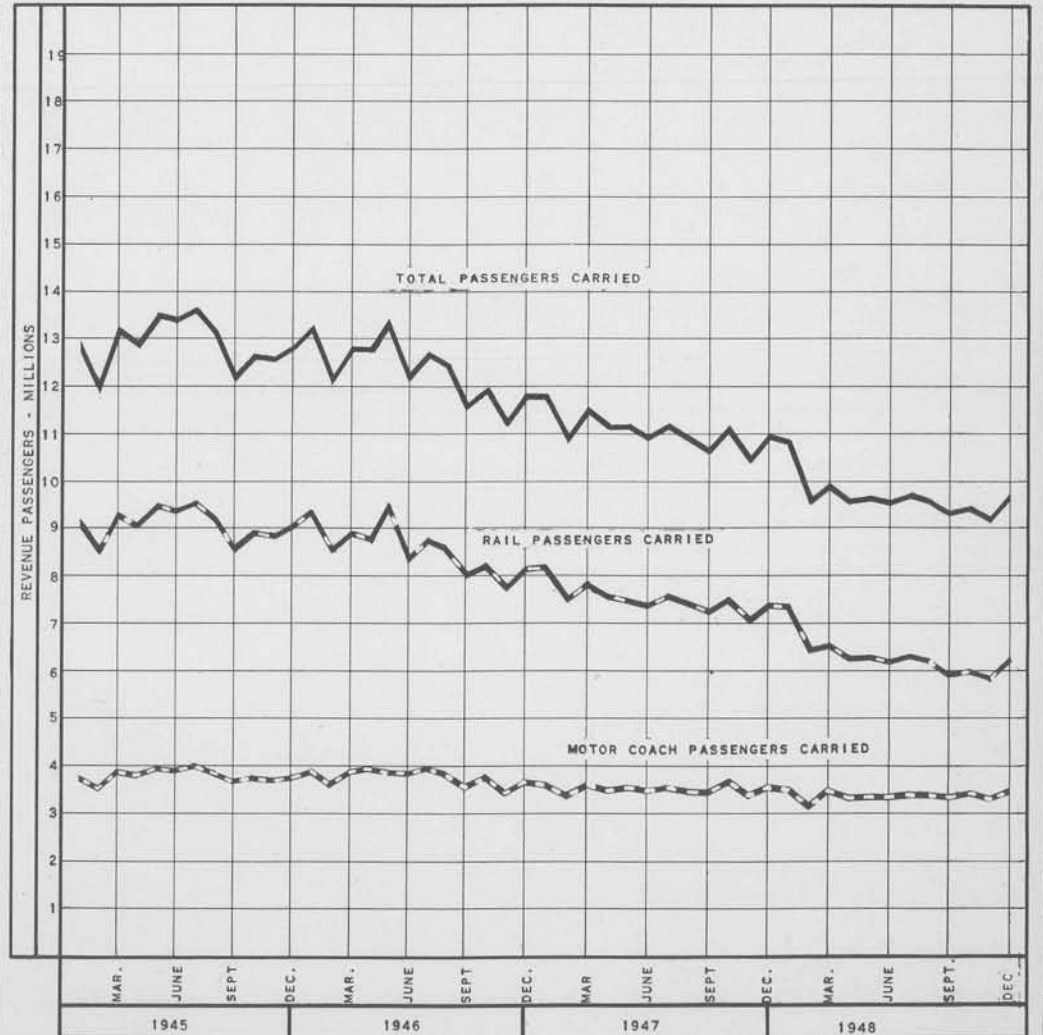
PACIFIC ELECTRIC RAILWAY COMPANY

# MONTHLY REVENUE AND PASSENGERS

PASSENGER AND FREIGHT REVENUE

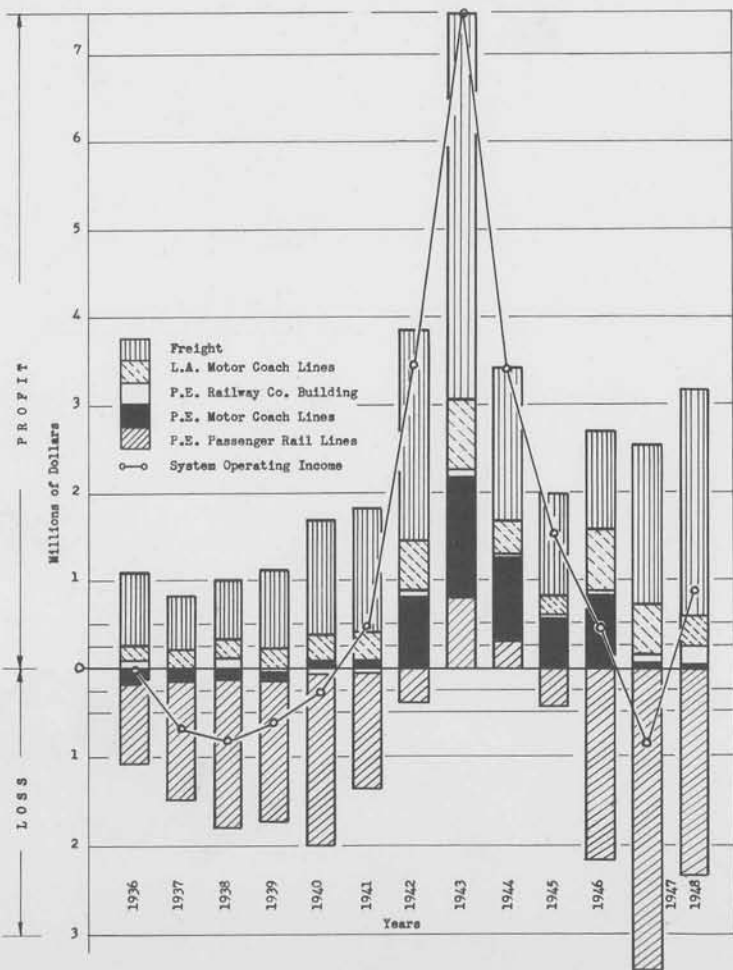


REVENUE PASSENGERS

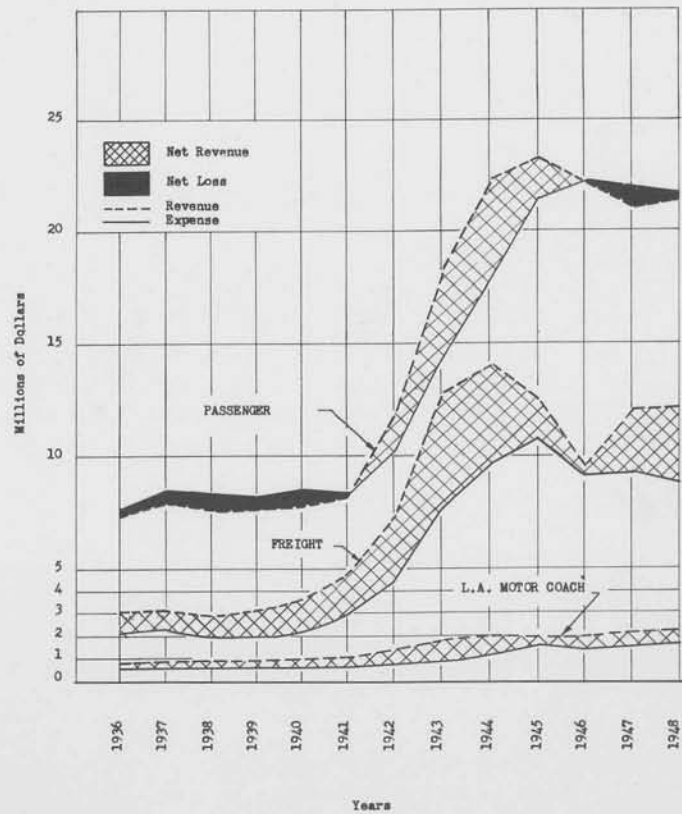


PACIFIC ELECTRIC RAILWAY COMPANY  
EARNINGS, COST, AND OPERATING INCOME

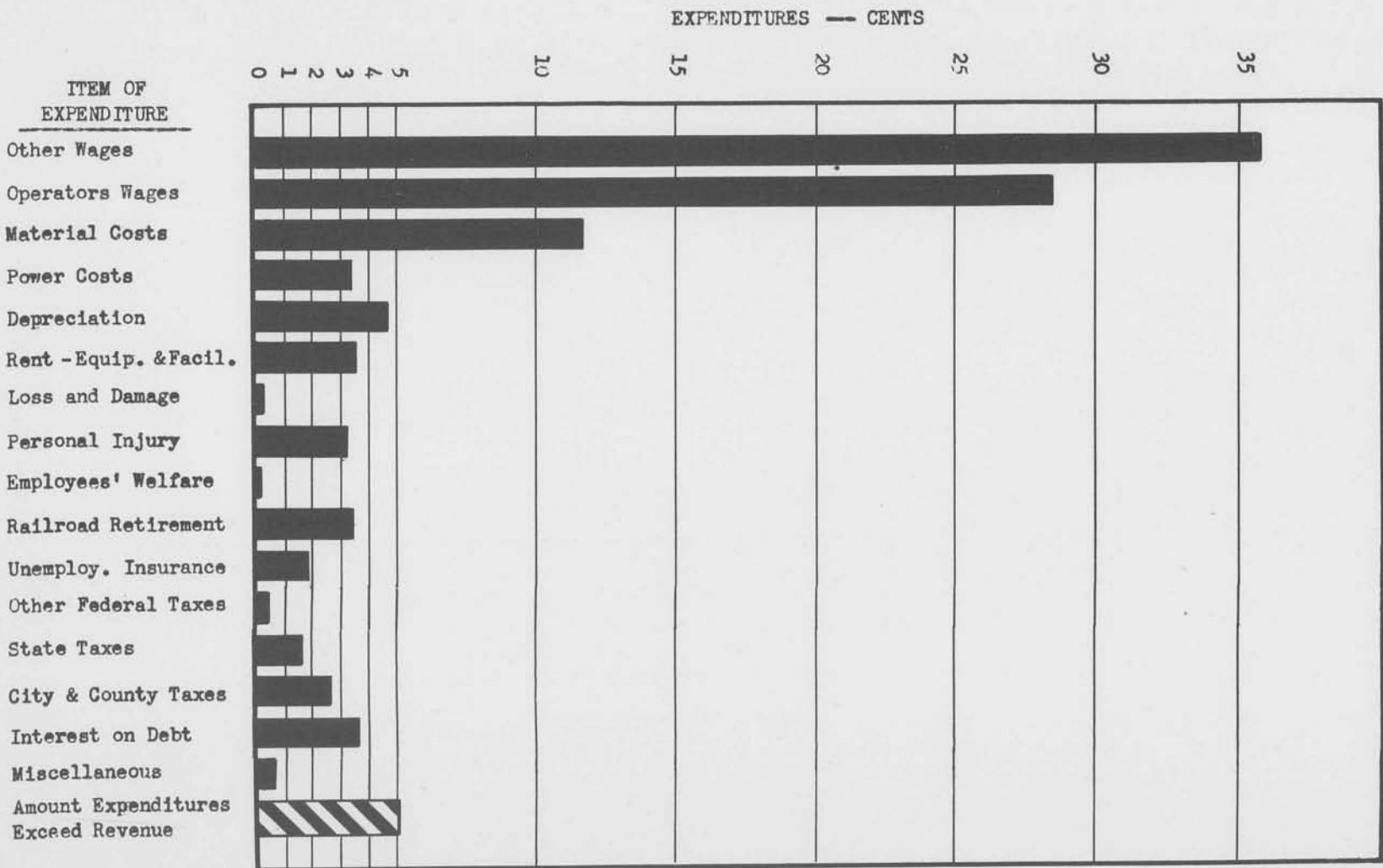
OPERATING INCOME BY SOURCES



OPERATING REVENUE, EXPENSE, AND NET REVENUE  
(Excluding Operating Taxes)



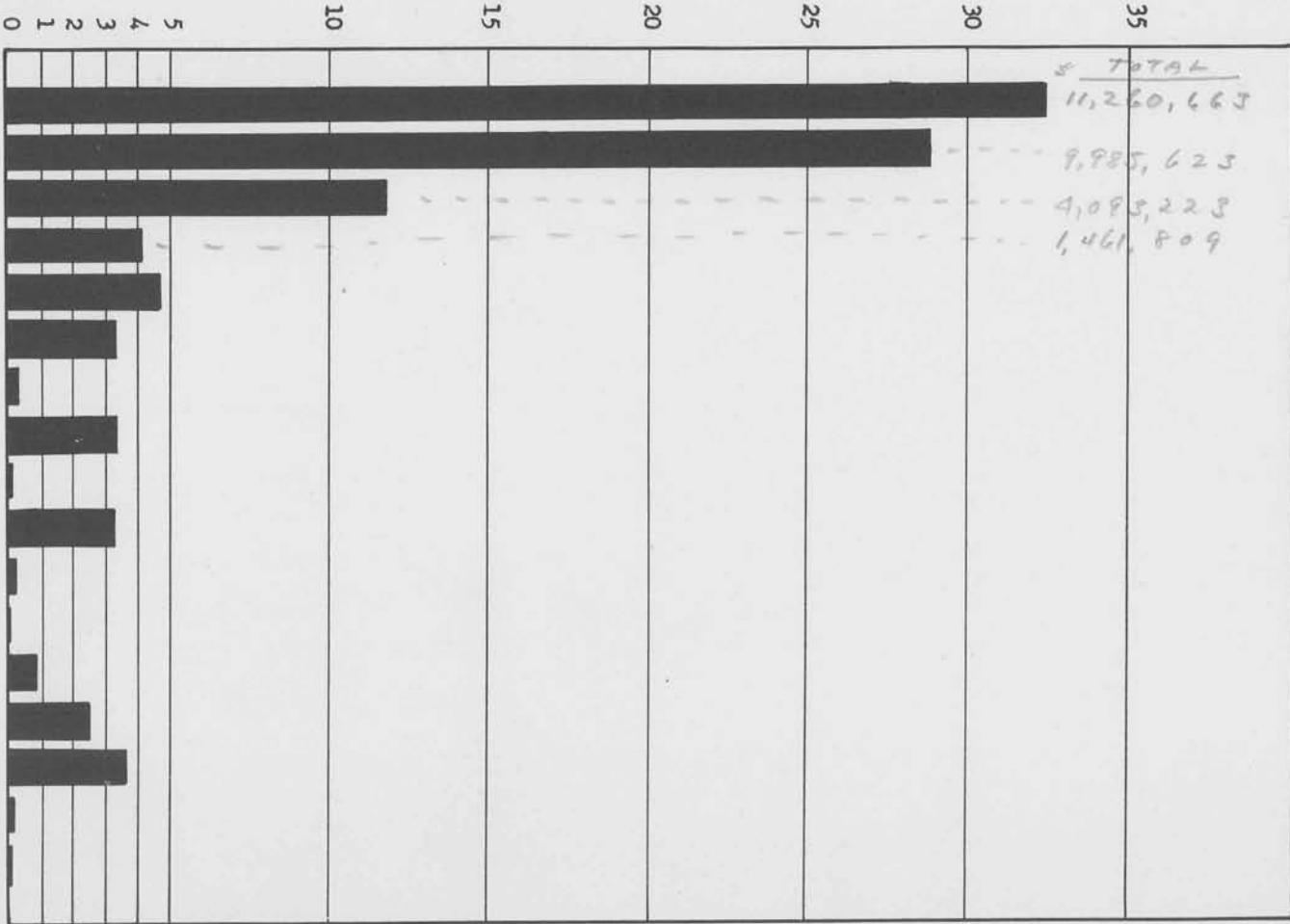
PACIFIC ELECTRIC RAILWAY COMPANY  
EXPENDITURES PER DOLLAR OF REVENUE—YEAR 1947  
 (Including L.A.M.C. and Harbor Belt Line)



12

EXPENDITURES --- CENTS

ITEM OF EXPENDITURE



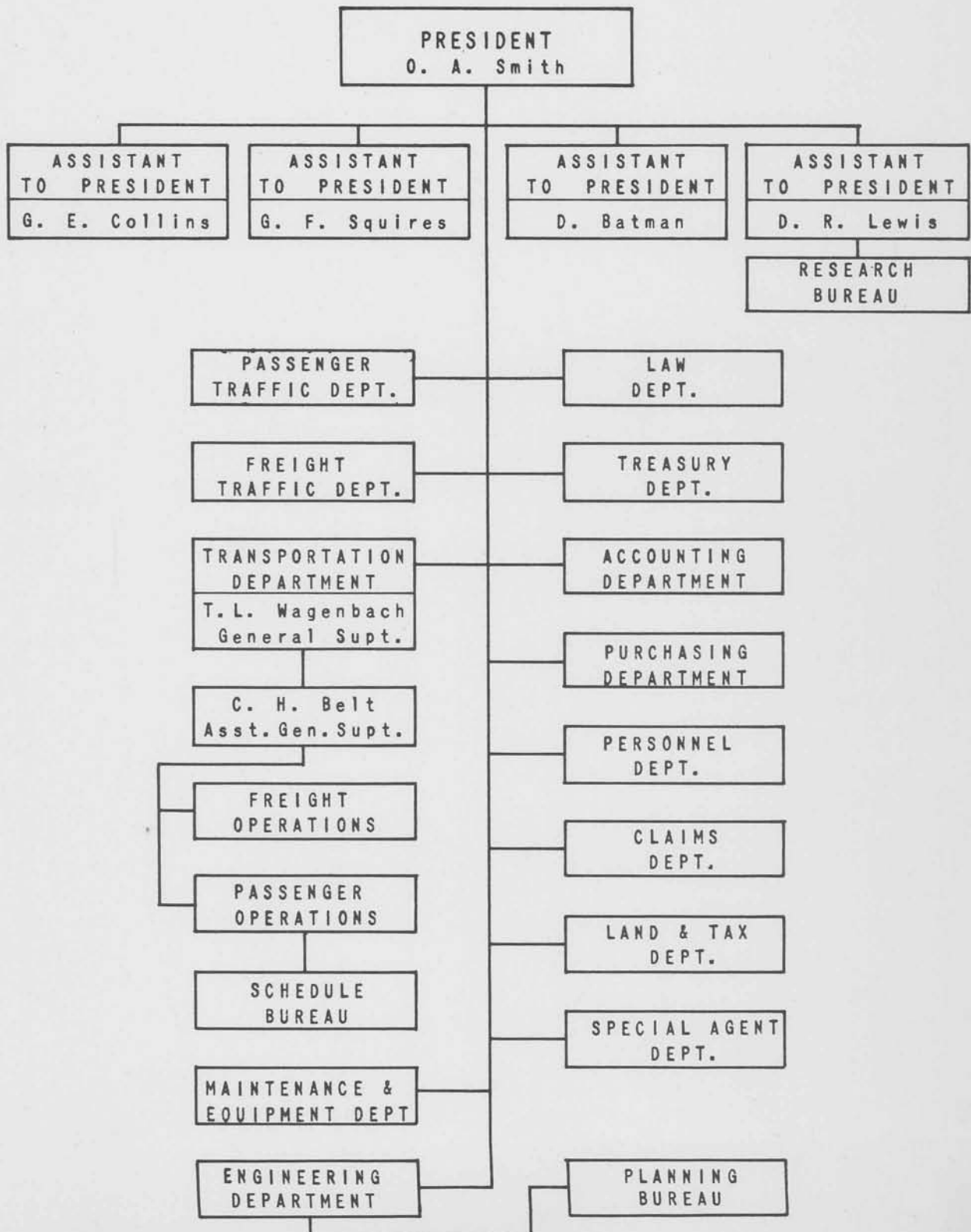
PACIFIC ELECTRIC RAILWAY COMPANY  
EXPENDITURES PER DOLLAR OF REVENUE-YEAR 1948  
(Including L.A.M.C. and Harbor Belt Line)

iii-a

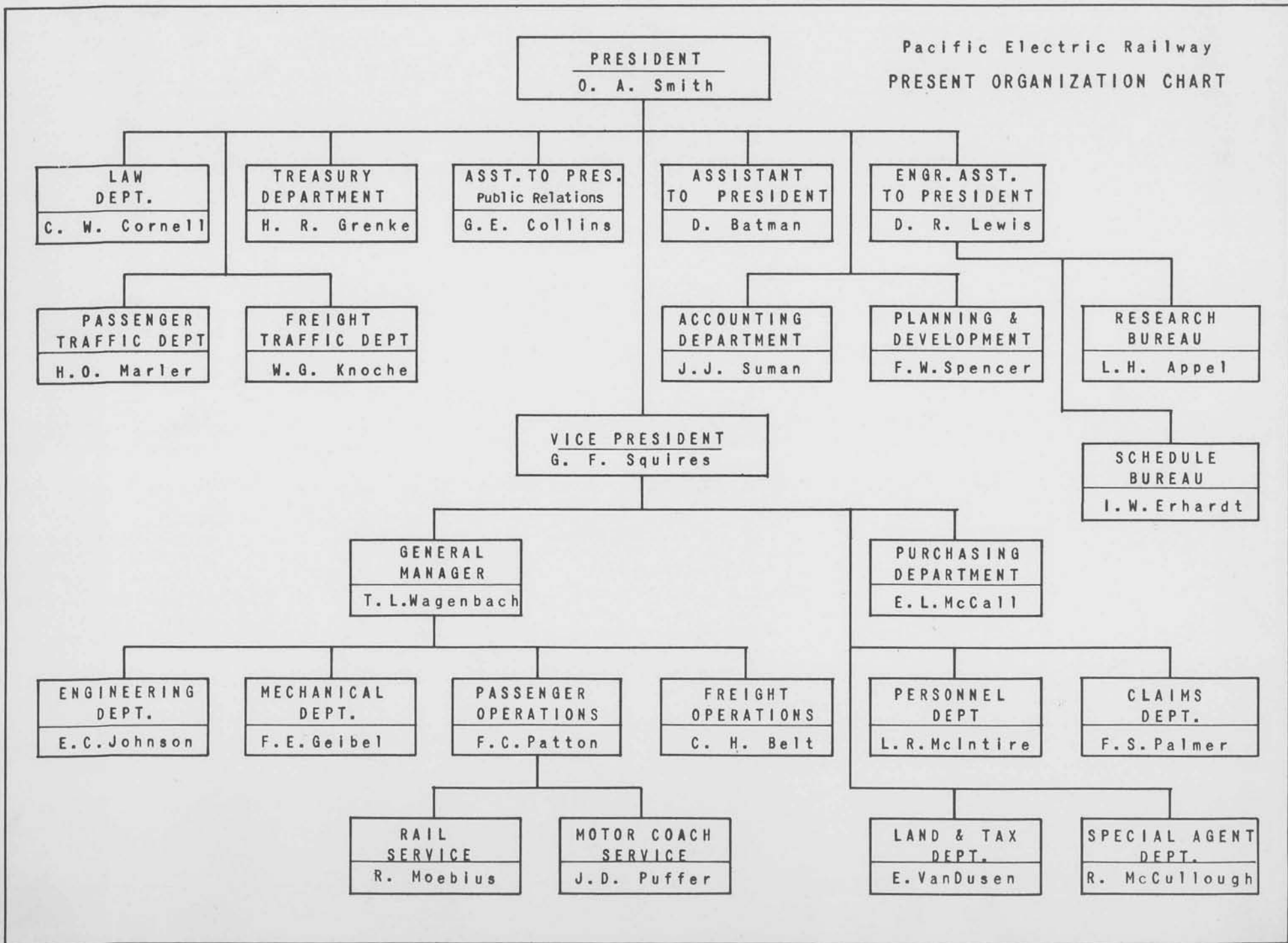
CHART III-A



Pacific Electric Railway Company  
 ORGANIZATION CHART  
 PRIOR TO CHANGE

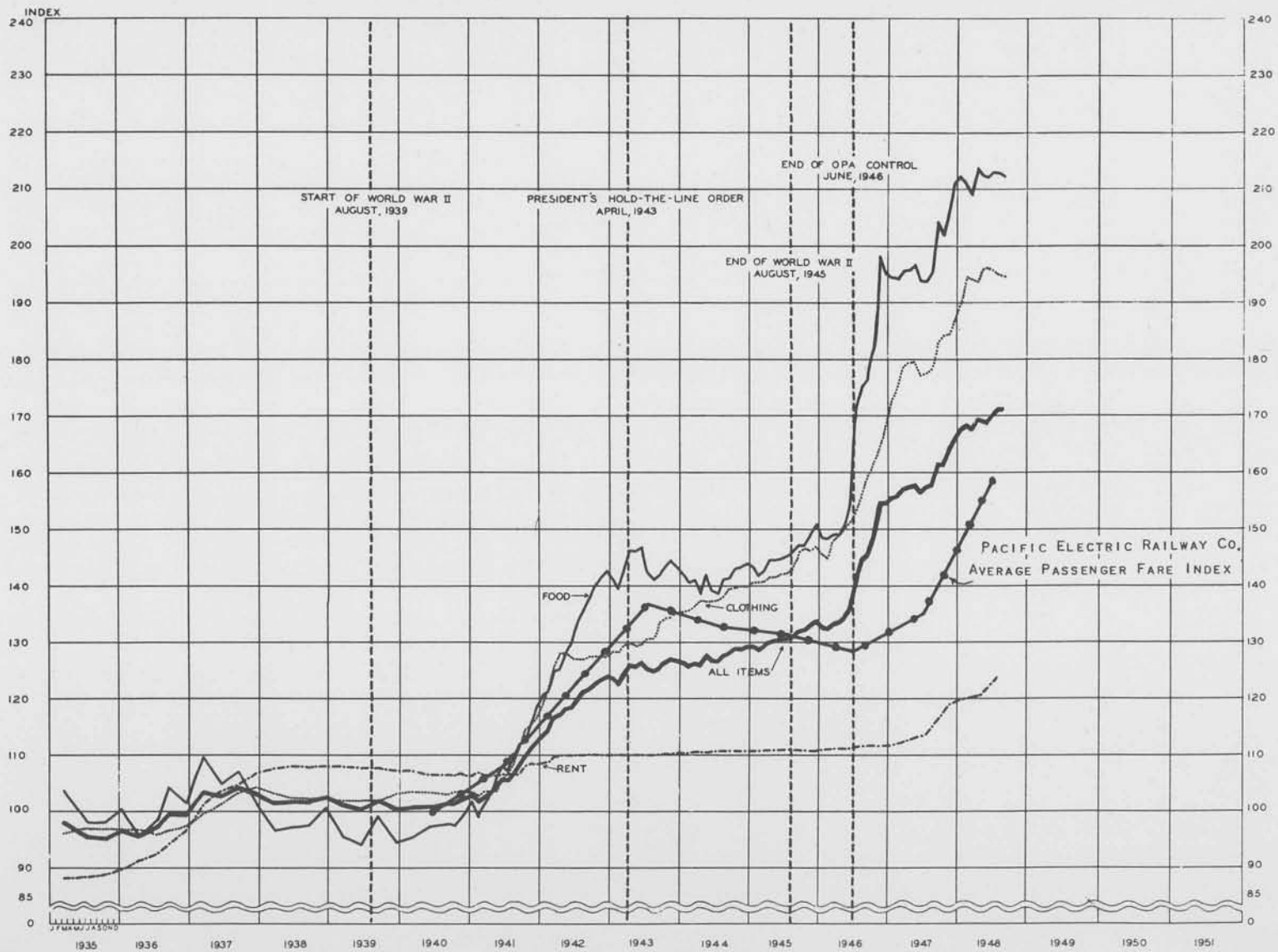


Pacific Electric Railway  
PRESENT ORGANIZATION CHART






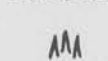
# COST OF LIVING IN LOS ANGELES

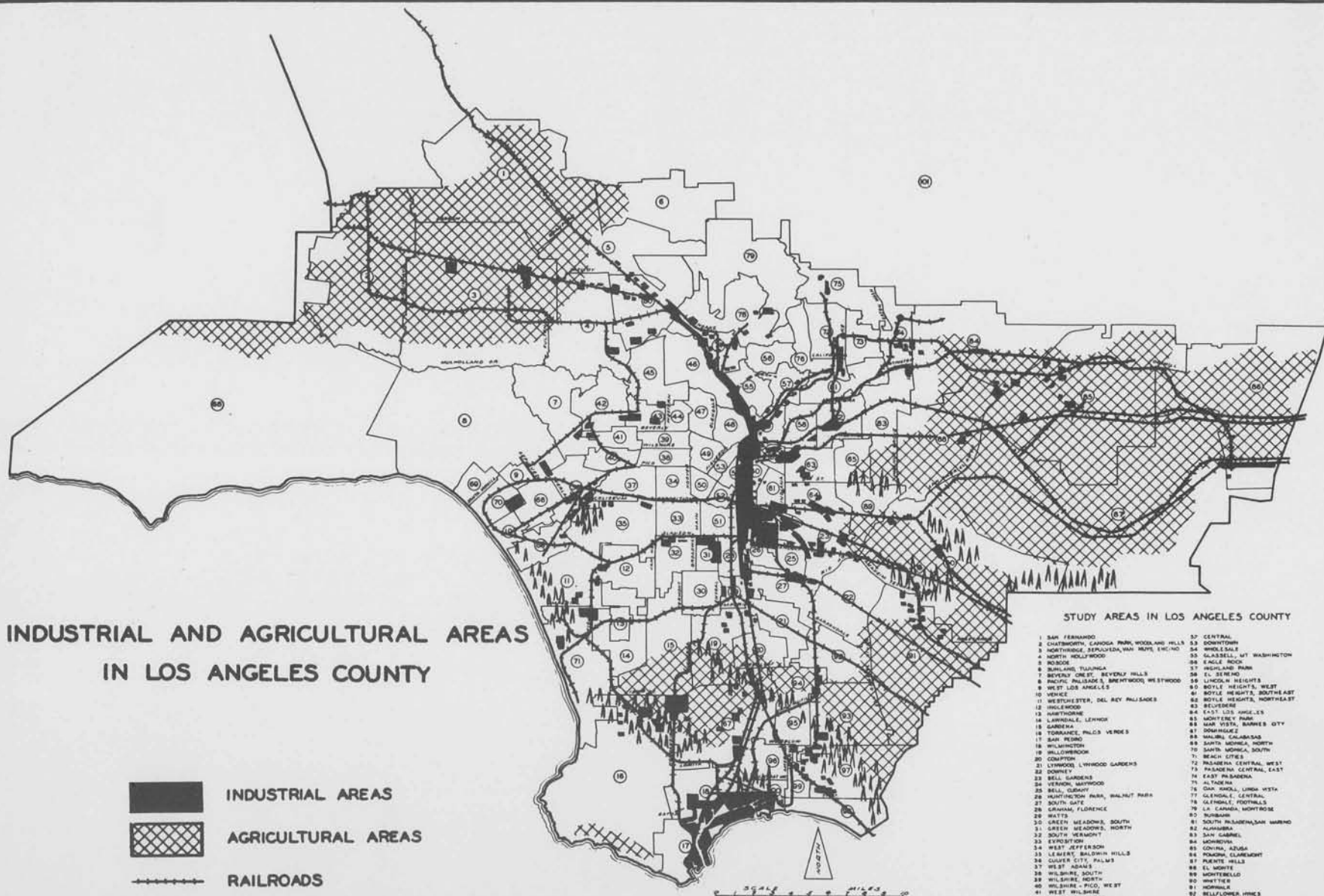
BASED ON CONSUMERS' PRICE INDEXES COMPILED BY THE UNITED STATES BUREAU OF LABOR STATISTICS



PREPARED BY RESEARCH DEPARTMENT -  
WELFARE COUNCIL OF METROPOLITAN LOS ANGELES  
CRD 4-27-48

# INDUSTRIAL AND AGRICULTURAL AREAS IN LOS ANGELES COUNTY

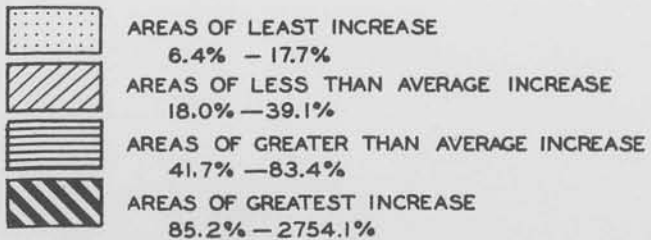
-  INDUSTRIAL AREAS
-  AGRICULTURAL AREAS
-  RAILROADS
-  OIL WELLS



## STUDY AREAS IN LOS ANGELES COUNTY

- |                                            |                                  |
|--------------------------------------------|----------------------------------|
| 1 SAN FERNANDO                             | 57 CENTRAL                       |
| 2 CHATSWORTH, CARPAGA PARK, WOODLAND HILLS | 58 DOWNTOWN                      |
| 3 NORTHridge, REVERLY, VAN NUYS, ENCINO    | 59 HOLLYWOOD                     |
| 4 NORTH HOLLYWOOD                          | 60 GLASSBELL, MT WASHINGTON      |
| 5 BOULDER                                  | 61 EAGLE ROCK                    |
| 6 BURLINGAME, TULUNCA                      | 62 EL SERENO                     |
| 7 BEVERLY WEST, BEVERLY HILLS              | 63 LINCOLN PARK                  |
| 8 PACIFIC PALISADES, BRENTWOOD, WESTWOOD   | 64 LINCOLN HEIGHTS               |
| 9 WEST LOS ANGELES                         | 65 BOYLE HEIGHTS, WEST           |
| 10 VENTURE                                 | 66 BOYLE HEIGHTS, NORTHEAST      |
| 11 WESTGATE, DEL REY PALISADES             | 67 BELTSHIRE                     |
| 12 HOLLYWOOD                               | 68 EAST LOS ANGELES              |
| 13 HAWTHORNE                               | 69 MONTREY PARK                  |
| 14 LORNAVILLE, LEVING                      | 70 SAN VITO, BARNES CITY         |
| 15 GARDENA                                 | 71 DOWNROCK                      |
| 16 TORRANCE, PALCO VERDES                  | 72 WILBUR, CALABAZAS             |
| 17 SAN PEDRO                               | 73 SANTA MONICA, NORTH           |
| 18 WILMINGTON                              | 74 SOUTH MONICA, SOUTH           |
| 19 HOLLOWOOD                               | 75 BEACH CITIES                  |
| 20 COMPTON                                 | 76 PASADENA CENTRAL, WEST        |
| 21 LYNNWOOD, LYNNWOOD GARDENS              | 77 PASADENA CENTRAL, EAST        |
| 22 DORNEY                                  | 78 EAST PASADENA                 |
| 23 BELL GARDENS                            | 79 ALTAIR                        |
| 24 VERNON, MAYWOOD                         | 80 SAN ANGELO, LINDA VISTA       |
| 25 BELL, GUNNAY                            | 81 GLENDALE, CENTRAL             |
| 26 GARDENVIEW PARK, WALNUT PARK            | 82 GLENDALE, FOOTHILLS           |
| 27 SOUTH GATE                              | 83 LA CARMEL, MONTROSE           |
| 28 GARDEN, FLORENCE                        | 84 NARBONNE                      |
| 29 WATTS                                   | 85 SOUTH PASADENA, SAN MARINO    |
| 30 GREEN MEADOWS, SOUTH                    | 86 ALHAMBRA                      |
| 31 GREEN MEADOWS, NORTH                    | 87 SAN GABRIEL                   |
| 32 SOUTH VERMONT                           | 88 MONROVIA                      |
| 33 EVANSTON                                | 89 COVINA, AZUSA                 |
| 34 WEST JEFFERSON                          | 90 POMONA, CLAREMONT             |
| 35 LAKELIST, BALDWIN HILLS                 | 91 PLAINHEATH                    |
| 36 CLAYTON CITY, PALMS                     | 92 EL MONTE                      |
| 37 WEST ADAMS                              | 93 MONTPELIER                    |
| 38 WILSHIRE, SOUTH                         | 94 WHITTIER                      |
| 39 WILSHIRE, NORTH                         | 95 NORWALK                       |
| 40 WILSHIRE - PICO, WEST                   | 96 BELLFLOWER, IRVINE            |
| 41 WEST WILSHIRE                           | 97 NORTH LONG BEACH              |
| 42 WEST HOLLYWOOD                          | 98 WEST LONG BEACH, WINGLEY      |
| 43 HOLLYWOOD, SOUTHWEST                    | 99 WEST LONG BEACH, SAGHILL HILL |
| 44 HOLLYWOOD, SOUTHEAST                    | 100 BELMONT                      |
| 45 HOLLYWOOD HILLS                         | 101 LONG BEACH CENTRAL           |
| 46 GRIFFITH PARK, ATWATER                  | 102 LONG BEACH HARBOR            |
| 47 SILVER LAKE                             | 103 NORTH COUNTY                 |
| 48 ELYSIAN PARK                            |                                  |
| 49 WEST LAKE                               |                                  |
| 50 UNIVERSITY                              |                                  |
| 51 JUALDI                                  |                                  |

### INCREASE IN POPULATION IN LOS ANGELES COUNTY 1940-1948



BASED ON ESTIMATES OF  
THE REGIONAL PLANNING COMMISSION - COUNTY OF LOS ANGELES

#### STUDY AREAS IN LOS ANGELES COUNTY

- |                                             |                                  |
|---------------------------------------------|----------------------------------|
| 1 SAN FERNANDO                              | 57 CENTRAL                       |
| 2 CHATSWORTH, LANOCHA PARK, WOODLAND HILLS  | 58 DOWNTOWN                      |
| 3 NORTHBIDGE, SEPULVEDA, VAN NATA, ELMHURST | 59 WOODSIDE                      |
| 4 NORTH HOLLYWOOD                           | 60 CLASSICAL, UT WASHINGTON      |
| 5 BOSON                                     | 61 EAGLE ROCK                    |
| 6 SUNLAND, TULINGA                          | 62 HIGHLAND PARK                 |
| 7 BEVERLY CREST, BEVERLY HILLS              | 63 EL SERENO                     |
| 8 PACIFIC PALISADES, BENTWOOD, WESTWOOD     | 64 LYNDHURST HEIGHTS             |
| 9 WEST LOS ANGELES                          | 65 BOYLE HEIGHTS, WEST           |
| 10 VENTURA                                  | 66 BOYLE HEIGHTS, SOUTHEAST      |
| 11 WESTCHESTER, DEL REY, MILITARY           | 67 BOYLE HEIGHTS, NORTHEAST      |
| 12 INGLEWOOD                                | 68 BELLEVUE                      |
| 13 HAWTHORNE                                | 69 EAST LOS ANGELES              |
| 14 LORNADELE, LEWIS                         | 70 MONTECITO PARK                |
| 15 GARRENA                                  | 71 MAP YOSTA, BARKER CITY        |
| 16 TORRANCE, PALMS VERDES                   | 72 DOWNSIDE                      |
| 17 SAN PEDRO                                | 73 MALIBU, CALABASO              |
| 18 WILMININGTON                             | 74 SANTA MONICA, NORTH           |
| 19 WILLCRESTON                              | 75 SANTA MONICA, SOUTH           |
| 20 COMPTON                                  | 76 BEACH CITY                    |
| 21 LYNNWOOD, LINDWOOD GARDENS               | 77 PASADENA, CENTRAL, WEST       |
| 22 DOWNEY                                   | 78 PASADENA, CENTRAL, EAST       |
| 23 BELL GARDENS                             | 79 EAST PASADENA                 |
| 24 VERNON, MAYWOOD                          | 80 ALTADENA                      |
| 25 BELL, GARDEN                             | 81 OAK HILLS, LINDA VISTA        |
| 26 HUNTINGTON PARK, WALNUT PARK             | 82 GLENDALE, CENTRAL             |
| 27 SOUTH GATE                               | 83 GLENDALE, FOOTHILLS           |
| 28 GRAHAM, FLORENCE                         | 84 LA CANADA, MONTE ROSE         |
| 29 WATTS                                    | 85 SUNBAY                        |
| 30 GREEN MEADOWS, SOUTH                     | 86 SOUTH PASADENA, SAN MARINO    |
| 31 GREEN MEADOWS, NORTH                     | 87 ALHAMBRA                      |
| 32 SOUTH VERMONT                            | 88 SAN GABRIEL                   |
| 33 EVANSTON                                 | 89 SAN ANTONIO                   |
| 34 WEST JEFFERSON                           | 90 CONITA, AZUSA                 |
| 35 LEAMONT, BALDWIN HILLS                   | 91 POMONA, CLAREMONT             |
| 36 SUIPER, CIV. PALMS                       | 92 PLUMERIE HILLS                |
| 37 WEST ADAMS                               | 93 EL MONTE                      |
| 38 WILSHIRE, NORTH                          | 94 MONTEBELLO                    |
| 39 WILSHIRE, SOUTH                          | 95 WHITTIER                      |
| 40 WILSHIRE, PICO, WEST                     | 96 HERRING                       |
| 41 WEST WILSHIRE                            | 97 BELFLOWER, PINE S             |
| 42 WEST HOLLYWOOD                           | 98 LANTWOOD                      |
| 43 HOLLYWOOD, SOUTHWEST                     | 99 NORTH LONG BEACH              |
| 44 HOLLYWOOD, SOUTHEAST                     | 100 BIRBY ANCHLES                |
| 45 HOLLYWOOD HILLS                          | 101 WEST LONG BEACH, WINGDA      |
| 46 GRIFFITH PARK, WATER                     | 102 EAST LONG BEACH, SIGNAL HILL |
| 47 SILVER LAKE                              | 103 BELMONT                      |
| 48 ELYSIAN PARK                             | 104 LONG BEACH, CENTRAL          |
| 49 WEST LAKE                                | 105 LONG BEACH, HARBOR           |
| 100 UNIVERSITY                              | 106 NORTH COUNTY                 |
| 51 AVALON                                   |                                  |



PREPARED BY RESEARCH DEPARTMENT  
WELFARE COUNCIL OF METROPOLITAN LOS ANGELES  
8-1-48 EPO

Pacific Electric Railway Company

SUMMARY OF ESTIMATED ANNUAL FINANCIAL RESULTS FROM PRESENT AND PROPOSED OPERATIONS

PRESENT OPERATIONS					PROPOSED OPERATIONS					Present Load Factor
LINES	Revenues	Expenses & Taxes	Net	Units Incl. Spares (M.C.) (Rail)	LINES	Revenues	Expenses & Taxes	Net	Units Incl. Spares (M.C.) (Rail)	
	(1)	(2)	(3)	(4) (5)		(6)	(7)	(8)	(9) (10)	
<b>NORTHERN DISTRICT LINES</b>					<b>NORTHERN DISTRICT LINES</b>					
Pasadena via Oak Knoll and Pasadena Short Line (rail)	\$ 797,218	\$ 978,154	\$ (180,936)	- 35	Pasadena via Oak Knoll and Pasadena Short Line (M.C.)	\$ 738,352	\$ 537,648	\$ 200,704	27 -	33 153,385
Monrovia-Glendorra (rail)	481,059	774,801	(293,742)	- 20	Monrovia-Glendorra (M.C.)	539,925	462,927	76,998	24 -	32 19,255
Sierra Madre (rail and M.C.)	105,105	169,723	(64,618)	1 8	Sierra Madre (M.C.)	105,105	107,638	(2,533)	8 -	8 24,844
Sierra Vista (rail)	332,729	485,087	(152,358)	- 16	Sierra Vista (M.C.)	332,729	329,287	3,442	19 -	19 3,442
El Monte-Baldwin Park (rail)	342,694	624,464	(281,770)	- 22	El Monte-Baldwin Park (M.C.)	325,876	299,625	26,251	23 -	28 4,096
<b>Total-Northern District Lines</b>	<b>\$2,058,805</b>	<b>\$3,032,229</b>	<b>\$ (973,424)</b>	<b>1 101</b>	<b>Total-Northern District Lines</b>	<b>2,041,987</b>	<b>\$1,737,125</b>	<b>\$ 304,862</b>	<b>101 -</b>	<b>120 155,334</b>
<b>SOUTHERN DISTRICT LINES</b>					<b>SOUTHERN DISTRICT LINES</b>					
L.A.-Santa Ana (rail)	\$ 472,622	\$ 676,701	\$ (204,079)	- 18	L.A.-Santa Ana (M.C.)#	\$ 46,611	\$ 44,225	\$ 2,386	3 -	
L.A.-Newport Beach (rail)	24,129	45,696	(21,567)	- 3	L.A.-Newport-Balboa (M.C.)#	21,670	29,682	(8,012)	3 -	
<b>Total-Southern District Lines</b>	<b>\$ 496,751</b>	<b>\$ 722,397</b>	<b>\$ (225,646)</b>	<b>- 21</b>	<b>Total-Southern District Lines</b>	<b>\$ 68,281</b>	<b>\$ 73,907</b>	<b>\$ (5,626)</b>	<b>6 -</b>	
<b>WESTERN DISTRICT LINES</b>					<b>WESTERN DISTRICT LINES</b>					
Venice Short Line (rail)	\$ 779,720	\$ 973,626	\$ (193,906)	- 42	Venice Short Line-Santa Monica (combined M.C.)	\$1,679,642	\$1,519,928	\$ 159,714	81 -	90 101,696
L.A.-Santa Monica (M.C.)	899,922	872,338	27,584	53 -	L.A.-Santa Monica Blvd.-West Hollywood-San Fernando Valley (rail)	490,508	467,888	22,620	28 -	
Subway-Santa Monica Blvd.-West Hollywood-San Fernando Valley (rail)	1,133,808	1,390,306	(256,498)	- 44	Hollywood (M.C.)	862,975	803,731	59,244	- 42	
Glendale-Burbank (rail)	862,975	922,231	(59,256)	- 42	Glendale-Burbank (rail)	862,975	803,731	59,244	- 42	
Subway-Hollywood Blvd.-San Vicente-Echo Park (rail)	1,766,851	1,944,629	(177,778)	- 80	Subway-Hollywood Blvd.-North Hollywood-Bev.Hills (rail)	1,409,958	1,166,832	243,126	- 54	
Hollywood-Ventura (M.C.)	223,632	235,589	(11,957)	10 -	Echo Park Avenue (M.C.)	178,647	173,129	5,518	12 -	
North Hollywood (M.C.)	66,417	92,526	(26,109)	3 -	Hollywood-Ventura (M.C.)#	295,654	285,917	9,737	13 -	
Van Nuys-Canoga Park (M.C.)	40,890	50,943	(10,053)	2 -	L.A.-No.Hollywood-Van Nuys via Riverside Dr. (M.C.)#	417,797	469,903	(52,106)	27 -	
Van Nuys-San Fernando (M.C.)	28,289	39,653	(11,364)	1 -	Hill St.-Sunset Blvd. (M.C.)	462,893	459,963	2,930	25 -	
Van Nuys-Birmingham (M.C.) Hospital	36,195	42,724	(6,529)	2 -	<b>Total-Western District Lines</b>	<b>\$5,798,074</b>	<b>\$5,347,291</b>	<b>\$ 450,783</b>	<b>186 96</b>	
L.A.-No.Hollywood-Van Nuys via Riverside Dr. (M.C.)	238,642	317,991	(79,349)	20 -						
No.Hollywood-Studio City (M.C.)	14,992	28,211	(13,219)	2 -	<b>TOTAL - PRESENT OPERATIONS</b>	<b>\$ 8,647,889</b>	<b>10,665,393</b>	<b>\$ (2,017,504)</b>	<b>94 330</b>	
<b>Total-Western District Lines</b>	<b>\$6,092,333</b>	<b>\$6,910,767</b>	<b>\$ (818,434)</b>	<b>93 208</b>	<b>TOTAL - PROPOSED OPERATIONS</b>	<b>\$7,908,342</b>	<b>\$7,158,323</b>	<b>\$ 750,019</b>	<b>293 96</b>	

# - Additional service proposed on present motor coach lines.

NOTE - Estimated results are based on present wage rates, including recent increase to operating personnel, but do not include any possible increase in non-operating personnel account present demand for wage increase and reduced work week. The effect of further increase in payroll cost will, of course, result in a further widening of the comparative results.

( ) - Indicates RED figures.

Pacific Electric Railway Company

REVISED SUMMARY OF ESTIMATED ANNUAL FINANCIAL RESULTS FROM PROPOSED OPERATIONS

Lines		Revenues	Expenses & Taxes	Net	Units	
					Incl. (M.C.)	Spares (Rail)
	(1)	(2)	(3)	(4)	(5)	(6)
<u>NORTHERN DISTRICT LINES</u>						
1	Pasadena via Oak Knoll & Pasadena Short Line (M.C.)	\$ 738,352	\$ 541,856	\$196,496	27	--
2	Monrovia-Glendora (M.C.)	539,925	466,476	73,449	24	--
3	Sierra Madre (M.C.)	105,105	108,388	(3,283)	8	--
4	Sierra Vista (M.C.)	332,729	331,824	905	19	--
5	El Monte-Baldwin Park (M.C.)	325,876	301,785	24,091	23	--
6	Total Northern District Lines	<u>\$2,041,987</u>	<u>\$1,750,329</u>	<u>\$291,658</u>	<u>101</u>	<u>--</u>
<u>SOUTHERN DISTRICT LINES</u>						
7	L.A.-Santa Ana (M.C.)#	\$ 46,611	\$ 44,532	\$ 2,079	3	--
8	L.A.-Newport Balboa (M.C.)#	21,670	29,932	(8,262)	3	--
9	Total Southern District Lines	<u>\$ 68,281</u>	<u>\$ 74,464</u>	<u>(\$ 6,183)</u>	<u>6</u>	<u>--</u>
<u>WESTERN DISTRICT LINES</u>						
10	Venice Short Line-Santa Monica, combined (M.C.)	\$1,679,642	\$1,532,836	\$146,806	81	--
11	L.A.-Santa Monica Blvd.-West Hollywood-Hollywood (M.C.)	490,508	471,425	19,083	28	--
12	Glendale-Burbank (Rail)	862,975	863,274	(299)	--	42
13	Subway-Hollywood Blvd.-No. Hollywood-Beverly Hills (Rail)	1,409,958	1,249,866	160,092	--	54
14	Echo Park Avenue (M.C.)	178,647	174,265	4,382	12	--
15	Hollywood-Ventura Blvd. (M.C.)#	295,654	288,427	7,227	13	--
16	L.A.-No. Hollywood-Van Nuys via Riverside Dr. (M.C.)#	417,797	473,487	(55,690)	27	--
17	Hill St.-Sunset Blvd. (M.C.)	462,893	463,294	(401)	25	--
18	Total Western District Lines	<u>\$5,798,074</u>	<u>\$5,516,874</u>	<u>\$281,200</u>	<u>186</u>	<u>96</u>
19	TOTAL PROPOSED OPERATIONS	<u>\$7,908,342</u>	<u>\$7,341,667</u>	<u>\$566,675</u>	<u>293</u>	<u>96</u>

#- Additional service proposed on present motor coach lines.

Note: Revised estimated results are based on present wage rates, including recent increase to operating personnel; also, includes increase to non-operating employees retroactive to October 1, 1948, and expense of establishing 40-hour week to non operating employees effective September 1, 1949.

Pacific Electric Railway Company

REVENUE AND EXPENSES OF RAIL AND MOTOR COACH LINES

JANUARY TO JUNE, INCLUSIVE, 1948

RAIL LINES:

Analysis  
of P.R.T.

259,594

87,812

561,960

x

684,460

625,573

1,331,119

Line:	Miles Operated	*TOTAL REVENUE		OPERATING EXPENSES & TAXES		NET		M. C. Miles not incl. in Cal. 1
		Amount	Cents Per Mile	Amount	Cents Per Mile	Amount	Cents Per Mile	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	
<u>INTERURBAN RAIL LINES:</u>								
✓ Pasadena Oak Knoll .....	300,367	\$ 206,522	68.15	\$ 318,437	106.01	(\$111,915)	(37.26)	
✓ Pasadena Short Line .....	259,474	228,051	87.89	230,806	108.22	(52,755)	(20.33)	120
✓ L. A. -El Monte-Baldwin Park .....	302,796	185,251	61.18	352,915	116.55	(167,664)	(55.37)	
✓ L. A. -Monrovia-Glendora .....	463,522	366,617	79.09	497,641	107.36	(131,024)	(28.27)	
✓ L. A. -Sierra Madre .....	87,447	56,641	64.77	107,082	122.45	(50,441)	(57.68)	365
✓ L. A. -Long Beach .....	719,638	747,817	103.91	769,954	106.99	(22,137)	(3.08)	
✓ L. A. -San Pedro .....	561,195	525,945	93.72	610,643	108.81	(84,698)	(15.09)	755
✓ Long Beach-San Pedro .....	128,155	85,034	66.35	144,196	112.51	(59,162)	(46.16)	
✓ L. A. -Santa Ana .....	369,037	256,262	69.44	436,978	118.41	(180,716)	(48.97)	
✓ L. A. -Santa Monica via Air Line .....	5,836	2,280	39.06	9,220	157.98	(6,940)	(118.92)	
✓ L. A. -Newport Beach .....	18,403	12,491	67.87	23,017	125.07	(10,526)	(57.20)	
L. A. & Long Beach Steamship Service	23,201	32,662	140.77	26,657	114.89	6,005	25.88	
Others (Shop train, etc.) .....	6,394	429	-	25,247	-	(24,818)	-	
Total Interurban Rail Lines .....	3,245,465	\$2,706,002	83.37	\$3,602,793	111.01	(\$896,791)	(27.64)	
<u>LOCAL RAIL LINES:</u>								
✓ Watts-Sierra Vista .....	684,456	\$ 471,785	68.93	\$ 493,997	72.17	(\$ 22,212)	(3.24)	4
✓ Subway-S. Monica Blvd. -W. Hwd. -SFV..	913,246	575,706	63.04	674,879	73.90	(99,173)	(10.86)	
✓ L. A. -Glendale-Burbank .....	636,048	435,800	68.52	439,692	69.13	(3,892)	(.61)	
✓ Venice Short Line .....	625,264	385,555	61.66	452,571	72.38	(67,016)	(10.72)	
✓ Subway-Hollywood Blvd. -San Vicente..	1,331,038	956,521	71.86	1,029,396	77.34	(72,875)	(5.48)	81
Total Local Rail Lines .....	4,190,052	\$2,825,367	67.43	\$3,090,535	73.76	(\$265,168)	(6.33)	
TOTAL ALL RAIL LINES .....	7,435,517	\$5,531,369	74.39	\$6,693,328	90.02	(\$1,161,959)	(15.63)	

\*-Includes "Other Revenues" allocated on car-mile basis.

(RED FIGURES)

TABLE NO. II



Line:	Miles Operated (1)	*TOTAL REVENUE		OPERATING EXPENSES & TAXES		NET	
		Amount (2)	Cents Per Mile (3)	Amount (4)	Cents Per Mile (5)	Amount (6)	Cents Per Mile (7)
<u>MOTOR COACH LINES:</u>							
Pasadena-Alhambra S.P. Station . . .	10,815	\$ 4,590	42.44	\$ 7,181	66.40	\$ (2,591)	(23.96)
Garfield-Highland Park . . . . .	147,181	58,536	39.77	80,380	54.61	(21,844)	(14.84)
Alhambra-Temple City . . . . .	490,054	262,842	53.64	229,977	46.93	32,865	6.71
Long Beach-Huntington Park . . . . .	386,889	246,412	63.69	191,142	49.40	55,270	14.29
L. A. -Balboa . . . . .	281,977	104,559	37.08	127,000	45.04	(22,441)	(7.96)
L. A. -Sunland . . . . .	468,442	234,836	50.13	224,644	47.96	10,192	2.17
L. A. -Santa Ana . . . . .	892,696	459,262	51.45	447,233	50.10	12,029	1.35
Long Beach-Riverside . . . . .	169,746	83,275	49.06	68,109	40.12	15,166	8.94
Long Beach-Pasadena . . . . .	172,177	82,975	48.19	75,470	43.83	7,505	4.36
Riverside-Arlington . . . . .	385,774	155,990	40.44	167,836	43.51	(11,846)	(3.07)
L. A. -El Monte-Pomona-S. Bдно. -Riv. . . . .	1,991,705	1,070,633	53.75	919,795	46.18	150,838	7.57
Pasadena-Pomona . . . . .	37,648	13,292	35.31	16,354	43.44	(3,062)	(8.13)
San Marino-Sierra Madre . . . . .	4,026	1,333	33.11	2,090	51.91	(757)	(18.80)
L. A. -Santa Monica via Bev. Hills. . . . .	896,873	467,133	52.08	451,172	50.31	15,961	1.77
L. A. -Beverly-Sunset Blvds. . . . .	75,276	25,935	34.45	35,971	47.79	(10,036)	(13.34)
Hollywood-Beverly Hills-University . . . . .	223,965	113,803	50.81	126,348	56.41	(12,545)	(5.60)
Western and Franklin . . . . .	75,242	43,149	57.35	43,181	57.39	(32)	(.04)
L. A. -Redondo Beach . . . . .	715,641	310,467	43.38	369,625	51.65	(59,158)	(8.27)
Emery Park . . . . .	25,281	7,651	30.26	11,410	45.13	(3,759)	(14.87)
Hollywood-Ventura Blvd. . . . .	275,185	116,378	42.29	123,194	44.77	(6,816)	(2.48)
North Hollywood . . . . .	104,479	35,825	34.29	52,212	49.97	(16,387)	(15.68)
Van Nuys-Canoga Park . . . . .	64,747	22,919	35.40	27,837	42.99	(4,918)	(7.59)
Van Nuys-San Fernando . . . . .	45,355	15,933	35.13	21,269	46.89	(5,336)	(11.76)
Van Nuys-Birmingham Hospital . . . . .	44,088	19,509	44.25	23,472	53.24	(3,963)	(8.99)
L. A. -North Hollywood-Van Nuys . . . . .	216,881	98,782	45.55	114,284	52.69	(15,502)	(7.14)
Total . . . . .	8,202,143	\$4,056,019	49.45	\$3,957,186	48.25	\$ 98,833	1.20

\*-Includes "Other Revenues" allocated on car-mile basis.

(RED FIGURES)

TABLE NO. II (CONTD.)

TABLE NO. III

EXH. 3

*Operating*  
Pacific Electric Railway Company  
NET INCOME OR LOSS FROM PASSENGER OPERATIONS BY  
MONTHS FOR YEAR OF 1948 and 1949 32

<u>Month</u> (1)	<u>Rail</u> (2)	<u>P. E. Motor Coach</u> (3)	<u>Total</u> (4)
January	<u>(\$334,978)</u>	<u>\$(28,999)</u>	<u>(\$363,977)</u>
February	<u>(239,305)</u>	<u>(8,819)</u>	<u>(248,124)</u>
March	<u>(197,453)</u>	<u>10,404</u>	<u>(187,049)</u>
April	<u>(165,769)</u>	<u>17,813</u>	<u>(147,956)</u>
May	<u>(130,568)</u>	<u>29,884</u>	<u>(100,684)</u>
June	<u>(93,887)</u>	<u>78,550</u>	<u>(15,337)</u>
July	<u>(147,409)</u>	<u>30,298</u>	<u>(117,111)</u>
August	<u>(130,603)</u>	<u>17,774</u>	<u>(112,829)</u>
September	<u>(155,003)</u>	<u>28,824</u>	<u>(126,179)</u>
October	<u>(236,920)</u>	<u>(10,998)</u>	<u>(247,918)</u>
November	<u>(280,396)</u>	<u>(44,602)</u>	<u>(324,998)</u>
December	<u>(251,231)</u>	<u>(69,123)</u>	<u>(320,354)</u>
<u>Total 1948</u>	<u>(\$2,363,521)</u>	<u>\$ 51,006</u>	<u>(\$2,312,515)</u>
Jan. 1949	<u>(209,130)</u>	<u>(49,793)</u>	<u>(258,923)</u>
Feb	<u>(251,360)</u>	<u>(54,351)</u>	<u>(305,711)</u>

(RED FIGURES)

NOTE: Excludes L. A. Motor Coach Lines, prior to May 1949

March	<u>(174,168)</u>	<u>(17,282)</u>	<u>(191,450)</u>
April	<u>(120,067)</u>	<u>(45,186)</u>	<u>(165,253)</u>
May	<u>(189,240)</u>	<u>(29,970)</u>	<u>(219,210)</u>
JUNE	<u>(177,952)</u>	<u>1,976</u>	<u>(175,976)</u>
JULY	<u>(179,638)</u>	<u>5,804</u>	<u>(173,834)</u>
AUGUST	<u>(126,235)</u>	<u>(39,833)</u>	<u>(166,068)</u>
<u>Total 1949</u>	<u>(1,427,790)</u>	<u>(228,135)</u>	<u>(1,655,925)</u>
<i>Proposed to year based on 1st 8 mos</i>	<u>(2,141,685)</u>	<u>(342,202)</u>	<u>(2,483,887)</u>
<i>Year Sept. 1948 - Aug 1949 incl</i>	<u>(2,351,340)</u>	<u>(324,034)</u>	<u>(2,675,374)</u>

Pacific Electric Railway Company

INCOME STATEMENT BY YEARS

*Readings in Caps*

NET

Year	Operating Income	Non-Operating Income	Interest on Funded Debt	Other Deductions	Income to Profit	Loss
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1916	\$2,261,823	\$ 52,567	\$2,835,898	\$460,950	-	\$ 982,458
1917	2,490,313	65,730	2,830,787	610,372	-	885,116
1918	1,692,189	150,974	2,818,542	772,813	-	1,748,192
1919	897,772	134,824	2,808,281	992,041	-	2,767,726
1920	2,714,411	91,432	3,727,251	236,637	-	1,158,045
1921	3,192,424	104,382	3,841,976	254,463	-	799,633
1922	3,542,207	98,215	3,912,135	304,276	-	575,989
1923	4,463,752	216,292	3,994,269	354,860	\$ 330,915	-
1924	3,714,351	292,163	4,143,720	454,979	-	592,185
1925	2,356,582	539,356	2,533,725	404,651	-	42,438
1926	1,563,161	381,788	2,704,393	336,589	-	1,096,033
1927	2,149,421	243,797	2,692,565	297,357	-	596,704
1928	1,296,204	384,523	2,631,439	282,341	-	1,233,053
1929	1,805,404	376,658	2,638,121	259,501	-	715,560
1930	610,512	331,484	2,652,669	259,149	-	1,969,822
1931	292,188	220,367	2,564,621	202,921	-	2,254,487
1932	(121,154)	197,125	2,484,608	188,090	-	2,597,546
1933	(156,986)	193,486	2,468,670	182,232	-	2,614,402
1934	(323,811)	159,146	2,449,035	165,622	-	2,779,322
1935	(202,516)	225,015	2,439,041	145,881	-	2,562,423
1936	(17,743)	316,074	2,441,883	140,953	-	2,284,505
1937	(687,962)	261,117	2,416,905	138,632	-	2,982,382
1938	(826,505)	126,876	2,403,362	145,393	-	3,248,384
1939	(608,989)	138,381	2,389,462	58,664	-	2,918,734
1940	(264,709)	220,043	2,373,857	124,597	-	2,543,120
1941	480,476	168,062	2,162,096	150,277	-	1,663,835
1942	3,447,097	159,220	1,876,245	183,265	1,546,807	-
1943	7,460,340	139,505	1,845,451	152,079	5,602,315	-
1944	3,420,514	184,925	1,572,706	110,539	1,922,194	-
1945	1,547,830	203,496	1,328,065	66,997	356,264	-
1946	485,615	668,108	1,227,254	145,348	-	218,879
1947	(837,607)	369,807	1,227,215	65,058	-	1,760,073
1948	878,604	434,903	1,227,200	53,127	33,180	-
1949*	(221,746)	424,124	1,226,867	52,925	-	(1,077,415)

(2055)

(RED FIGURES)

\* First 11 months actual last month estimated.  
12 Months ending ~~September~~ October 31, 1949

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*all caps*

Pacific Electric Railway Company

OPERATING INCOME - SYSTEM

Year	PASSENGER								
	System	Freight	Rail		Motor Coach		L. A. M. C.	P. E. Rwy. Building	
	Total		Total	Rail	Motor Coach Total	P. E. Rwy.			
(1)	(2) (7)	(3) (5)	(4) (4)	(5) (2)	(6) (3)	(7) (X)	(8) (X)	(9) (6)	
1936	\$ (17,743)	\$ 835,904	\$ (937,280)	\$ (938,590)	\$ 1,310 ✓	\$ (158,095)	\$ 159,405	\$ 83,633	
1937	(687,962)	608,601	(1,328,141)	(1,385,486)	57,345	(120,899)	178,244	31,578	
1938	(826,505)	657,413	(1,597,030)	(1,676,900)	79,870	(114,943)	194,813	113,112	
1939	(608,989)	899,394	(1,465,025)	(1,602,327)	137,302	(101,950)	239,252	(43,358)	
1940	(264,709)	1,285,494	(1,482,462)	(1,856,773)	374,311	70,378	303,933	(67,741)	
1941	480,476	1,404,445	(878,904)	(1,315,294)	436,390	99,952	336,438	(45,065)	
1942	3,447,097	2,394,124	996,034	(381,010)	1,377,044	825,242	551,802	56,939	
1943	7,460,340	4,407,854	2,967,410	810,647	2,156,763	1,388,399	768,364	85,076	
1944	3,420,514	1,733,449	1,636,917	339,108	1,297,809	919,520	378,289	50,148	
1945	1,547,830	1,161,333	347,506	(422,319)	769,825	567,039	202,786	38,991	
1946	485,615	1,073,999	(607,236)	(2,168,487)	1,561,251	857,913	703,338	18,852	
1947	(837,607)	1,851,547	(2,793,876)	(3,426,189)	632,313	73,241	559,072	104,722	
1948	878,604	2,641,626	(1,974,237)	(2,363,521)	389,284 ✓	51,006 ✓	338,278 ✓	211,215 ✓	
1949*	(221,746)	2,152,755	(2,552,394)	(2,373,470)	(178,924)	(371,663)	192,739 ✓	197,893	

*dots outside*

Δ IX

NOTE: For the purpose of comparing Operating Income with Net Income. Example: Whereas the former is shown to be \$878,604 for the year of 1948, Net Income, after adjustment for non-operating revenue, interest on debt and other miscellaneous deductions, was \$33,180.

*221,746*

*\* 12 months ending October 31, 1949*

*1,077,415*

**RED FIGURES**

TABLE NO. V

Pacific Electric Railway Company  
**COMPARATIVE FINANCIAL STATEMENT**  
(Rail, Motor Coach and Incidental Operations, Including Los Angeles Motor Coach Lines)  
Net Income Results - Years 1939-1948, Incl.

	Year 1948	Year 1947	Year 1946	Year 1945	Year 1944	Year 1943	Year 1942	Year 1941	Year 1940	Year 1939
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<b>Railway Operating Revenues</b>										
Freight . . . . .	\$10,870,454	\$10,922,675	\$ 8,413,037	\$11,267,897	\$12,594,095	\$11,520,135	\$ 6,372,222	\$ 4,202,550	\$ 3,280,727	\$ 2,741,306
Passenger . . . . .	20,355,011	19,860,892	20,822,398	21,805,708	21,134,222	17,432,579	11,232,457	7,801,818	7,496,715	7,260,467
Mail . . . . .	206,628	107,922	101,649	103,495	108,057	88,525	85,616	88,347	85,925	83,339
Express . . . . .	286,275	305,845	461,342	492,699	516,350	474,083	379,658	192,562	185,413	159,833
All Other Transportation . . . . .	475,475	345,576	332,695	493,974	447,214	426,394	406,598	180,647	155,729	155,256
Revenue from Other Railway Operations . . . . .	2,119,619	2,255,575	2,220,051	2,248,182	2,086,981	1,855,209	1,274,559	957,190	858,776	895,260
<b>Total Railway Operating Revenues</b>	<b>34,313,462</b>	<b>33,798,485</b>	<b>32,351,172</b>	<b>36,411,955</b>	<b>36,886,919</b>	<b>31,796,925</b>	<b>19,751,110</b>	<b>13,423,114</b>	<b>12,063,285</b>	<b>11,295,461</b>
<b>Railway Operating Expenses</b>										
Way and Structures . . . . .	3,047,706	3,860,652	3,582,731	5,179,768	4,215,437	2,605,652	1,542,033	1,311,492	1,092,022	1,175,057
Equipment . . . . .	4,924,807	4,737,164	4,370,373	5,332,789	3,769,089	2,939,608	2,259,537	1,854,940	1,719,357	1,316,470
Power . . . . .	1,461,809	1,579,944	1,565,533	1,569,382	1,463,604	1,355,541	1,137,016	954,662	975,779	1,032,493
Conducting Transportation . . . . .	16,713,338	16,787,378	16,827,054	15,333,203	14,137,565	11,818,899	7,428,628	5,430,581	5,222,239	5,008,226
Traffic . . . . .	283,213	263,684	266,028	214,712	184,026	179,999	158,951	144,272	170,556	141,678
General . . . . .	4,593,170	4,546,937	5,320,526	5,173,860	4,286,697	3,597,380	2,440,906	2,056,686	1,898,232	2,033,387
Transportation for Investment - Credit . . . . .	- -	- -	(5,924)	(3,228)	(2,584)	(5,484)	(6,588)	(5,531)	(2,186)	(2,609)
<b>Total Railway Operating Expenses</b>	<b>31,024,043</b>	<b>31,775,759</b>	<b>31,926,321</b>	<b>32,800,486</b>	<b>28,053,834</b>	<b>22,491,595</b>	<b>14,960,483</b>	<b>11,747,102</b>	<b>11,075,999</b>	<b>10,704,702</b>
Net Revenue from Railway Operations . . . . .	3,289,419	2,022,726	424,851	3,611,469	8,833,085	9,305,330	4,790,627	1,676,012	987,286	590,759
Taxes Assignable to Transportation Operations . . . . .	2,410,815	2,860,333	(60,764)	2,063,640	5,412,572	1,844,990	1,343,530	1,195,536	1,251,995	1,199,748
Net Railway Operating Income or Loss . . . . .	878,604	(837,607)	485,615	1,547,829	3,420,513	7,460,340	3,447,097	480,476	(264,709)	(608,989)
Non-Operating Income . . . . .	434,946	369,807	668,108	203,496	184,926	139,505	159,220	168,062	220,043	138,381
<b>Gross Income</b> . . . . .	<b>1,313,550</b>	<b>(467,800)</b>	<b>1,153,723</b>	<b>1,751,325</b>	<b>3,605,439</b>	<b>7,599,845</b>	<b>3,606,317</b>	<b>648,538</b>	<b>(44,666)</b>	<b>(470,608)</b>
Deduction from Gross Income . . . . .	1,280,265	1,292,273	1,372,602	1,395,061	1,683,245	1,997,530	2,059,510	2,312,373	2,498,454	2,448,126
<b>Net Income</b> . . . . .	<b>\$ 33,285</b>	<b>(\$1,760,073)</b>	<b>(\$218,879)</b>	<b>\$ 356,264</b>	<b>\$1,922,194</b>	<b>\$5,602,315</b>	<b>\$1,546,807</b>	<b>(\$1,663,835)</b>	<b>(\$2,543,120)</b>	<b>(\$2,918,734)</b>

( ) - Indicates RED figures.

Pacific Electric Railway Company  
OPERATING REVENUE AND EXPENSES—SYSTEM

*caps in heading*

Year:	Freight	Passenger		P. E. Bldg.	Total
		P. E. Rwy	L. A. M. C.		
(1)	(2) <sup>(4)</sup>	(3) <sup>(2)</sup>	(4)*	(5)	(6)
<u>OPERATING REVENUE</u>					
1936	\$ 3,119,809	\$ 7,417,250	\$ 797,048	\$ 420,100	\$ 10,957,159
1937	3,167,289	7,992,790	884,527	488,860	11,648,939
1938	2,946,742	7,599,915	905,927	514,822	11,061,479
1939	3,202,159	7,656,354	960,632	436,948	11,295,461
1940	3,742,119	7,891,368	1,032,379	429,798	12,063,285
1941	4,744,832	8,247,566	1,123,908	430,716	13,423,114
1942	7,460,965	12,100,079	1,418,678	190,066	19,751,110
1943	12,901,733	18,666,763	1,855,840	228,429	31,796,925
1944	14,100,049	22,547,241	2,094,319	239,629	36,886,919
1945	12,738,614	23,413,318	2,022,780	260,023	36,411,955
1946	9,749,173	22,332,801	2,036,004	269,197	32,351,171
1947	12,259,809	21,213,851	2,283,246	324,825	33,798,485
1948	12,374,910	21,553,713	2,335,678	384,840	34,313,463

OPERATING EXPENSES  
 (Excluding Taxes Assignable to Operations)

1936	\$ 2,121,295	\$ 7,706,513	\$ 620,754	\$ 304,235	\$ 10,132,043
1937	2,308,837	8,443,859	679,283	415,999	11,168,695
1938	2,071,552	8,252,682	677,666	350,212	10,674,446
1939	2,095,049	8,189,638	686,752	420,016	10,704,703
1940	2,206,178	8,436,501	688,626	433,320	11,075,999
1941	3,015,087	8,316,464	746,693	415,551	11,747,102
1942	4,515,347	10,332,989	813,047	112,147	14,960,483
1943	7,323,138	14,544,191	975,204	124,266	22,491,595
1944	9,709,719	18,190,381	1,266,385	153,733	28,053,833
1945	10,921,522	21,673,956	1,729,682	205,008	32,800,486
1946	9,268,200	22,418,640	1,468,446	239,481	31,926,321
1947	9,449,812	22,141,694	1,629,475	184,253	31,775,759
1948	8,970,593	21,909,164	1,842,482	144,286	31,024,043

TAXES ASSIGNABLE TO OPERATIONS

1936	\$ 162,610	\$ 648,016	\$ 16,889	\$ 32,232	\$ 842,858
1937	249,851	877,072	27,001	41,283	1,168,206
1938	217,778	944,262	33,448	51,498	1,213,538
1939	207,717	931,741	34,627	60,290	1,199,748
1940	250,447	937,329	39,821	64,220	1,251,996
1941	325,300	810,006	40,777	60,230	1,195,536
1942	551,493	771,057	48,829	20,980	1,343,530
1943	670,741	1,155,161	112,271	19,088	1,844,990
1944	2,656,880	2,719,943	449,646	35,749	5,412,572
1945	655,760	1,391,855	90,312	16,024	2,063,639
1946	(593,026)	521,397	(135,780)	10,865	(60,764)
1947	958,450	1,866,033	94,700	35,850	2,860,333
1948	762,690	1,618,786	154,917	29,339	2,410,816

\*-Included in Col. 3

(RED FIGURES)

\* 12 Months ending October 31, 1949

Pacific Electric Railway Company

PASSENGER REVENUE

	1945		
	Rail	Motor Coach	Total
	(1)	(2)	(3)
Jan.	\$ 1,080,792	\$ 587,610	\$ 1,668,402
Feb.	964,564	534,868	1,499,432
March	1,044,070	598,962	1,643,032
April	1,025,583	590,054	1,615,637
May	1,108,017	582,210	1,690,227
June	1,135,830	583,546	1,719,376
July	1,179,370	609,416	1,788,786
Aug.	1,124,450	587,839	1,712,289
Sept.	1,011,996	540,561	1,552,557
Oct.	1,061,133	559,917	1,621,050
Nov.	1,071,747	558,785	1,630,532
Dec.	1,125,444	577,516	1,702,960
	\$12,932,996	\$6,911,284	\$19,844,280

	1946		
	Rail	Motor Coach	Total
	(4)	(5)	(6)
Jan.	\$ 1,164,164	\$ 585,910	\$ 1,750,074
Feb.	1,012,235	535,787	1,548,022
March	1,038,972	577,354	1,616,326
April	973,406	574,795	1,548,201
May	990,126	515,338	1,505,464
June	932,171	552,753	1,484,924
July	986,986	575,848	1,562,834
Aug.	1,005,032	585,339	1,590,371
Sept.	1,003,403	589,728	1,593,131
Oct.	971,786	586,144	1,557,930
Nov.	925,438	548,515	1,473,953
Dec.	983,608	586,992	1,570,600
	\$11,987,327	\$6,814,503	\$18,801,830

	1947		
	Rail	Motor Coach	Total
	(1)	(2)	(3)
Jan.	\$ 995,322	\$ 600,157	\$ 1,595,479
Feb.	892,245	556,372	1,448,617
March	914,783	597,113	1,511,896
April	879,739	575,706	1,455,445
May	866,022	580,189	1,446,211
June	877,072	578,329	1,455,401
July	918,308	597,708	1,516,016

	1948		
	Rail	Motor Coach	Total
	(4)	(5)	(6)
Jan.	\$ 874,121	\$ 587,534	\$ 1,461,655
Feb.	876,312	595,782	1,472,094
March	909,780	669,157	1,578,937
April	852,019	630,958	1,482,977
May	865,923	637,236	1,503,159
June	865,083	640,843	1,505,926
July	909,617	655,099	1,564,716

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Pacific Electric Railway Company

R E V E N U E   P A S S E N G E R S

	1945		
	<u>Rail Psgrs.</u>	<u>Motor Coach Psgrs.</u>	<u>Total Psgrs.</u>
	(1)	(2)	(3)
Jan.	9,186,020	3,763,799	12,949,819
Feb.	8,413,713	3,467,453	11,881,166
March	9,374,399	3,923,950	13,298,349
April	8,991,375	3,837,293	12,828,668
May	9,544,163	4,007,474	13,551,637
June	9,394,598	3,930,005	13,324,603
July	9,586,293	4,050,945	13,637,238
Aug.	9,247,119	3,909,816	13,156,935
Sept.	8,482,917	3,602,297	12,085,214
Oct.	8,932,870	3,763,290	12,696,160
Nov.	8,892,156	3,715,856	12,608,012
Dec.	9,057,912	3,777,990	12,835,902
	<u>109,103,535</u>	<u>45,750,168</u>	<u>154,853,703</u>

	1946		
	<u>Rail Psgrs.</u>	<u>Motor Coach Psgrs.</u>	<u>Total Psgrs.</u>
	(4)	(5)	(6)
Jan.	9,405,245	3,899,795	13,305,040
Feb.	8,458,602	3,603,738	12,062,340
March	8,961,029	3,905,901	12,866,930
April	8,848,000	3,968,292	12,816,292
May	9,575,529	3,871,013	13,446,542
June	8,272,048	3,827,563	12,099,611
July	8,790,171	3,972,781	12,762,952
Aug.	8,660,045	3,851,768	12,511,813
Sept.	7,946,780	3,521,028	11,467,808
Oct.	8,254,091	3,744,702	11,998,793
Nov.	7,709,886	3,415,912	11,125,798
Dec.	8,200,289	3,659,720	11,860,009
	<u>103,081,715</u>	<u>45,242,213</u>	<u>148,323,928</u>

	1947		
	<u>Rail Psgrs.</u>	<u>Motor Coach Psgrs.</u>	<u>Total Psgrs.</u>
Jan.	8,229,461	3,612,709	11,842,170
Feb.	7,445,690	3,350,839	10,796,529
March	7,913,973	3,615,328	11,529,301
April	7,590,352	3,488,280	11,078,632
May	7,564,292	3,534,331	11,098,623
June	7,396,006	3,473,333	10,869,339
July	7,620,461	3,586,902	11,207,363
Aug.	7,163,086	3,178,666	10,341,752
Sept.	7,172,362	3,408,986	10,581,348
Oct.	7,331,218	3,650,829	10,982,047
Nov.	7,024,187	3,380,821	10,405,008
Dec.	7,425,437	3,528,778	10,954,215
	<u>77,387,911</u>	<u>30,742,729</u>	<u>108,130,640</u>

	1948		
	<u>Rail Psgrs.</u>	<u>Motor Coach Psgrs.</u>	<u>Total Psgrs.</u>
Jan.	7,387,749	3,506,813	10,894,562
Feb.	6,349,041	3,145,632	9,494,673
March	6,496,181	3,482,693	9,978,874
April	6,197,040	3,317,248	9,514,288
May	6,259,342	3,341,881	9,601,223
June	6,160,056	3,330,695	9,490,751
July	6,274,128	3,367,577	9,641,705
Aug.	6,182,215	3,338,775	9,520,990
Sept.	5,328,309	3,251,789	8,580,098
Oct.	5,788,397	3,485,380	9,273,777
Nov.	5,247,322	3,216,301	8,463,623
Dec.	6,211,724	3,292,892	9,504,616
	<u>77,387,911</u>	<u>40,742,729</u>	<u>118,130,640</u>

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TABLE NO. XI

Pacific Electric Railway Company

SUMMARY OF FREIGHT REVENUE, YEARS 1916 - 1948

: Year :	Freight Revenue :	Index :	: Year :	Freight Revenue :	Index :
1916	\$ 1,868,000	100	1932	\$ 2,375,000	127
1917	2,061,000	110	1933	2,088,000	112
1918	2,406,000	129	1934	2,055,000	110
1919	2,632,000	141	1935	2,416,000	129
1920	3,859,000	207	1936	3,007,000	161
1921	4,358,000	233	1937	2,990,000	160
1922	4,590,000	246	1938	2,713,000	145
1923	6,464,000	346	1939	2,886,000	154
1924	6,259,000	335	1940	3,412,000	183
1925	6,204,000	332	1941	4,369,000	234
1926	6,110,000	327	1942	6,607,000	354
1927	6,379,000	342	1943	11,889,000	636
1928	5,688,000	304	1944	12,997,000	695
1929	5,545,000	296	1945	11,643,000	623
1930	3,868,000	207	1946	8,762,000	469
1931	3,072,000	164	1947	11,363,815	608
			1948	11,432,161	612

NOTE: Freight Revenue includes Account Nos. 107, 108 and 113.

Pacific Electric Railway Company

PASSENGER STATISTICAL INDICES\*

Year	Average Fare Per Passenger		PASSENGER REVENUE				OPERATING EXPENSE COST**					
	Amount	Index	Per Rail Car Mile		Per Motor Coach Mile		Per Rail Car Mile		Per Motor Coach Mile			
			Amount	Index	Amount	Index	Amount	Index	Amount	Index		
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
1940	9.80¢	100	34.29¢	100	18.96¢	100	50.44¢	100	147*	22.29¢	118*	100
1941	10.65	109	40.82	119	22.55	119	54.93	109	160	22.41	118	101
1942	11.99	122	50.82	148	32.85	173	57.86	115	168	27.80	147	125
1943	13.44	137	60.44	176	40.95	216	59.25	117	173	34.42	182	154
1944	13.10	134	64.12	187	44.75	236	67.23	133	196	43.60	241	196
1945	12.81	131	66.58	194	44.52	235	72.35	143	212	46.35	244	208
1946	12.68	129	66.67	194	43.12	227	82.92	164	241	42.39	224	190
1947	13.27	135	67.14	196	43.17	228	93.16	185	272	46.82	247	210
1948	15.59	159	71.43	208	45.95	242	91.93	182	268	49.09	259	220

\*Excludes Los Angeles Motor Coach  
 \*\*Includes Taxes

TABLE NO. XII

\* computed on 6" slide rule

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## Pacific Electric Railway Company

DISTRIBUTION OF EXPENDITURES IN TOTAL AND PER DOLLAR OF REVENUE

YEAR - 1947

(Includes P.E. Proportion of L.A.M.C. &amp; Harbor Belt Line)

ITEM (1)	TOTAL AMOUNT (2)	PER DOLLAR OF REVENUE	
		(3)	(4)
<u>Operating Expenses &amp; Taxes:</u>			
Trainmen & Operators Wages . . . . .	\$ 9,738,237.51	28.50¢)	
Other Wages . . . . .	12,230,425.35	35.80 )	64.30¢
Material Costs . . . . .	3,993,716.85		11.70
Power Costs . . . . .	1,183,110.69		3.46
Depreciation . . . . .	1,612,505.63		4.72
Rent of Equipment & Facilities . . . . .	1,203,334.30		3.52
Loss and Damage Claims . . . . .	66,158.43		.19
Personal Injury Claims . . . . .	1,107,554.55		3.24
Empl. Welfare Contr. Group Life Ins. Prem. . . . .	36,363.76	.11)	
Empl. Welfare Contr. Pensions & Gratuities . . . . .	18,045.16	.05)	.16
State Taxes . . . . .	577,919.85	1.69 )	
City & County Taxes . . . . .	901,591.37	2.64 )	
Railroad Retirement . . . . .	1,174,620.49	3.44 )	
Unemployment Insurance . . . . .	615,153.76	1.80 )	
Other Federal Taxes . . . . .	123,666.13	.36 )	9.93
Insurance . . . . .	47,477.04		.14
Amortization of Franchises . . . . .	1,210.91		.01
Total Operating Expenses & Taxes. . . . .	\$34,636,091.78		101.37
<u>Deductions from Gross Income:</u>			
Rent for Leased Roads . . . . .	38,617.65	.11)	
Miscellaneous Rents . . . . .	4,780.48	.01)	
Interest on Funded Debt . . . . .	1,227,214.81	3.59)	
Interest on Unfunded Debt . . . . .	13,076.71	.04)	
Miscellaneous Debits . . . . .	8,533.46	.03)	3.78
Total Deductions . . . . .	\$ 1,292,273.11		3.78
Total Expenditures . . . . .	\$35,928,364.89		105.15
<u>Income:</u>			
Operating Revenues . . . . .	\$33,798,485.06		
Non-Operating Income . . . . .	369,806.85		
Total Income . . . . .	\$34,168,291.91		100.00
Net Income: . . . . .	(\$ 1,760,072.98)		(5.15)

(RED FIGURES)

Pacific Electric Railway Company

DISTRIBUTION OF EXPENDITURES IN TOTAL AND PER DOLLAR OF REVENUE

YEAR - 1948

(Includes P.E. Proportion of L.A.M.C. & Harbor Belt Line)

ITEM (1)	TOTAL AMOUNT (2)	PER DOLLAR OF REVENUE	
		(3)	(4)
<u>Operating Expenses &amp; Taxes:</u>			
Trainmen & Operators Wages . . . . .	\$ 9,985,623.21	28.72¢)	
Other Wages . . . . .	11,260,663.30	<u>32.41</u> )	61.14
Material Costs . . . . .	4,093,223.39		11.78
Power Costs . . . . .	1,461,809.26		4.21
Depreciation . . . . .	1,674,327.66		4.82
Rent of Equipment & Facilities . . . . .	1,166,266.71		3.36
Loss and Damage Claims . . . . .	109,347.73		.31
Personal Injury Claims . . . . .	1,181,101.57		3.40
Empl. Welfare Contr. Group Life Ins. Prem. . . . .	32,178.24	.09)	
Empl. Welfare Contr. Pensions & Gratuities . . . . .	18,382.00	.06)	.15
State Taxes . . . . .	296,740.15	.85)	
City & County Taxes . . . . .	876,231.70	2.52)	
Railroad Retirement . . . . .	1,127,285.27	3.25)	
Unemployment Insurance . . . . .	101,697.42	.29)	
Other Federal Taxes . . . . .	8,860.96	.03)	6.94
Insurance . . . . .	39,938.48		.11
Amortization of Franchises . . . . .	<u>1,181.94</u>		-
Total Operating Expenses & Taxes.	\$33,434,858.99		96.22
<u>Deductions from Gross Income:</u>			
Rent for Leased Roads . . . . .	38,033.52	.11	
Miscellaneous Rents . . . . .	4,737.26	.01	
Interest on Funded Debt . . . . .	1,227,200.00	3.53	
Interest on Unfunded Debt . . . . .	2,202.63	.01	
Miscellaneous Debits . . . . .	<u>8,152.82</u>	.02	3.68
Total Deductions . . . . .	\$ 1,280,326.23		3.68
Total Expenditures . . . . .	\$34,715,185.22		99.90
<u>Income:</u>			
Operating Revenues . . . . .	\$34,313,462.50		
Non-Operating Income . . . . .	<u>434,902.56</u>		
Total Income . . . . .	\$34,748,365.06		100.00
<u>Net Income:</u> . . . . .	\$ 33,179.84		.10

(5)

Pacific Electric Railway CompanySTATISTICAL DATA

	<u>Year 1947</u>	<u>Year 1948</u>
REVENUE MILES - Rail . . . . .	15,765,586	14,538,444
- Motor Coach . . . . .	16,223,059	16,632,022
FARE PASSENGERS - Rail . . . . .	82,231,465	65,343,800
- Motor Coach . . . . .	40,061,202	37,608,850
TRANSFER PASSENGERS - Rail . . . . .	8,137,920	9,937,114
- Motor Coach . . . . .	2,078,117	2,753,879
TOTAL (FARE, TRANSFER & FREE) PASSENGERS - Rail.	93,464,163	77,779,964
- M. C.	42,934,954	41,172,036
TOTAL FARE & TRANSFER PASSENGERS - Rail & M. C.	132,508,704	115,643,643
TOTAL ALL PASSENGERS - Rail & Motor Coach . . .	136,399,117	118,952,000
OPERATING REVENUE PER MILE - Rail . . . . .	71.43¢	75.67¢
- Motor Coach . . . . .	47.27¢	49.40¢
OPERATING EXPENSES (Incl. Taxes) PER MILE - Rail	93.16¢	91.93¢
- M. C.	46.82¢	49.09¢
RATIO OF TRANSFER PSGRS. TO FARE PSGRS. - Rail	9.90%	15.21%
- M. C.	5.19%	7.32%
FARE PASSENGERS PER MILE OPERATED - Rail . . . . .	5.22	4.49
- Motor Coach.	2.47	2.26
TRANSFER PASSENGERS PER MILE OPERATED - Rail . .	.52	.68
- M. C. . . . .	.14	.17
TOTAL (ALL) PASSENGERS PER MILE OPERATED - Rail.	5.93	5.35
- M. C.	2.65	2.48
RATIO OF OPERATING EXPENSES (Incl. Taxes) TO OPERATING REVENUE - Rail . . . . .	130.42%	121.48%
- Motor Coach . . . . .	99.42%	99.38%
RATIO OF OPERATING EXPENSES (Incl. Taxes) TO OPERATING REVENUE - Rail & Motor Coach . . .	117.71%	112.03%

PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
 TRANSPORTATION DEPARTMENT  
 Engineering Division

ELECTRIC RAILWAY AND URBAN BUS TRAVEL AND REVENUES  
 Comparative Report for the Year 1948

Name of Street Railway or Local Bus Company	Fare Passengers			Passenger Revenue		
	1948	1947	% Increase	1948	1947	% Increase
	(1)	(2)	(3)	(4)	(5)	(6)
Bakersfield & Kern Electric Rwy.	5,960,908	6,054,889	1.6*	\$ 418,831.48	\$ 413,250.48	1.4
California Street Cable RR. Co.	7,084,553	7,943,632	10.8*	705,485.30	728,121.10	3.1*
Fresno City Lines, Inc.	7,796,215	8,982,344	13.2*	637,582.31	580,109.30	9.9
Glendale City Lines, Inc.	5,107,467	5,822,711	12.3*	385,764.91	360,597.65	7.0
Inglewood City Lines	3,051,712	3,307,869	7.7*	277,399.26	251,928.97	10.1
Key System - Transit	88,801,104	91,216,186	2.6*	8,969,549.35	9,010,884.32	0.5*
Los Angeles Motor Coach Co.	58,513,759	59,566,492	1.8*	4,809,549.11	6,037,291.92	20.3*
Los Angeles Transit Lines	303,390,365	345,032,298	12.1*	22,874,113.90	23,143,592.16	1.2*
Municipal Ry. of San Francisco	211,588,948	220,007,678	3.8*	17,930,892.47	18,688,113.92	4.1*
Pacific Electric Motor Coach	14,116,592	14,938,704	5.5*	2,428,208.08	2,084,119.00	16.5
Pacific Electric Railway	45,241,058	58,629,525	22.8*	5,537,533.90	5,583,246.41	0.8*
Pasadena City Lines, Inc.	14,878,060	16,163,118	8.0*	965,877.62	848,519.08	13.8
Sacramento City Lines, Inc.	16,755,010	16,396,915	2.2	1,308,511.68	1,092,822.43	19.7
San Diego Electric Railway	74,871,226	78,678,546	4.8*	5,825,256.63	6,010,670.38	3.1*
San Jose City Lines, Inc.	13,053,387	12,707,137	2.7	858,192.28	678,333.12	26.5
Stockton City Lines, Inc.	8,637,874	8,566,684	0.8	681,145.22	570,112.90	19.5
<b>TOTAL</b>	<b>878,848,238</b>	<b>954,014,728</b>	<b>7.9*</b>	<b>74,613,893.50</b>	<b>76,081,713.14</b>	<b>1.9*</b>
<b>SELECTED INTERURBAN LINES</b>						
Key System - Bridge	29,618,443	32,978,613	10.2*	5,891,155.98	5,769,488.85	2.1
Pacific Electric Motor Coach	23,492,258	25,122,498	6.5*	5,213,927.87	4,922,877.04	5.9
Pacific Electric Railway	20,102,742	23,601,940	14.8*	4,848,003.04	5,001,650.62	3.1*
<b>TOTAL</b>	<b>73,213,443</b>	<b>81,703,051</b>	<b>10.4*</b>	<b>15,953,086.89</b>	<b>15,694,016.51</b>	<b>1.7</b>
<b>GRAND TOTAL</b>	<b>952,061,681</b>	<b>1,035,717,779</b>	<b>8.1*</b>	<b>90,566,980.39</b>	<b>91,775,729.65</b>	<b>1.3*</b>

\*Red Figures

TABLE NO. XV

COMBINED REPORT FOR THE YEAR OF 1948

LINE	Fare Passengers			%	Passenger Revenue		
	1948	1947	Increase:		1948	1947	Increase:
	(1)	(2)	(3)		(4)	(5)	(6)
<u>KEY SYSTEM TRANSIT</u>							
Bridge	29,618,443	32,978,613	10.2*	\$ 5,891,155.98	\$ 5,769,488.85	2.1	
Transit	88,801,104	91,216,186	2.6*	8,969,549.35	9,010,884.32	0.5*	
TOTAL	118,419,547	124,194,799	4.7*	14,860,705.33	14,780,373.17	0.5	
<u>PACIFIC CITY LINES</u>							
Glendale City Lines	5,107,467	5,822,711	12.3*	385,764.91	360,597.65	7.0	
Pasadena City Lines	14,878,060	16,163,118	8.0*	965,877.62	848,519.08	13.8	
Sacramento City Lines	16,755,010	16,396,915	2.2	1,308,511.68	1,092,822.43	19.7	
San Jose City Lines	13,053,387	12,707,137	2.7	858,192.28	678,333.12	26.5	
Stockton City Lines	8,637,874	8,566,684	0.8	681,145.22	570,112.90	19.5	
TOTAL	58,431,798	59,656,565	2.1*	4,199,491.71	3,550,385.18	18.3	
<u>PACIFIC ELECTRIC RAILWAY COMPANY</u>							
Local - Motor Coach	14,116,592	14,938,704	5.5*	2,428,208.08	2,084,119.00	16.5	
Local - Rail	45,241,058	58,629,525	22.8*	5,537,533.90	5,533,246.41	0.8*	
Interurban - Motor Coach	23,492,258	25,122,498	6.5*	5,213,927.87	4,922,877.04	5.9	
Interurban - Rail	20,102,742	23,601,940	14.8*	4,848,003.04	5,001,650.62	3.1*	
TOTAL	102,952,650	122,292,667	15.8*	18,027,672.89	17,591,893.07	2.5	
<u>LOS ANGELES TRANSIT LINES</u>							
Motor Coach	58,513,759	59,566,492	1.8*	4,809,549.11	6,037,291.92	20.3*	
Rail	303,390,365	345,032,298	12.1*	22,874,113.90	23,143,592.16	1.2*	
TOTAL	361,904,124	404,598,790	10.6*	27,683,663.01	29,180,884.08	5.1*	

\*Red Figures

TABLE NO. XV. (CONTD.)

*An Analysis of Taxation*

TABLE NO. XVI

Pacific Electric Railway Company

EXPENDITURE OF HIGHWAY AND MOTOR VEHICLE FUNDS  
STATE OF CALIFORNIA

:	:	:	:	:	:
Fiscal	State	County	City	Total	:
Year	Expenditures	Expenditures	Expenditures	Expenditures	:
(1)	(2)	(3)	(4)	(5)	:
1920	\$10,496,000	\$16,935,000	\$ 7,176,000	\$34,607,000	
1921	10,473,000	27,988,000	7,619,000	46,080,000	
1922	20,303,000	26,786,000	9,922,000	55,011,000	
1923	20,596,000	24,164,000	10,343,000	55,463,000	
1924	19,530,000	24,002,000	14,949,000	58,481,000	
1925	18,970,000	25,879,000	21,262,000	66,111,000	
1926	19,139,000	26,077,000	19,847,000	65,063,000	
1927	18,975,000	26,164,000	20,880,000	66,019,000	
1928	18,797,000	30,754,000	21,054,000	70,605,000	
1929	28,303,000	28,544,000	26,768,000	83,615,000	
1930	35,891,000	27,806,000	21,252,000	84,949,000	
1931	34,966,000	29,899,000	17,769,000	82,634,000	
1932	37,745,000	27,326,000	17,041,000	82,112,000	
1933	35,466,000	21,115,000	12,611,000	69,192,000	
1934	38,505,000	19,082,000	10,357,000	67,944,000	
1935	38,145,000	18,499,000	11,883,000	68,527,000	
1936	38,960,000	17,629,000	13,292,000	69,881,000	
1937	48,613,000	19,585,000	18,958,000	87,156,000	
1938	41,414,000	21,038,000	19,645,000	82,097,000	
1939	37,349,000	21,970,000	20,122,000	79,441,000	
1940	35,342,000	20,486,000	18,970,000	74,798,000	
1941	40,388,000	21,222,000	17,923,000	79,533,000	
1942	41,986,000	21,905,000	21,119,000	85,010,000	
1943	43,472,000	14,872,000	18,568,000	76,912,000	
1944	37,475,000	16,814,000	15,983,000	70,272,000	
1945	32,159,000	18,754,000	15,542,000	66,455,000	
1946	42,304,000	25,290,000	19,290,000	86,884,000	
1947	84,611,000	33,319,000	27,256,000	145,176,000	
1948	116,377,000	58,755,000	40,458,000	215,590,000	



Pacific Electric Railway Company

*Records of Dept. Mot. Vehicle*

STATISTICS OF AUTOMOBILE USE

LOS ANGELES COUNTY										
Year	State	L.A. County	State	L.A. County	per Vehicle	Autos Only	Miles	Miles	per Auto	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
			(Million Gallons)					(Millions)	(Millions)	
			GASOLINE CONSUMPTION		Annual Consump:Registered:			Auto	Passenger	Population:
			REGISTRATION		per Vehicle			Miles	Miles	per Auto
			AUTO & TRUCK							
1923	1,100,283	425,582	547	212	497.8	410,517	2,554	3,699	3.25	
1924	1,319,072	532,082	670	271	508.5	465,950	2,961	4,288	3.54	
1925	1,439,402	578,298	749	301	520.7	506,267	3,295	4,771	3.43	
1926	1,599,246	635,949	835	332	522.4	560,136	3,657	5,296	3.29	
1927	1,693,195	678,462	943	378	557.0	601,637	4,188	6,065	3.20	
1928	1,799,890	734,057	1,011	412	561.7	654,100	4,592	6,650	3.07	
1929	1,974,341	810,133	1,139	468	577.3	776,677	5,604	8,115	2.68	
1930	2,041,356	842,528	1,211	500	593.3	806,264	5,979	8,658	2.72	
1931	2,043,281	843,536	1,244	514	608.8	805,787	6,132	8,879	2.82	
1932	1,971,616	809,703	1,221	497	614.3	772,399	5,931	8,588	3.00	
1933	1,958,797	808,640	1,205	498	615.4	770,877	5,929	8,586	3.03	
1934	1,993,116	819,425	1,212	498	608.2	779,915	5,929	8,585	3.11	
1935	2,150,740	884,521	1,358	558	631.3	838,983	6,620	9,586	2.91	
1936	2,327,029	956,974	1,478	608	635.1	907,223	7,202	10,428	2.76	
1937	2,483,473	1,030,406	1,565	650	630.4	975,392	7,686	11,129	2.62	
1938	2,509,691	1,036,904	1,561	645	622.2	979,974	7,621	11,035	2.77	
1939	2,605,147	1,020,031	1,659	649	636.7	1,019,293	8,113	11,748	2.69	
1940	2,772,159	1,160,124	1,737	727	626.7	1,093,290	8,565	12,402	2.55	
1941	2,961,247	1,248,787	1,947	821	657.5	1,174,358	9,651	13,975	2.44	
1942	2,834,808	1,199,550	1,679	711	592.3	1,127,538	8,348	12,088	2.61	
1943	2,748,901	1,151,278	1,389	582	505.5	1,082,809	6,843	9,909	2.86	
1944	2,779,243	1,159,874	1,418	592	510.2	1,088,930	6,945	10,056	2.96	
1945	2,853,177	1,182,343	1,752	726	614.0	1,103,914	8,473	12,269	3.06	
1946	3,097,882	1,291,569	2,367	987	764.2	1,196,319	11,428	16,548	2.90	
1947	3,476,554	1,451,001	2,594	1,083	746.3	1,333,718	12,443	18,017	2.72	
1948	3,746,266	1,594,695	2,745	1,095	732.7	1,426,073	13,305	19,266	2.63	

XXVII

TABLE NO. XVII

Footnote

A CITY ON WHEELS -- AUTOMOBILE WHEELS

Robert Gresham

Auto Club of Southern California

(An address at meeting of The Research Committee, Los Angeles Chamber of Commerce, October 15, 1948)

Sixty years ago -- in 1888 -- when the Los Angeles Chamber of Commerce was founded, there were no automobiles on the streets of Los Angeles, and all of the growth of this industry has come since the organization of the Chamber. It wasn't until eight years later that Los Angeles horses first were frightened into breaking out of their traces by the appearance of half a dozen noisy horseless carriages.

Despite prejudice, suspicion and ridicule, automobiles were not to be denied their place in the economic sun. In metropolitan Los Angeles today the automobile means an annual volume of business well in excess of two billion dollars, and is the sole means of transportation for hundreds of thousands of people. It is the region's Number One industry, in order of economic importance.

Ten assembly plants in the Los Angeles metropolitan area have a combined capacity of about 1,000 cars daily -- an annual capacity output in excess of 250,000 cars, with an f.o.b. plant value of more than \$400,000,000.

Nearly 7,500 service stations provide gasoline, oil and service to Los Angeles cars at the rate of another \$400,000,000 per year.

Sale of cars, parts, maintenance and repairs by new car dealers approximate \$1,200,000,000. Still more millions are represented in the average investment of \$175,000 in plant and inventory by each of the more than 900 automobile dealers in the Los Angeles metropolitan area.

Twenty-two hundred merchants dealing in used cars maintain a stock of approximately 125,000 motor vehicles -- forty per cent more vehicles than are on the streets and highways of all Continental Europe.

The over-all annual business done by the automobile industry in Los Angeles approximates \$2,250,000,000, which is about equal to the assessed valuation of all property in the City of Los Angeles.

Recognized as the second most important automotive center in the world, Los Angeles' continuing improvement of streets and highways makes possible the fullest utilization of motor vehicles.

One thought for the future -- it was recently announced by the research organization of the Automobile Manufacturers Association that, barring another war, by 1952 Southern California will absorb six per cent of the total world production of automobiles, the nearest area competitor being Greater New York City, with only 1-1/4 per cent of world production. Southern California, with Los Angeles as its heart, is an area and a city whose economy and society are indisputably on wheels -- automobile wheels!

PACIFIC ELECT  
COMPARATIVE STATEMENT OF REVENUE  
FOR YEARS 1940 TO 1948, INCLUSIVE

Line Number	1		2		3		4		
Name of Line	PASADENA OAK KNOLL		PASADENA SHORT LINE		# EL MONTE- BALDWIN PARK		MONROVIA GLENDDORA		SIERRA
1940 Revenue Passengers & Index	1,487,951	100.0	1,384,818	100.0	937,131	■	895,139	100.0	309.
1940 Passenger Revenue & Index	\$201,543	100.0	\$182,481	100.0	\$245,367	■	\$187,356	100.0	\$47.
1941 Revenue Passengers & Index	1,545,224	103.8	1,418,990	102.5	956,740	■	1,002,126	111.9	321.
1941 Passenger Revenue & Index	\$219,908	104.6	\$184,964	101.4	\$220,027	■	\$199,255	106.3	\$43.
1942 Revenue Passengers & Index	2,084,278	140.1	1,889,395	136.4	1,109,777	100.0	1,323,765	147.8	450.
1942 Passenger Revenue & Index	\$294,418	146.1	\$251,857	138.0	\$191,062	100.0	\$266,766	142.3	\$62.
1943 Revenue Passengers & Index	2,623,445	176.3	2,462,576	177.8	1,556,303	140.2	2,444,625	273.1	533.
1943 Passenger Revenue & Index	\$369,010	183.1	\$340,501	186.6	\$253,738	132.8	\$477,954	255.1	\$73.
1944 Revenue Passengers & Index	2,906,414	195.3	2,954,838	213.4	1,954,909	176.1	2,500,928	279.3	625.
1944 Passenger Revenue & Index	\$386,634	191.8	\$397,306	217.7	\$296,911	155.4	\$470,131	250.9	\$82.
1945 Revenue Passengers & Index	2,853,785	191.7	3,014,188	217.7	2,096,186	188.9	2,730,816	305.0	618.
1945 Passenger Revenue & Index	\$393,239	195.1	\$417,655	230.1	\$302,634	158.4	\$540,801	288.6	\$89.
1946 Revenue Passengers & Index	2,707,648	181.9	2,956,939	213.5	2,167,276	195.3	2,551,850	285.0	594.
1946 Passenger Revenue & Index	\$391,582	194.3	\$424,743	232.8	\$315,116	164.9	\$541,214	288.8	\$90.
1947 Revenue Passengers & Index	2,381,964	160.1	2,549,391	184.1	1,910,327	172.1	2,232,637	249.4	592.
1947 Passenger Revenue & Index	\$381,214	189.1	\$419,357	229.8	\$306,990	160.7	\$514,044	274.3	\$99.
1948 Revenue Passengers & Index	2,037,790	136.9	2,253,525	162.7	1,761,109	158.7	2,137,432	238.7	452.
1948 Passenger Revenue & Index	\$363,595	180.4	\$419,476	229.9	\$348,184	182.2	\$572,531	305.5	\$86.

Line Number	25		28		29		30		
Name of Line	WATTS - SIERRA VISTA		SUBWAY - SANTA MONICA 3D-WEST HOLLYWOOD--SAN FERNANDO VALLEY		GLENDALE -BURBANK		VENICE SHORT LINE		HOLLISTER SA E
1940 Revenue Passengers & Index	4,808,601	100.0	6,270,672	100.0	3,917,624	100.0	1,892,946	100.0	14.7
1940 Passenger Revenue & Index	\$321,872	100.0	\$492,126	100.0	\$395,760	100.0	\$231,282	100.0	\$9
1941 Revenue Passengers & Index	5,287,675	109.9	7,240,724	115.4	5,387,850	137.5			18,649,175
1941 Passenger Revenue & Index	\$341,232	100.0	\$540,084	109.7	\$488,595	123.4			\$1,278,436
1942 Revenue Passengers & Index	6,434,506	133.8	8,891,669	141.7	7,088,571	180.9			21,510,171
1942 Passenger Revenue & Index	\$443,995	137.9	\$740,619	150.4	\$703,196	177.6			\$1,560,937
1943 Revenue Passengers & Index	7,824,010	162.7	11,231,415	179.1	8,895,152	227.0			28,323,435
1943 Passenger Revenue & Index	\$613,043	190.4	\$1,058,901	215.1	\$908,318	229.5			\$2,289,527
1944 Revenue Passengers & Index	11,507,205	239.3	13,232,657	211.0	9,993,187	255.0	6,205,820	327.8	27.6
1944 Passenger Revenue & Index	\$854,820	265.5	\$1,215,751	247.0	\$975,569	246.5	\$755,030	326.4	\$1.9
1945 Revenue Passengers & Index	12,973,031	269.7	14,075,855	224.4	10,150,007	259.0	6,388,894	337.5	28.4
1945 Passenger Revenue & Index	\$903,463	280.6	\$1,281,351	260.3	\$997,003	251.9	\$791,983	342.4	\$1.9
1946 Revenue Passengers & Index	13,664,061	284.1	14,398,781	229.6	10,174,003	259.6	6,311,421	333.4	28.1
1946 Passenger Revenue & Index	\$928,051	288.3	\$1,339,859	272.2	\$1,039,767	262.7	\$767,275	331.7	\$1.9
1947 Revenue Passengers & Index	12,500,100	259.9	13,034,460	207.8	9,166,300	233.9	5,408,636	285.7	26.0
1947 Passenger Revenue & Index	\$862,438	267.9	\$1,189,218	241.6	\$905,414	228.7	\$727,626	314.6	\$1.8
1948 Revenue Passengers & Index	9,976,774	207.4	10,377,132	165.4	7,617,509	194.4	4,911,239	259.4	21.7
1948 Passenger Revenue & Index	\$922,332	286.5	\$1,123,451	228.2	\$856,641	216.4	\$763,940	330.3	\$1.8

# - See also comparison of combined results of L.A.-El Monte-Baldwin Park rail line, Red Bernardino-Riverside-Arlington Line, and L.A.-El Monte-Pomona-San Bernardino-Riverside.  
 \* - See comparison of combined results of Sierra Madre rail line and San Marino-Sierra Madre.  
 ● - See also comparison of combined results of Newport Beach rail line and L.A.-Balboa Main Line.  
 ⊕ - Includes L.A.-San Pedro Steamship Service.  
 ⊗ - Includes Long Beach-San Pedro Steamship Service.

ERIC RAILWAY COMPANY  
 UENUE PASSENGERS AND PASSENGER REVENUE  
 USIVE, WITH INDEXES BASED ON 1940

5 *		6		7-8		9-10		11		12		17	
SERRA MADRE		L. A. - LONG BEACH		L. A. - SAN PEDRO		LONG BEACH - SAN PEDRO		SANTA ANA		SANTA MONICA AIR LINE		NEWPORT BEACH	
475	100.0	1,816,701	100.0	1,378,976	100.0	1,049,334	100.0	343,984	100.0	14,316	100.0	63,246	100.0
157	100.0	\$454,542	100.0	\$265,866	100.0	\$104,202	100.0	\$81,612	100.0	\$1,859	100.0	\$18,354	100.0
495	103.9	1,934,873	106.5	1,592,908	115.5	1,223,933	116.6	405,422	117.8	5,545	38.7	--	-
577	92.4	\$522,667	114.9	\$344,242	129.4	\$125,060	120.0	\$98,423	120.5	\$682	36.6	--	-
635	145.6	2,852,306	157.0	2,989,084	216.7	2,217,092	211.2	750,758	218.2	12,565	87.7	1,345	2.1
844	133.3	\$819,184	180.2	\$656,940	247.0	\$254,283	244.0	\$199,061	243.9	\$1,688	90.8	\$784	4.2
708	172.5	4,645,961	255.7	5,735,381	415.9	4,040,556	385.0	1,558,209	452.9	17,765	124.0	115,932	183.3
799	156.5	\$1,284,675	282.6	\$1,252,186	470.9	\$449,662	431.5	\$423,479	518.8	\$2,571	138.3	\$47,522	258.9
311	202.1	6,361,299	350.1	7,759,583	562.7	5,534,022	527.3	2,270,201	659.9	22,633	157.9	8,085	12.7
426	174.8	\$1,666,536	366.6	\$1,724,877	648.7	\$577,656	554.3	\$590,800	723.9	\$3,166	170.3	\$3,285	17.8
190	199.8	7,881,677	433.8	8,580,265	622.2	5,734,089	546.4	2,479,296	720.7	27,217	189.9	13,405	21.1
335	189.4	\$1,949,402	428.8	\$1,881,542	707.7	\$581,904	558.4	\$635,905	779.1	\$3,723	200.2	\$5,378	29.3
494	192.1	6,968,209	383.5	6,774,107	491.2	3,325,520	316.9	2,231,655	648.7	31,721	221.4	24,225	38.3
345	191.6	\$1,805,838	397.2	\$1,497,401	563.2	\$352,683	338.4	\$501,139	614.0	\$4,526	243.4	\$9,547	52.0
341	191.4	5,499,853	302.7	5,163,320	374.4	1,692,419	161.2	2,064,688	600.2	23,227	162.1	53,178	84.0
247	210.5	\$1,412,840	310.8	\$1,089,875	409.9	\$197,577	189.6	\$492,843	603.8	\$3,851	207.1	\$18,459	100.5
996	*	4,575,288	251.8	4,364,925	316.5	1,090,712	103.9	1,865,553	542.3	20,106	140.3	60,006	94.8
973	*	\$1,369,374	301.2	\$1,031,102	387.8	\$147,230	141.2	\$482,035	590.6	\$3,966	213.3	\$23,535	128.2

32		51		52		54		55		56		58	
SUBWAY- LYWOOD BLVD. N VICENTE CHO PARK		GARFIELD AVE. HIGHLAND PARK		ALHAMBRA TEMPLE CITY		LONG BEACH- HUNTINGTON PARK		LOS ANGELES - BALBOA MOTOR COACH		SUNLAND		LOS ANGELES SANTA ANA MOTOR COACH	
27,642	100.0	718,452	100.0	+ 1,097,636	100.0	712,086	100.0	⊕ 148,694	100.0	682,469	100.0	905,763	100.0
36,403	100.0	\$38,523	100.0	+ \$136,688	100.0	\$70,476	100.0	⊕ \$48,422	100.0	\$97,132	100.0	\$164,014	100.0
112.9		748,600	104.2	⊕ 1,242,023	113.2	1,010,988	142.0	130,218	87.6	807,582	118.3	1,106,817	122.2
109.5		\$37,966	98.6	⊕ \$160,846	117.7	\$106,344	150.9	\$48,077	99.3	\$114,621	118.0	\$206,926	126.2
130.2		981,681	136.6	2,019,261	184.0	1,772,031	248.8	258,056	173.5	1,259,488	184.6	1,805,278	199.3
133.7		\$52,699	136.8	\$276,634	202.4	\$198,589	281.8	\$83,202	171.8	\$189,803	195.4	\$369,419	225.2
171.4		1,142,361	159.0	2,621,489	238.8	2,798,186	393.0	273,483	183.9	1,798,209	263.5	2,700,604	298.2
196.1		\$67,782	176.0	\$339,431	248.3	\$311,513	442.0	\$80,819	166.9	\$259,966	267.6	\$564,709	344.3
203,925	187.4	1,372,193	191.0	3,102,543	282.7	4,402,045	618.2	508,796	342.1	2,295,486	336.4	3,790,020	418.4
32,915	206.4	\$79,752	207.0	\$404,523	295.9	\$387,856	550.3	\$147,806	305.2	\$323,119	332.7	\$700,902	427.4
56,069	193.2	1,437,873	200.1	3,239,591	295.2	3,835,704	538.7	513,785	345.5	2,587,441	379.1	4,749,654	524.4
64,753	209.8	\$85,230	221.2	\$414,755	303.4	\$426,356	605.0	\$143,736	296.8	\$359,047	369.6	\$815,583	497.3
99,805	191.5	1,409,874	196.2	3,282,392	299.1	3,970,098	557.5	539,937	363.1	2,606,045	381.8	4,994,292	551.4
78,239	211.2	\$87,260	226.5	\$423,807	310.0	\$472,516	670.5	\$167,066	345.0	\$367,008	377.8	\$820,687	500.4
62,149	176.9	1,257,516	175.0	3,023,033	275.4	3,607,028	506.5	572,285	384.9	2,482,740	363.8	4,545,967	501.9
98,551	202.7	\$97,091	252.0	\$452,612	331.1	\$484,063	686.8	\$177,752	367.1	\$394,203	405.8	\$814,637	496.7
78,818	147.9	1,105,476	153.9	2,893,809	263.6	2,992,165	420.2	568,709	382.5	2,442,556	357.9	4,337,974	478.9
71,171	199.8	\$107,258	278.4	\$503,499	368.4	\$459,276	651.7	\$194,576	401.8	\$446,325	459.5	\$858,285	523.3

lands-San  
 side Line.  
 dre motor coach line.  
 otor coach line.

⊕ - Combined results for rail and motor coach operations.  
 + - Rail line only  
 ▲ - Comparison not available by separate lines  
 ■ - Comparison not satisfactory account changes in operations, and indexes are based on 1942.

PACIFIC ELECTRIC  
COMPARATIVE STATEMENT OF REVENUE  
FOR YEARS 1940 TO 1948, IN

Line Number	59		61		62		63		
Name of Line	LONG BEACH - RIVERSIDE		LONG BEACH PASADENA		REDLANDS SAN BERNARDINO # RIVERSIDE ARLINGTON		L. A. -EL MONTE-POMONA SAN BERNARDINO RIVERSIDE		
1940 Revenue Passengers & Index	62,832	100.0	87,254	100.0	+ 310,005	100.0	1,907,168		■
1940 Passenger Revenue & Index	\$25,209	100.0	\$18,127	100.0	+ \$20,961	100.0	\$397,384		■
1941 Revenue Passengers & Index	81,703	130.0	94,086	107.8	+ 328,443	108.9	2,421,869		■
1941 Passenger Revenue & Index	\$36,355	144.2	\$20,565	113.4	+ \$22,161	105.7	\$589,355		■
1942 Revenue Passengers & Index	169,441	269.7	144,158	165.2	+ 508,908	164.2	4,108,377	100.0	
1942 Passenger Revenue & Index	\$77,832	308.7	\$33,022	182.2	+ \$35,176	167.8	\$1,101,364	100.0	
1943 Revenue Passengers & Index	283,805	451.7	193,879	222.2	⊕ 1,055,101	340.3	6,822,772	166.7	
1943 Passenger Revenue & Index	\$136,431	541.2	\$46,899	258.7	⊕ \$81,865	390.5	\$2,037,448	185.0	
1944 Revenue Passengers & Index	368,075	585.8	263,770	302.3	◆ 1,440,714	464.7	8,430,651	205.2	
1944 Passenger Revenue & Index	\$169,343	671.7	\$63,686	351.3	◆ \$115,446	550.7	\$2,563,289	232.7	
1945 Revenue Passengers & Index	444,755	707.8	259,216	297.1	◆ 1,346,360	434.3	8,803,173	214.3	
1945 Passenger Revenue & Index	\$203,819	808.5	\$59,355	327.4	◆ \$110,756	528.4	\$2,398,661	217.8	
1946 Revenue Passengers & Index	518,532	825.3	230,879	264.6	◆ 1,048,291	338.1	8,647,589	210.5	
1946 Passenger Revenue & Index	\$226,081	896.8	\$53,574	295.5	◆ \$90,950	433.9	\$2,173,964	197.4	
1947 Revenue Passengers & Index	432,425	688.2	494,635	↑	1,854,667	↑	7,123,449		■
1947 Passenger Revenue & Index	\$164,149	651.2	\$127,278	↑	\$239,314	↑	\$1,943,832		■
1948 Revenue Passengers & Index	389,841	620.4	638,769	↑	1,779,376	↑	6,584,765		■
1948 Passenger Revenue & Index	\$155,061	615.1	\$156,274	↑	\$271,775	↑	\$2,017,996		■

Line Number	80		81		82		83		
Name of Line	EMERY PARK		HOLLYWOOD-VENTURA BLVD.		NORTH HOLLYWOOD		VAN NUYS-CANOGA PARK		V SAN
1940 Revenue Passengers & Index	118,996	100.0	250,950	100.0	103,221	100.0	82,027	100.0	53
1940 Passenger Revenue & Index	\$4,944	100.0	\$20,694	100.0	\$4,890	100.0	\$9,522	100.0	\$5
1941 Revenue Passengers & Index	127,609	107.2	388,506	154.8	143,266	138.8	99,865	121.7	72
1941 Passenger Revenue & Index	\$6,138	124.2	\$28,818	139.3	\$7,540	154.2	\$10,464	109.9	\$5
1942 Revenue Passengers & Index	177,755	149.4	650,809	259.3	223,642	216.7	172,015	209.7	111
1942 Passenger Revenue & Index	\$8,129	164.4	\$50,409	243.6	\$12,546	256.6	\$19,272	202.4	\$10
1943 Revenue Passengers & Index	200,711	168.7	968,445	385.9	260,101	252.0	275,227	335.5	181
1943 Passenger Revenue & Index	\$8,901	180.0	\$76,293	368.7	\$13,048	266.8	\$32,028	336.4	\$1
1944 Revenue Passengers & Index	220,857	185.6	1,240,813	494.4	372,551	360.9	324,168	395.2	231
1944 Passenger Revenue & Index	\$9,619	194.6	\$102,839	497.0	\$18,475	377.8	\$36,958	388.1	\$21
1945 Revenue Passengers & Index	225,257	189.3	1,366,590	544.6	469,943	455.3	318,060	387.8	251
1945 Passenger Revenue & Index	\$10,000	202.3	\$116,160	561.3	\$24,808	507.3	\$36,577	384.1	\$21
1946 Revenue Passengers & Index	206,389	173.4	1,306,000	520.4	500,653	485.0	287,251	350.2	241
1946 Passenger Revenue & Index	\$9,528	192.7	\$117,396	567.3	\$27,873	570.0	\$34,388	361.1	\$2
1947 Revenue Passengers & Index	204,066	171.5	1,472,705	↑	641,220	↑	275,378	335.7	251
1947 Passenger Revenue & Index	\$10,681	216.0	\$167,878	↑	\$46,218	↑	\$42,452	445.8	\$2
1948 Revenue Passengers & Index	177,442	149.1	1,572,209	↑	700,472	↑	257,727	314.2	221
1948 Passenger Revenue & Index	\$13,286	268.7	\$219,784	↑	\$65,353	↑	\$40,229	422.5	\$2

# - See also comparison of combined results of L.A.-El Monte-Baldwin Park rail line, Bernardino-Riverside-Arlington Line, and L.A.-El Monte-Pomona-San Bernardino-Riverside-Arlington Line, and L.A.-El Monte-Pomona-San Bernardino-Riverside-Arlington Line.  
\* - See comparison of combined results of Sierra Madre rail line and San Marino-Sierra Madre rail line.  
⊕ - Combined results for rail and motor coach operations.  
+ - Rail line only.

**TRIC RAILWAY COMPANY**  
**ENUE PASSENGERS AND PASSENGER REVENUE**  
**CLUSIVE, WITH INDEXES BASED ON 1940**

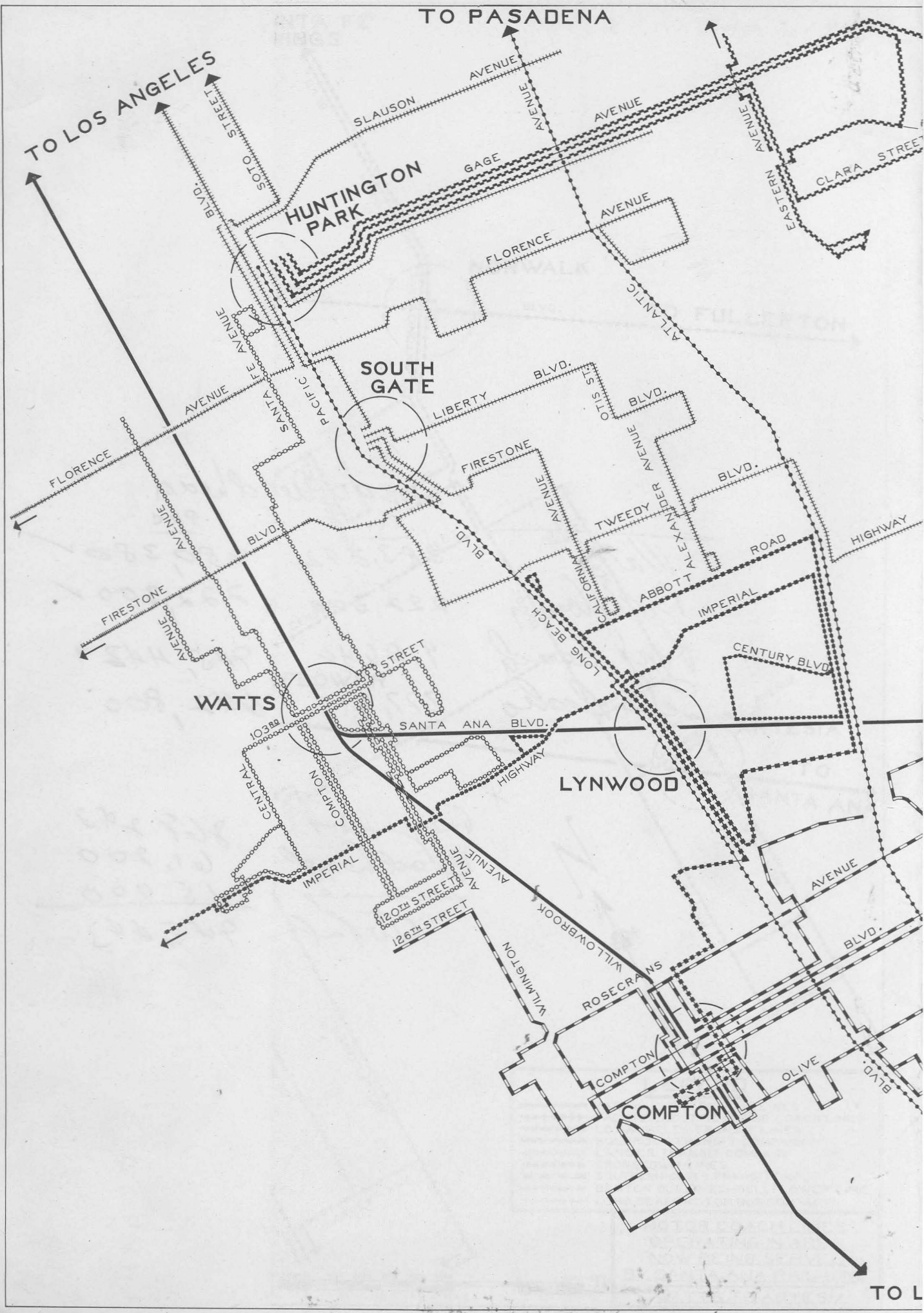
64		65		75		76		77		78		79	
PASADENA POMONA		SAN MARINO SIERRA MADRE MOTOR COACH		SANTA MONICA via BEVERLY HILLS MOTOR COACH LINE		BEVERLY-SUNSET BLVDS. MOTOR COACH		HOLLYWOOD BEVERLY HILLS UNIVERSITY		WESTERN- FRANKLIN		LOS ANGELES REDONDO BEACH MOTOR COACH	
---	---	---	---	1,911,383	100.0	131,883	100.0	1,255,000	100.0	1,029,669	100.0	473,098	◆
---	---	---	---	\$233,426	100.0	\$22,912	100.0	\$89,695	100.0	\$44,349	100.0	\$93,009	◆
---	---	---	---	2,128,751	111.4	132,318	100.3	1,350,422	107.6	1,093,007	106.2	842,672	100.0
---	---	---	---	\$262,353	112.4	\$24,415	106.6	\$83,722	93.3	\$47,008	106.0	\$163,552	100.0
---	---	---	---	3,546,753	185.6	163,616	124.1	1,710,029	136.3	1,266,040	122.9	1,256,725	149.1
---	---	---	---	\$419,813	179.8	\$31,475	137.4	\$104,807	116.8	\$53,074	119.7	\$247,629	151.4
---	---	---	---	5,117,604	267.7	199,714	151.4	2,213,065	176.3	1,459,528	141.7	1,886,353	223.8
---	---	---	---	\$603,171	258.4	\$32,686	142.7	\$161,644	180.2	\$62,065	139.9	\$339,332	207.5
---	---	---	---	7,052,650	369.0	261,473	198.3	2,707,251	215.7	1,641,816	159.4	2,585,460	306.8
---	---	---	---	\$741,147	317.5	\$42,193	184.2	\$189,888	211.7	\$67,329	151.8	\$441,598	270.0
---	---	---	---	7,537,811	394.4	288,328	218.6	3,041,558	242.4	1,804,486	175.2	2,836,497	336.6
---	---	---	---	\$830,247	355.7	\$45,785	199.8	\$207,016	230.8	\$82,373	185.7	\$464,305	283.9
---	---	---	---	7,272,405	380.5	289,322	219.4	2,862,919	228.1	1,808,434	175.6	2,833,222	336.2
---	---	---	---	\$846,689	362.7	\$43,681	190.6	\$208,283	232.2	\$86,108	194.2	\$481,836	294.6
065	◆	---	---	5,992,101	313.5	257,520	195.3	2,613,825	208.3	1,662,681	161.5	2,692,976	319.6
007	◆	---	---	\$855,196	366.4	\$41,121	179.5	\$203,369	226.7	\$83,799	189.0	\$517,321	316.3
140	100.0	94,975	◆	5,804,552	303.7	314,723	238.6	2,162,695	172.3	1,172,125	113.8	2,610,075	309.7
801	100.0	\$10,973	◆	\$890,027	381.3	\$51,165	223.3	\$211,296	235.6	\$79,716	179.7	\$577,943	353.3

84		85		86		COMBINATIONS OF LINES FOR COMPARATIVE PURPOSES						
VAN NUYS- FERNANDO		VAN NUYS BIRMINGHAM HOSPITAL		L.A.-VAN NUYS via RIVERSIDE DR. MOTOR COACH LINE		L.A.-SIERRA MADRE RAIL & SAN MARINO -SIERRA MADRE M/C		L.A.-NEWPORT RAIL & L.A.-BALBOA MOTOR COACH LINE		L.A.-BALDWIN PARK RAIL REDLANDS-ARLINGTON M/C LA-SAN BERDO-RIVERSIDE M/C		
726	100.0	---	---	---	---	309,475	100.0	148,694	100.0	3,154,304		100.0
019	100.0	---	---	---	---	\$47,157	100.0	\$48,422	100.0	\$663,712		100.0
192	134.4	---	---	---	---	321,495	103.9	130,218	87.6	3,707,052		117.5
899	117.5	---	---	---	---	\$43,577	92.4	\$48,077	99.3	\$831,543		125.3
877	208.2	---	---	---	---	450,635	145.6	259,401	174.5	5,727,062		181.5
809	215.4	---	---	---	---	\$62,844	133.3	\$83,986	173.4	\$1,327,602		200.0
010	344.4	---	---	---	---	533,708	172.5	389,415	261.9	9,434,176		299.0
223	343.2	---	---	---	---	\$73,799	156.5	\$128,341	265.0	\$2,373,051		357.5
421	432.6	240,540	◆	---	---	625,311	202.1	516,881	347.6	11,826,274		374.9
550	449.3	\$20,636	◆	---	---	\$82,426	174.8	\$151,091	312.0	\$2,975,646		448.3
969	472.7	380,403	100.0	---	---	618,190	199.8	527,190	354.5	12,243,719		388.2
397	506.0	\$33,724	100.0	---	---	\$89,335	189.4	\$149,114	307.9	\$2,812,051		423.7
920	461.5	372,175	97.8	---	---	594,494	192.1	564,162	379.4	11,863,156		376.1
180	521.6	\$32,536	96.5	---	---	\$90,345	191.6	\$176,613	364.7	\$2,580,030		388.7
294	480.8	380,279	100.0	233,337	◆	592,341	191.4	625,463	420.6	10,888,443		345.2
438	586.5	\$38,028	112.8	\$48,619	◆	\$99,247	210.5	\$196,211	405.2	\$2,490,136		375.2
604	418.1	380,858	100.1	1,006,225	100.0	547,971	177.1	628,715	422.8	10,125,250		321.0
810	554.1	\$35,839	106.3	\$209,157	100.0	\$97,946	207.7	\$218,111	450.4	\$2,637,955		397.4

Redlands-San  
verside Line.  
a Madre motor coach line.

- - Comparison not satisfactory account changes in operations, and indexes are based on 1942.
- ◆ - Motor coach operations only, between Riverside and Arlington.
- ◆ - Motor coach service not operated full year; indexes are based on first full year of operation
- ‡ - Comparison not satisfactory account change in service.



TO LOS ANGELES

TO SANTA FE SPRINGS

LORENCE AVENUE

DOWNEY

NORWALK

FIRESTONE

BLVD.

TO

BLVD.

AVENUE

BLVD.

LAKEWOOD

DOWNEY

ROSECRANS

AVENUE

CROSSDALE

AVENUE

CENTER

STREET

PARAMOUNT

BELLFLOWER

CLEARWATER

MAYNE ST.

AVENUE

JACKSON ST.

FLOWER AVENUE

ARTESIA

AVENUE

AVENUE

BLVD.

BLVD.

CLARK

BELLFLOWER

WAY

HARVEY

STREET

STREET

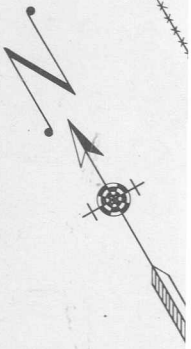
LONG BEACH

LONG BEACH

ARTESIA

ATLANTIC

	PACIFIC EL
	PACIFIC EL
	LOS ANGELES
	HOLBROOK
	LANDIER 7
	CROSTOV
	SOUTHERN
	BENTON B
	LONG BEA



MC  
O  
N  
BYS  
V



EXH. No 4  
MAY 11, 1949  
WITNESS JENKINS

PR 3.2 (Supplement)

Before The  
Public Utilities Commission of The State of California  
Application No. 30095

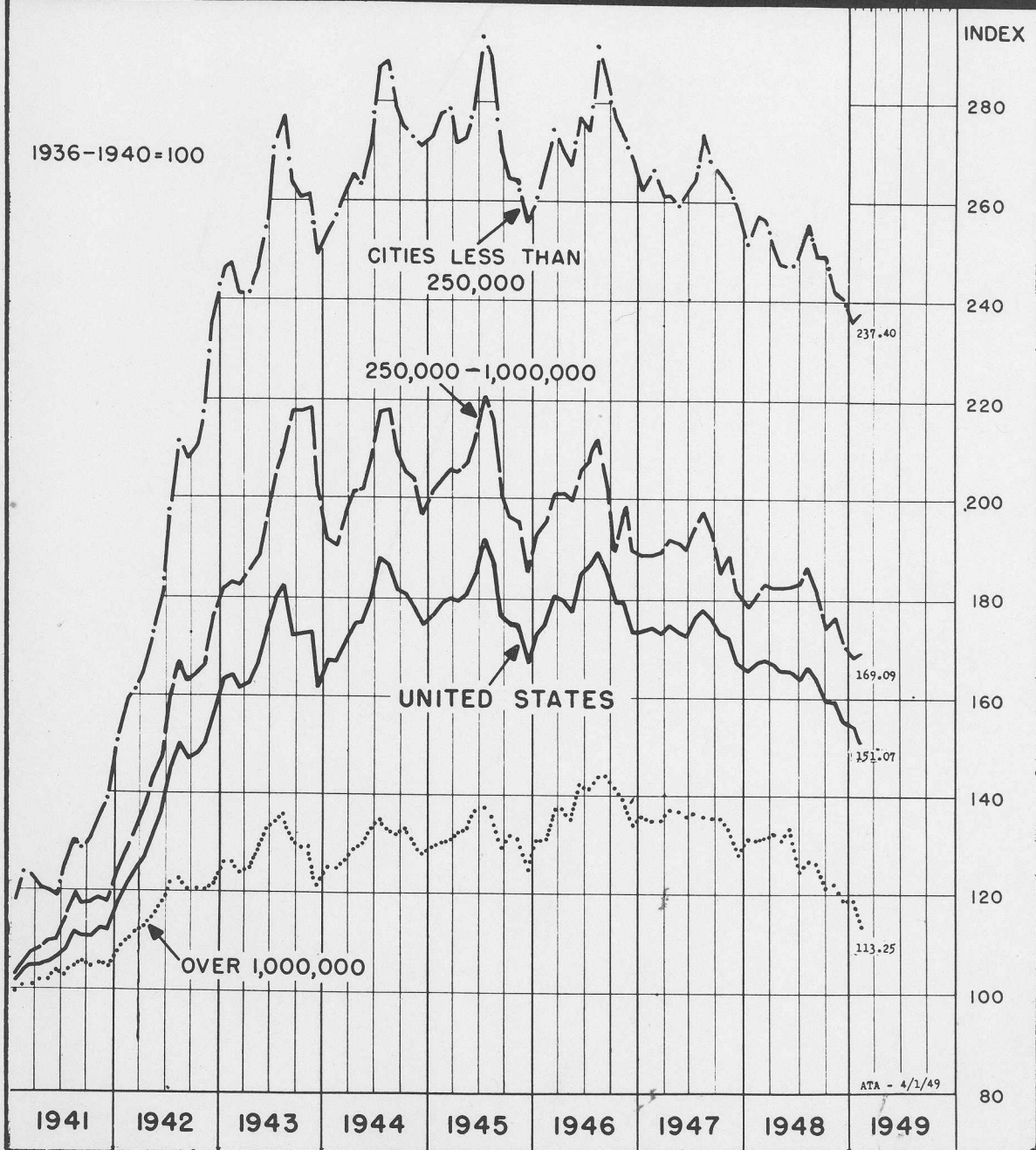
NONPRODUCTIVE USE OF INVESTMENT,  
SCHEDULE MAN-HOUR ANALYSIS  
AND  
TRAFFIC DATA

Submitted by Arthur C. Jenkins,  
Consulting Engineer

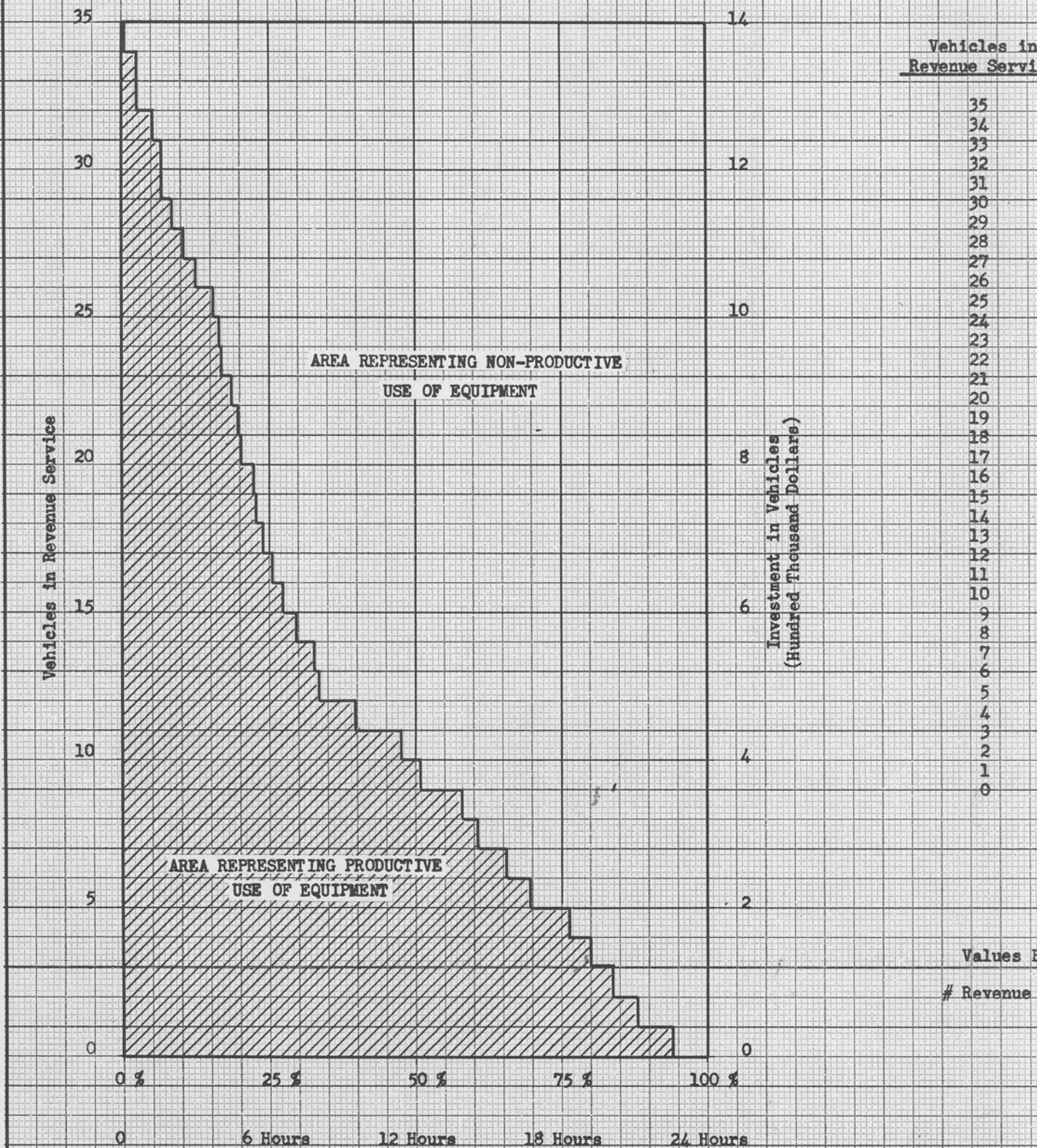
Pacific Electric Railway Company  
Los Angeles, California  
May 9, 1949

# TREND OF TRANSIT TRAFFIC, 1941 - 1949

TO FEBRUARY 28, 1949



Pacific Electric Railway Company  
 Venice Short Line  
 Vehicles in Revenue Service #



Aggregate Portion of  
24 Hours Vehicles are  
in Revenue Service #

0.3 %  
2.8  
2.8  
5.2  
6.9  
6.9  
8.7  
10.4  
12.5  
15.3  
16.7  
17.0  
18.6  
19.8  
20.1  
22.6  
22.9  
24.0  
25.7  
27.4  
29.9  
32.6  
33.7  
39.9  
47.6  
51.0  
58.0  
60.8  
65.6  
69.8  
76.4  
80.2  
84.0  
88.2  
94.1  
100.0 %

Based on Operations of Thursday, March 17, 1949

Service Consists of Running Time and Layover



Productive Hours (Running Time & Layover) ..... mmmmmmmmm  
 Non-Productive Working Hours ..... -----  
 Non-Working Hours ..... - - - - -  
 Overtime ..... | | | | | | | | | |

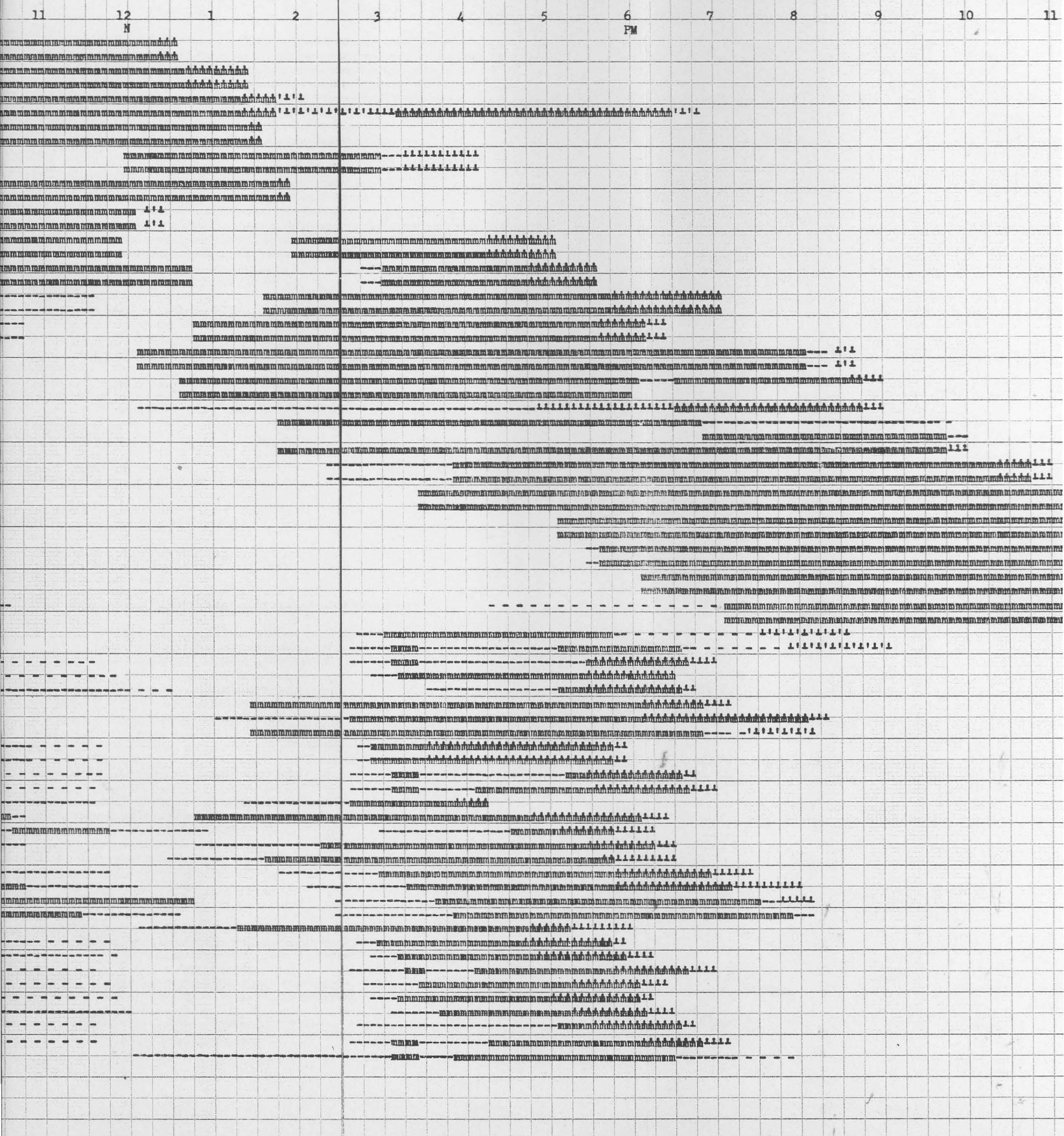
Conductor Badge	Motorman Badge	Assignment	4 AM	5	6	7	8	9	10
2936		1001	-----	-----	-----	-----	-----	-----	-----
	2309	1001	-----	-----	-----	-----	-----	-----	-----
2848		1002	-----	-----	-----	-----	-----	-----	-----
	2275	1002	-----	-----	-----	-----	-----	-----	-----
2798		1003	-----	-----	-----	-----	-----	-----	-----
	1183	1003	-----	-----	-----	-----	-----	-----	-----
2698		1004	-----	-----	-----	-----	-----	-----	-----
	2643	1004	-----	-----	-----	-----	-----	-----	-----
7237		1005	-----	-----	-----	-----	-----	-----	-----
	2489	1005	-----	-----	-----	-----	-----	-----	-----
7256		1006	-----	-----	-----	-----	-----	-----	-----
	2233	1006	-----	-----	-----	-----	-----	-----	-----
2375		1007	-----	-----	-----	-----	-----	-----	-----
	7423	1007	-----	-----	-----	-----	-----	-----	-----
2522		1008	-----	-----	-----	-----	-----	-----	-----
	2571	1008	-----	-----	-----	-----	-----	-----	-----
2618		1009	-----	-----	-----	-----	-----	-----	-----
	2644	1009	-----	-----	-----	-----	-----	-----	-----
2258		1010	-----	-----	-----	-----	-----	-----	-----
	2465	1010	-----	-----	-----	-----	-----	-----	-----
2528		1011	-----	-----	-----	-----	-----	-----	-----
	2056	1011	-----	-----	-----	-----	-----	-----	-----
7240		1012	-----	-----	-----	-----	-----	-----	-----
	7317	1012	-----	-----	-----	-----	-----	-----	-----
7379		1013	-----	-----	-----	-----	-----	-----	-----
	7393	1013	-----	-----	-----	-----	-----	-----	-----
	7341	1013	-----	-----	-----	-----	-----	-----	-----
2600		1026 Swtg.	-----	-----	-----	-----	-----	-----	-----
		1014	-----	-----	-----	-----	-----	-----	-----
3268		1014	-----	-----	-----	-----	-----	-----	-----
	2289	1014	-----	-----	-----	-----	-----	-----	-----
1596		1015	-----	-----	-----	-----	-----	-----	-----
	2087	1015	-----	-----	-----	-----	-----	-----	-----
2806		1016	-----	-----	-----	-----	-----	-----	-----
	1381	1016	-----	-----	-----	-----	-----	-----	-----
1038		1017	-----	-----	-----	-----	-----	-----	-----
	2980	1017	-----	-----	-----	-----	-----	-----	-----
7455		1018	-----	-----	-----	-----	-----	-----	-----
	2984	1018	-----	-----	-----	-----	-----	-----	-----
2846		1019	-----	-----	-----	-----	-----	-----	-----
	2255	1019	-----	-----	-----	-----	-----	-----	-----
2112		1020	-----	-----	-----	-----	-----	-----	-----
	2619	1020	-----	-----	-----	-----	-----	-----	-----
1312		1026	-----	-----	-----	-----	-----	-----	-----
		1074	-----	-----	-----	-----	-----	-----	-----
7219		1027	-----	-----	-----	-----	-----	-----	-----
		1078 Xtra.	-----	-----	-----	-----	-----	-----	-----
	7374	1027	-----	-----	-----	-----	-----	-----	-----
		1036	-----	-----	-----	-----	-----	-----	-----
2454		1028	-----	-----	-----	-----	-----	-----	-----
		1033	-----	-----	-----	-----	-----	-----	-----
	2047	1028	-----	-----	-----	-----	-----	-----	-----
		1035	-----	-----	-----	-----	-----	-----	-----
1580		1029	-----	-----	-----	-----	-----	-----	-----
		1032	-----	-----	-----	-----	-----	-----	-----
7503		1029	-----	-----	-----	-----	-----	-----	-----
	7503	1071	-----	-----	-----	-----	-----	-----	-----
	2916	1032	-----	-----	-----	-----	-----	-----	-----
7214		1034 Mech.	-----	-----	-----	-----	-----	-----	-----
		1034 Mech.	-----	-----	-----	-----	-----	-----	-----
7262		1035	-----	-----	-----	-----	-----	-----	-----
	1407	1057 Xtra.	-----	-----	-----	-----	-----	-----	-----
7343		1036	-----	-----	-----	-----	-----	-----	-----
		1063	-----	-----	-----	-----	-----	-----	-----
2592		1040	-----	-----	-----	-----	-----	-----	-----
2300		1041	-----	-----	-----	-----	-----	-----	-----
2634		1042	-----	-----	-----	-----	-----	-----	-----
2266		1043	-----	-----	-----	-----	-----	-----	-----
2428		1044	-----	-----	-----	-----	-----	-----	-----
2053		1045	-----	-----	-----	-----	-----	-----	-----
2362		1046	-----	-----	-----	-----	-----	-----	-----
2844		1047	-----	-----	-----	-----	-----	-----	-----
2834		1048	-----	-----	-----	-----	-----	-----	-----
2210		1049	-----	-----	-----	-----	-----	-----	-----
2244		1055	-----	-----	-----	-----	-----	-----	-----
		1073	-----	-----	-----	-----	-----	-----	-----
7359		1056	-----	-----	-----	-----	-----	-----	-----
		1072	-----	-----	-----	-----	-----	-----	-----
7267		1058	-----	-----	-----	-----	-----	-----	-----
		1069	-----	-----	-----	-----	-----	-----	-----
2121		1059	-----	-----	-----	-----	-----	-----	-----
		1076	-----	-----	-----	-----	-----	-----	-----
2512		1060	-----	-----	-----	-----	-----	-----	-----
		1075	-----	-----	-----	-----	-----	-----	-----
7253		1061	-----	-----	-----	-----	-----	-----	-----
		1077	-----	-----	-----	-----	-----	-----	-----
5217		1062	-----	-----	-----	-----	-----	-----	-----
		1079 Xtra	-----	-----	-----	-----	-----	-----	-----
1491		1064	-----	-----	-----	-----	-----	-----	-----
		1070	-----	-----	-----	-----	-----	-----	-----
7276		1068	-----	-----	-----	-----	-----	-----	-----

Pacific Electric Railway Company

Venice Short Line

Rail Line 30

Man-Hours for Thursday, March 17, 1949



\* - Operators paid to the nearest five minutes  
 # - Running Time and Layover  
 \*\* - Deadhead, Protection, and other Dead Time  
 T - Total Time  
 ## - Premium Time

12	1	2	3	4	Regular Time	+	Overtime	=	Hours Paid *	=	Productive Hours #	+	Non-Productive Hours **	+	Non-Working Hours ##
				AM	8:00		0:15		8:15		7:54		0:21		0:00
					8:00		0:15		8:15		7:54		0:21		0:00
					8:00		0:45		8:45		8:24		0:21		0:00
					8:00		0:45		8:45		8:24		0:21		0:00
					8:20		0:45		9:05		8:24		0:21		0:20
					8:20		5:30		13:50		11:47		0:38		1:25
					8:00		0:10		8:10		7:49		0:21		0:00
					8:00		0:10		8:10		7:49		0:21		0:00
					3:17		0:56		4:13		3:08		1:05		0:00
					3:17		0:56		4:13		3:08		1:05		0:00
					8:00		0:10		8:10		7:52		0:18		0:00
					8:00		0:10		8:10		7:52		0:18		0:00
					8:20		0:15		8:35		5:43		2:32		0:20
					8:20		0:15		8:35		5:43		2:32		0:20
					8:00		0:50		8:50		8:31		0:19		0:00
					8:00		0:50		8:50		8:31		0:19		0:00
					8:00		0:50		8:50		8:12		0:38		0:00
					8:00		0:50		8:50		8:12		0:38		0:00
					8:00		1:20		9:20		6:59		2:21		0:00
					8:00		1:20		9:20		6:59		2:21		0:00
					8:00		0:50		8:50		6:25		2:25		0:00
					8:00		0:50		8:50		6:25		2:25		0:00
					8:20		0:15		8:35		8:02		0:13		0:20
					8:20		0:15		8:35		8:02		0:13		0:20
					8:00		0:25		8:25		7:40		0:45		0:00
					5:25		0:00		5:25		5:25		0:00		0:00
					8:00		4:10		12:10		5:04		7:03		0:03
					8:00		0:00		8:00		5:05		2:51		0:04
					3:10		0:00		3:10		2:57		0:13		0:00
					8:00		0:15		8:15		8:02		0:13		0:00
					8:00		0:40		8:40		6:56		1:44		0:00
					8:00		0:40		8:40		6:56		1:44		0:00
					8:20		0:55		9:15		8:41		0:14		0:20
					8:20		0:55		9:15		8:41		0:14		0:20
					8:00		0:15		8:15		7:59		0:16		0:00
					8:00		0:15		8:15		7:59		0:16		0:00
					8:00		0:20		8:20		7:56		0:24		0:00
					8:00		0:20		8:20		7:56		0:24		0:00
					8:00		0:25		8:25		8:12		0:13		0:00
					8:00		0:25		8:25		8:12		0:13		0:00
					16:00		0:55		16:55		11:54		2:10		2:51
					8:00		0:55		8:55		8:12		0:43		0:00
					8:00		1:05		9:05		5:33		0:52		2:40
					8:00		1:15		9:15		2:56		3:57		2:21
					8:00		1:30		9:30		2:43		5:11		1:36
					8:00		1:05		9:05		4:38		2:12		2:15
					3:00		1:20		4:20		2:44		6:06		0:30
					8:00		1:05		9:05		6:31		2:04		0:30
					8:00		2:15		10:15		6:34		3:35		0:06
					5:56		0:49		6:45		5:27		0:19		0:59
					8:00		2:25		10:25		2:52		6:43		0:50
					8:00		2:25		10:25		2:52		6:43		0:50
					8:00		1:20		9:20		3:04		4:13		2:03
					8:00		1:30		9:30		4:03		3:05		2:22
					8:00		0:25		8:25		5:42		2:43		0:00
					8:00		1:40		9:40		8:37		1:03		0:00
					8:00		1:10		9:10		3:30		5:40		0:00
					8:00		1:05		9:05		5:14		3:51		0:00
					8:00		0:55		8:55		5:12		3:43		0:00
					8:00		1:40		9:40		5:23		4:17		0:00
					8:00		2:15		10:15		5:46		4:29		0:00
					8:00		0:25		8:25		6:36		1:49		0:00
					8:00		0:00		8:00		4:58		2:57		0:05
					8:00		1:15		9:15		6:59		2:16		0:00
					8:00		1:15		9:15		6:22		2:03		0:50
					8:00		1:25		9:25		5:35		3:40		0:10
					8:00		1:15		9:15		3:59		3:35		1:41
					8:00		1:10		9:10		5:21		1:19		2:30
					8:00		1:15		9:15		4:10		2:15		2:50
					8:00		1:15		9:15		3:35		5:35		0:05
					8:00		1:15		9:15		2:36		4:16		2:23
					8:00		1:05		9:05		3:59		3:25		1:41
					8:00		0:00		8:00		3:01		4:15		0:44
					575:45 T		70:06 T		645:51 T		458:29 T		150:38 T		36:44 T
					89.1 %		10.9 %		100.0 %		71.0 %		23.3 %		5.7 %

Pacific Electric Railway

Los Angeles - Alhambra - Temple Cit

Vehicles in Revenue Service

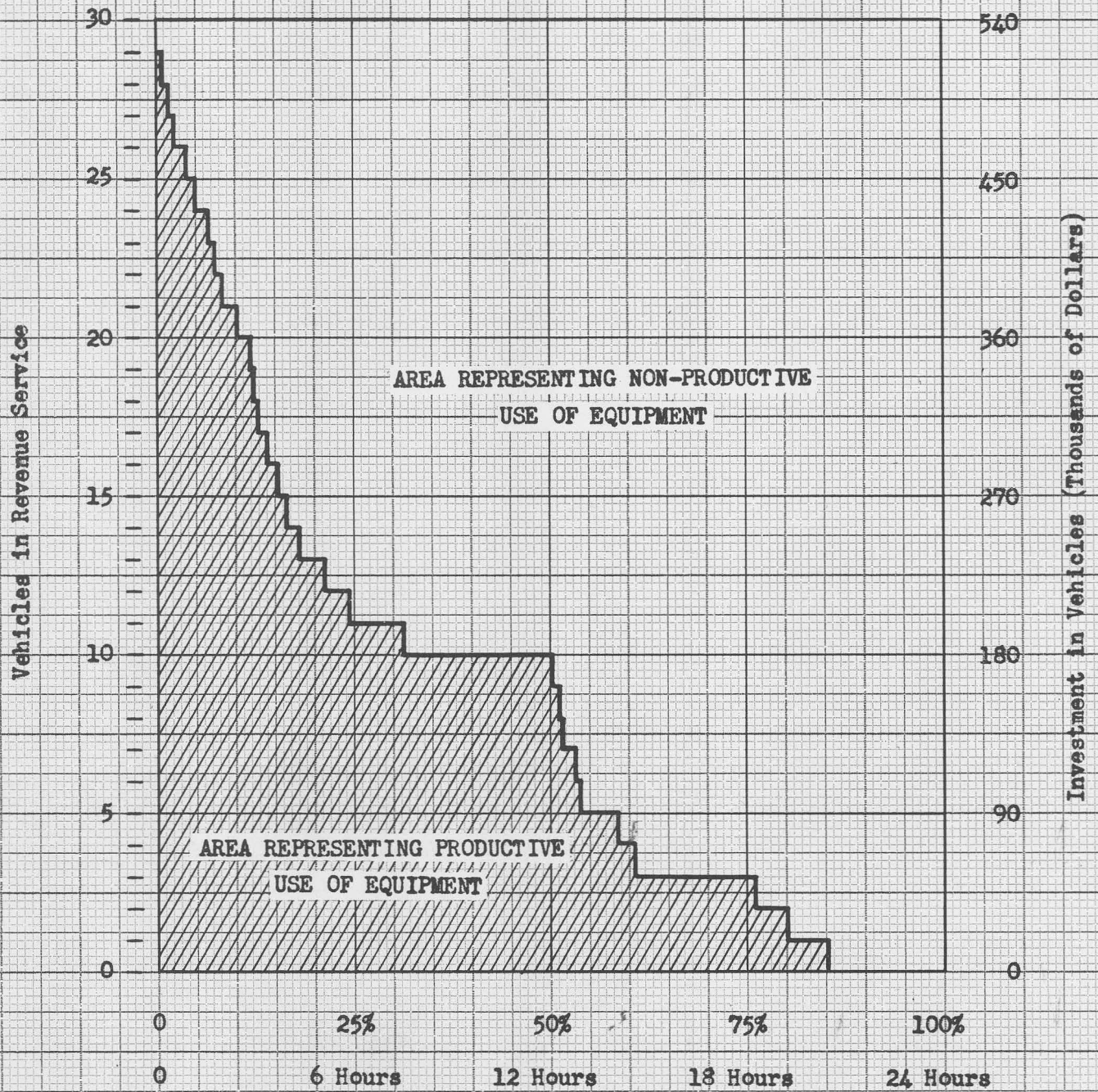




CHART V

Company

y - Arcadia Line

# by Totals

Vehicles In Revenue Service #	Aggregate of Portions of 24 Hours Vehicles are in Revenue Service #
-------------------------------------	---------------------------------------------------------------------------

29	1.0 %
28	1.4
27	2.4
26	3.5
25	4.9
24	6.6
23	7.3
22	8.3
21	10.1
20	11.8
19	12.2
18	12.8
17	13.9
16	15.6
15	16.3
14	17.7
13	22.1
12	24.0
11	31.2
10	50.4
9	51.0
8	51.4
7	53.1
6	53.8
5	58.7
4	60.7
3	76.0
2	80.1
1	85.1
0	100.0 %

Values based on operations of Thursday, March 17, 1949

# -Revenue Service Consists of Running Time and Layover

Productive Hours (Running Time & Layover) . . . ██████████  
 Non-Productive Working Hours . . . . . ██████████  
 Non-Working Hours . . . . . ██████████  
 Overtime . . . . . ██████████

<u>Badge</u>	<u>Assignment</u>	4 AM	5	6	7	8
336	4150					-----
562	4151					-----
41	4800	-----				-----
398	4801		-----			-----
54	4802		-----			-----
440	4803			-----		-----
18	4804				-----	-----
30	4805				-----	-----
390	4806				-----	-----
190	4807				-----	-----
388	4808				-----	-----
313	4809				-----	-----
108	4810				-----	-----
528	4811				-----	-----
402	4812					-----
2724	4813					-----
488	4814					-----
172	4815					-----
606	4816					-----
7392	4853+ 4817					-----
5331	4818					-----
428	4819					-----
42	4820					-----
40	4821					-----
6	4840+4864					-----
700	4841+4863					-----
332	4842+4895					-----
486	4843+4866					-----
998	4844+4868					-----
7408	4845+4869					-----
230	4846+4871					-----
414	4847+4870					-----
716	4848+4872					-----
710	4849+4874					-----
452	4850+4873					-----
1714	4851+4875					-----
720	4852+4865					-----
268	4860					-----
292	4861					-----
970	4862					-----
882	4890					-----
378	4896+4891					-----
376	4892					-----
1173	4893					-----
7509	4894					-----

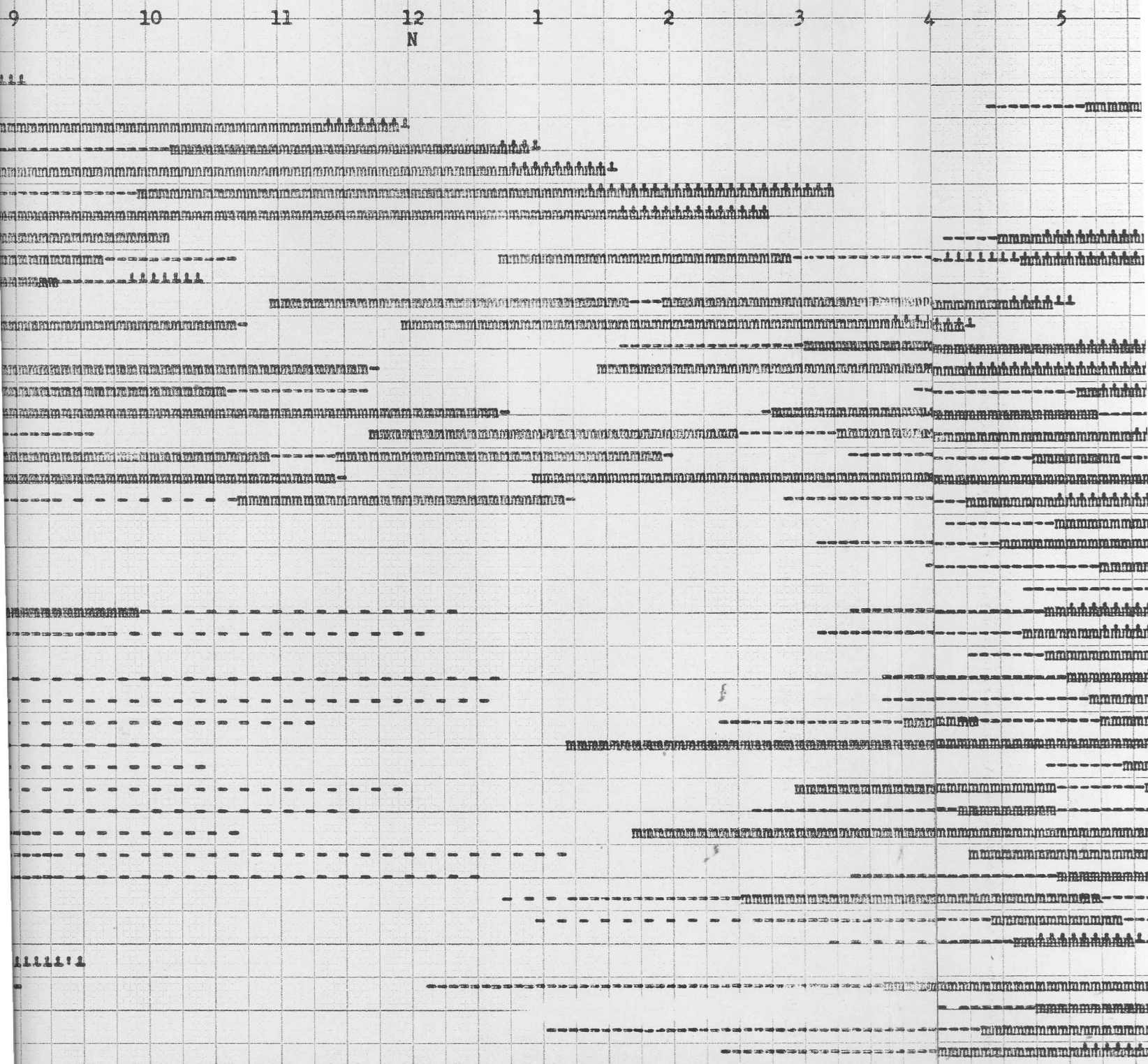
Bureau of Research  
 April 14, 1949

Pacific Electric Railway Company

Los Angeles - Alhambra - Temple City - Arcadia

Motor Coach Line 52

Man-Hours for Thursday, March 17, 1949





ld to the nearest five minutes  
and Layover  
rotection, and other Dead Time

T - Total Time  
## - Premium Time

Time	Hours Paid *	Productive Hours #	Non-Productive Hours **	Non-Working Hours ##
100%	100.0%	59.8%	28.7%	11.5%
T 340:07	T 203:21	T 97:29	T 39:17	
4	2:03	0:55	1:08	0:00
3	2:13	1:03	1:10	0:00
0	8:40	6:31	2:09	0:00
0	8:20	3:36	4:44	0:00
0	8:50	8:36	0:14	0:00
5	9:55	8:15	1:40	0:00
0	9:10	8:48	0:22	0:00
9	6:12	4:42	1:30	0:00
5	9:45	6:31	3:14	0:00
5	4:03	2:49	1:14	0:00
0	8:30	7:48	0:37	0:05
0	8:40	8:19	0:21	0:00
8	6:08	3:55	2:13	0:00
5	10:05	9:19	0:46	0:00
7	6:48	3:57	2:51	0:00
0	9:20	8:16	1:04	0:00
0	8:50	6:09	2:36	0:05
5	9:35	6:51	2:44	0:00
0	8:20	8:00	0:20	0:00
5	11:25	6:57	3:14	1:14
7	4:43	3:21	1:22	0:00
5	9:05	6:54	2:11	0:00
5	8:55	7:22	1:33	0:00
0	8:50	7:33	1:17	0:00
5	9:05	3:51	2:53	2:21
0	8:50	2:40	3:52	2:18
7	5:32	2:43	2:15	0:34
5	8:45	2:55	1:51	3:59
5	8:45	1:52	2:54	3:59
5	8:35	2:24	3:38	2:33
5	8:45	6:00	1:33	1:12
7	5:17	1:34	2:14	1:29
5	8:45	3:40	2:06	2:59
0	8:50	2:25	3:45	2:40
5	8:55	5:50	1:35	1:30
5	8:45	3:11	1:39	3:55
0	8:00	1:43	3:04	3:13
6	6:11	2:49	2:46	0:36
7	5:18	1:00	2:40	1:38
3	3:35	0:56	1:44	0:55
3	3:01	0:32	2:18	0:11
5	10:55	5:29	5:11	0:15
1	3:20	0:56	2:08	0:16
0	8:00	1:57	4:43	1:20
2	4:33	2:27	2:06	0:00

Pacific Electric Rail  
PASSENGER OPERATING  
YEARS 1943 - 1948,

R A I L L I N E

	1943		1944		1945		
	LOCAL	INTERURBAN	LOCAL	INTERURBAN	LOCAL	INTERURBAN	
	(1)	(2)	(3)	(4)	(5)	(6)	
1 - Total Passenger Revenue	\$4,871,129	\$5,492,809	\$5,734,087	\$6,720,435	\$5,938,554	\$6,994,441	\$6,
2 - Total Operating Revenue	\$5,005,591	\$5,965,516	\$5,882,608	\$7,154,183	\$6,081,879	\$7,547,384	\$6,
3 - Pasgr. Revenue Per Mile	57.65¢	63.15¢	61.48¢	70.29¢	62.19¢	70.82¢	
4 - Operating Revenue Per Mile	59.24¢	68.59¢	63.08¢	74.82¢	63.69¢	76.42¢	
5 - Revenue Passengers	56,292,114	27,778,924	68,542,794	35,581,927	72,043,856	37,059,679	72,
6 - Revenue Miles	8,450,177	8,697,570	9,326,274	9,561,455	9,548,459	9,875,743	9,
7 - Total Operating Exp. & Taxes	\$3,996,065	\$6,164,395	\$5,269,116	\$7,428,568	\$5,455,872	\$8,595,710	\$6,
8 - Average Fare Per Passenger	8.65¢	19.77¢	8.37¢	18.89¢	8.24¢	18.87¢	
9 - Total Operating Rev. Per Passenger	8.89¢	21.47¢	8.58¢	20.11¢	8.44¢	20.37¢	
10 - Operating Expenses & Taxes Per Passenger	7.10¢	22.19¢	7.69¢	20.88¢	7.57¢	23.19¢	
11 - Operating Expenses & Taxes Per Mile Operated	47.29¢	70.87¢	56.50¢	77.69¢	57.14¢	87.04¢	
12 - Pasgrs. Per Mile Operated	6.66	3.19	7.35	3.72	7.55	3.75	
13 - Average Monthly Wages For Each Employee (All Departments)	\$208 - Nov. 1943		\$216 - Nov. 1944		\$212 - Nov. 1945		

M O T O R C O A C H

	1943	1944	1945
	(16)	(17)	(18)
14 - Total Passenger Revenue	\$5,295,563	\$6,668,373	\$6,911,284
15 - Total Operating Revenue	\$5,839,817	\$7,416,130	\$7,761,275
16 - Pasgr. Revenue Per Mile	40.95¢	44.75¢	44.51¢
17 - Operating Revenue Per Mile	45.16¢	49.77¢	49.99¢
18 - Revenue Passengers	32,475,378	41,869,944	45,750,168
19 - Revenue Miles	12,931,503	14,901,538	15,526,518
20 - Total Operating Exp. & Taxes	\$4,451,417	\$6,496,609	\$7,192,492
21 - Average Fare Per Passenger	16.31¢	15.93¢	15.11¢
22 - Total Operating Revenue Per Passenger	17.98¢	17.71¢	16.96¢
23 - Operating Expenses & Taxes Per Passenger	13.71¢	15.52¢	15.72¢
24 - Operating Expenses & Taxes Per Mile Operated	34.42¢	43.60¢	46.32¢
25 - Pasgrs. Per Mile Operated	2.51	2.81	2.95

( ) - Indicates DECREASE

Bureau of Research, May 5, 1949

ailway Company  
ING STATISTICS  
3, INCLUSIVE

L I N E S

% OF INCREASE OR DECREASE  
COMPARING 1943 TO 1948

1 9 4 6		1 9 4 7		1 9 4 8				
LOCAL	INTERURBAN	LOCAL	INTERURBAN	LOCAL	INTERURBAN	LOCAL	INTER-URBAN	COM-BINED
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
\$6,053,192	\$5,934,134	\$5,583,246	\$5,001,651	\$5,537,533	\$4,848,003	13.68%	(11.74%)	0.21%
\$6,187,567	\$6,552,484	\$5,718,516	\$5,543,112	\$5,674,787	\$5,326,754	13.37%	(10.71%)	0.28%
64.32¢	69.26¢	62.92¢	72.57¢	67.06¢	77.18¢	16.32%	22.22%	19.40%
65.74¢	76.48¢	64.44¢	80.43¢	68.73¢	84.80¢	16.02%	23.63%	20.10%
72,748,071	30,333,644	66,171,645	24,197,740	54,661,472	20,619,442	(2.90%)	(25.77%)	(10.46%)
9,411,760	8,567,427	8,873,487	6,892,099	8,257,012	6,281,432	(2.29%)	(27.78%)	(15.22%)
\$6,387,864	\$8,520,674	\$6,594,433	\$8,093,384	\$6,545,811	\$6,819,251	63.81%	10.62%	31.54%
8.32¢	19.56¢	8.44¢	20.67¢	10.13¢	23.51¢	17.11%	18.92%	18.37%
8.51¢	21.60¢	8.64¢	22.91¢	10.38¢	25.83¢	16.76%	20.31%	19.27%
8.78¢	28.09¢	9.97¢	33.45¢	11.98¢	33.07¢	68.73%	49.03%	53.81%
67.87¢	99.45¢	74.32¢	117.43¢	79.28¢	108.56¢	67.65%	53.18%	58.97%
7.73	3.54	7.46	3.51	6.62	3.28	(0.60%)	2.82%	0.51%
\$253 - Nov. 1946		\$285 - Nov. 1947		\$300 - Sept. 1948		-	-	44.23%

H L I N E S

% OF INCREASE OR DECREASE  
COMPARING 1943 TO 1948

1 9 4 6	1 9 4 7	1 9 4 8	
(19)	(20)	(21)	(22)
\$6,814,501	\$7,002,996	\$7,642,136	44.31%
\$7,556,746	\$7,668,976	\$8,216,494	40.70%
43.12¢	43.17¢	45.95¢	12.21%
47.82¢	47.27¢	49.40¢	9.39%
45,242,213	42,139,319	40,362,729	24.29%
15,804,013	16,223,059	16,632,028	28.62%
\$6,698,834	\$7,286,129	\$8,165,488	83.44%
15.06¢	16.62¢	18.93¢	16.06%
16.70¢	18.20¢	20.36¢	13.24%
14.81¢	17.29¢	20.23¢	47.56%
42.39¢	44.91¢	49.09¢	42.62¢
2.8¢	2.60	2.43	(3.19%)

Pacific Electric Railway Co  
RAIL AND MOTOR COACH LINE OPERA  
JANUARY - 1949

L I N E	ROADWAY MILEAGE	CAR MILES		REVENUE PASSENGERS		APPROX. *WEEKDAY SEAT TRIPS AVAILABLE	*WE RAJ PASO SEAT
		MONTH	*WEEKDAY	MONTH	*WEEKDAY		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1 - Pasadena-Oak Knoll	13.95	47,648	1,479	173,218	5,963	6,400	92
2 - Pasadena Short Line	11.51	43,912	1,383	196,468	6,953	7,340	94
3 - L.A.-Baldwin Park	17.74	45,176	1,444	131,287	5,264	6,640	79
4 - L.A.-Glendora (a)	26.07	88,100	2,814	245,803	9,227	9,540	96
5 - L.A.-Sierra Madre	17.00	9,555	431	30,534	1,404	1,720	81
6 - L.A.-Long Beach	21.02	115,315	3,994	316,872	11,521	15,155	76
7 - L.A.-San Pedro	22.75	86,990	3,077	310,250	12,368	11,960	96
11 - L.A.-Santa Ana	33.49	56,749	1,962	144,090	5,526	5,530	99
12 - Santa Monica Air Line	19.20	960	38	1,678	98	120	81
17 - L.A.-Newport Beach	38.00	2,495	124	4,581	237	256	92
25 - Watts-Sierra Vista	14.83	109,978	3,802	753,631	28,783	16,640	173
28 - Subway-West Hollywood-Van Nuys	22.86	143,148	5,089	799,520	31,297	22,100	141
29 - L.A.-Glendale-Burbank	12.83	103,556	3,634	590,091	23,233	22,800	101
30 - Venice Short Line	16.96	98,950	3,579	372,049	14,738	12,770	115
32 - Subway-Hollywood Blvd.- San Vicente Blvd.	22.90	203,531	7,337	1,701,761	65,351	42,860	152
51 - Garfield Ave.-Highland Park	11.60	24,129	826	80,965	3,355	2,640	127
52 - L.A.-Alhambra-Temple City	29.35	82,850	3,311	231,341	9,837	9,280	106
54 - Long Beach-Huntington Park	16.50	62,411	2,120	219,879	8,290	7,280	113
55 - L.A.-Balboa	52.30	47,920	1,784	46,202	1,973	2,160	91
56 - L.A.-Sunland	30.20	78,890	2,976	193,569	8,062	7,750	104
58 - L.A.-Santa Ana	69.60	148,540	5,406	338,027	13,196	11,700	112
59 - Long Beach-Riverside	62.60	28,112	858	28,357	955	690	138
61 - Long Beach-Pasadena	62.40	36,236	1,115	59,942	2,061	1,630	126
62 - Redlands-Arlington	31.86	56,015	1,810	128,668	4,770	3,510	135
63 - L.A.-San Bernardino- Riverside	176.05	324,668	11,148	499,868	19,655	19,900	98
64 - Pasadena-Pomona	29.60	6,100	235	6,069	246	334	73
65 - San Marino-Sierra Madre	6.25	6,251	174	15,550	456	1,300	35
66 - Long Beach-San Pedro (1/2/49)	10.75	26,145	897	82,586	3,312	3,870	85
75 - L.A.-Santa Monica	23.95	152,941	5,486	450,356	17,969	14,800	121
76 - L.A.-Beverly-Sunset Blvds.	27.10	14,273	545	30,566	1,392	1,600	87
77 - Hollywood-Beverly Hills- University	13.30	35,062	1,237	171,615	6,272	5,400	116
78 - Western-Franklin	2.70	9,149	288	79,407	3,178	4,700	67
79 - L.A.-Redondo Beach	52.05	115,766	4,279	209,357	8,546	8,450	101
80 - Emery Park	3.90	4,114	168	15,029	675	2,600	26
81 - Hollywood-Ventura Blvd.	24.35	45,863	1,642	132,414	5,103	5,500	92
82 - North Hollywood	10.05	16,416	572	56,442	2,332	4,610	50
83 - Van Nuys-Canoga Park	12.15	11,329	385	18,991	795	1,640	48
84 - Van Nuys-San Fernando	11.10	7,562	238	15,930	616	1,150	53
85 - Van Nuys-Birmingham Hospital	6.40	7,775	267	34,790	1,444	1,790	80
86 - L.A.-No.Hollywood-Van Nuys	24.45	48,997	2,076	98,390	4,316	3,800	113
87 - No. Hollywood-Studio City- Sherman Oaks	8.30	5,673	234	13,902	742	1,280	58

\* - Average for Jan. 3 to 7, incl., 1949  
(a) - Including passengers to and from Santa Anita Race Track  
▲ - Partial service on weekdays, with full motor coach service on Saturdays and Sundays.



CHART VIII

Company  
LOADING DATA

WEEKDAY RATIO OF PASGRS. TO TRIP	UNITS ASSIGNED			*WEEKDAY PASGRS. PER		RATIO OF SAT.-SUN. LOAD TO		SEAT MILES PER *WEEKDAY
	PEAK	BASE	RATIO	CAR MILE	ROADWAY MILE	*WEEKDAY LOAD		
						SAT.	SUN.	
(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
93.2%	15	4	3.8	4.0	427	79.2%	78.2%	89,243
94.7	16	4	4.0	5.0	604	76.9	70.4	84,463
79.3	20	3	6.7	3.6	297	85.8	36.3	92,395
96.7	18	5	3.6	3.3	354	132.7♦	37.1	167,958
81.6	8	0	-	3.3	83	■	■	25,836
76.0	27	8	3.4	2.9	548	92.1	79.2	318,562
96.7	23	8	2.9	4.0	544	81.0	60.6	245,037
99.9	14	4	3.5	2.8	165	92.8	64.6	154,691
81.7	1	0	-	2.6	510*	31.6	●	2,304
92.6	2	0	-	1.9	624*	16.5	●	7,923
73.0	32	14	2.3	7.6	1,941	90.6	55.1	246,813
41.6	40	22	1.8	6.2	1,369	77.0	39.2	330,785
01.9	38	12	3.2	6.4	1,811	81.4	41.1	217,360
15.4	35	8	4.4	4.1	869	75.2	45.3	226,362
52.5	77	40	1.9	8.9	2,854	88.4	45.8	453,330
27.1	5	5	1.0	4.1	289	80.9	32.2	29,940
06.0	32	12	2.7	3.0	335	69.5	30.7	145,031
13.9	17	8	2.1	3.9	502	92.5	54.1	93,311
91.3	15	3	5.0	1.1	38	44.7	29.1	75,626
04.0	28	9	3.1	2.7	267	69.1	32.2	130,227
12.8	41	17	2.4	2.4	190	79.9	45.0	240,355
38.4	4	3	1.3	1.1	15	102.6	102.2	38,615
26.4	6	6	1.0	1.8	33	87.5	73.3	50,129
35.9	10	7	1.4	2.6	150	95.0	58.9	79,671
98.8	77	25	3.1	1.8	112	83.6	62.4	488,928
73.7	1	1	1.0	1.1	8	99.6	●	9,806
5.1	1	1	1.0	2.6	73	▲187.9	▲173.5	7,663
5.6	4	3	1.3	3.7	308	94.0	54.8	39,488
1.4	48	17	2.8	3.3	750	73.6	42.8	242,400
7.0	3	2	1.5	2.6	51	62.6	19.0	24,136
6.1	10	5	2.0	5.1	472	81.3	46.9	54,455
7.6	3	3	1.0	11.0	1,177	85.6	36.1	12,683
01.1	40	8	5.0	2.0	164	72.4	37.5	187,826
6.0	1	1	1.0	4.0	173	60.0	●	5,399
2.8	8	5	1.6	3.1	209	84.9	35.2	72,248
0.6	3	3	1.0	4.1	232	84.3	33.5	25,168
8.5	2	1	2.0	2.1	65	85.3	42.9	16,939
3.6	1	1	1.0	2.6	55	76.6	46.9	10,459
0.7	2	1	2.0	5.4	226	67.7	32.6	11,658
3.6	18	6	3.0	2.1	177	62.1	●	91,044
8.0	2	1	2.0	3.2	89	46.5	●	10,237

- ♦ - Santa Anita Race meet in progress.
- - No service on Saturdays or Sundays
- - No service on Sundays

\* Corrected in record. Decimal misplaced.

*[Faint, illegible text from the reverse side of the page, possibly bleed-through or a second page.]*

PACIFIC ELECTRIC RAILWAY COMPANY

MOTOR COACH INVENTORY AS OF MAY 1, 1949  
(In Pacific Electric Service)

<u>Class</u>	<u>Model</u>	<u>No. Units</u>	<u>Year of Mfg.</u>	<u>Mfgr.</u>	<u>Unit Seats</u>	<u>Total Seats</u>
220	PG2505	1	1941	GMC	14	14
315	30R	3	1940	Twin	31	93
1650	40R	12	1937	Twin	41	492
1686	PG3701	9	1940	GMC	41	369
1910	35RL Spec.	15	1940	Twin	37	555
2000	788-6	24	1940	White	41	984
2025	798-6	25	1942	White	45	1,125
2050	798-6	45	1941	White	45	2,025
2100	41-G	25	1940	Twin	41	1,025
(A) 2125	44-D-45	5	1947	Twin	44	220
(A) 2220	798	41	1947	White	44	1,804
(A) 2261	798	29	1947	White	44	1,276
2300	798	20	1942	White	45	900
2320	798	5	1942	White	44	220
2325	798	55	1944	White	44	2,420
2380	798	15	1945	White	44	660
2395	798	5	1944	White	44	220
2400	798	10	1944	White	44	440
2410	798	12	1945	White	44	528
(A) 2500	TD4505 (Diesel)	35	1941	GMC	45	1,575
(A) 2600	TD4507 (Diesel)	19	1947	GMC	45	855
(A) 2619	TD4507 (Diesel)	20	1946	GMC	45	900
(A) 2639	TD4502 (Diesel)	39	1940	GMC	45	1,755
(A) 2679	TD4506 (Diesel)	22	1945	GMC	45	990
(A) 3000	798	25	1948	White	44	1,100
Total		516		(Avg.)	43.69	22,545

(A) - Automatic Transmission - 235      Total Number Seats - - - - - 22,545  
 Total Number Units - - - 516      Average Seats Per Unit - - - 43.69

\* \* \* \* \*

<u>Manufacturer</u>	<u>No. Units</u>	<u>%</u>
White	311	60.27
Twin	60	11.63
GMC	145	28.10
Total	516	100.00

Summary of Age of Equipment

<u>Year Purchased</u>	<u>Age</u>	<u>No. Units</u>	<u>%</u>
1937	12	12	2.33
1940	9	115	22.29
1941	8	81	15.69
1942	6	50	9.69
1944	5	70	13.56
1945	4	49	9.50
1946	3	20	3.88
1947	2	94	18.22
1948	1	25	4.84
Avg. or Total	5.71	516	100.00

Bureau of Research  
May 6, 1949

Pacific Electric Railway Company

REVENUE AND EXPENSES OF RAIL AND MOTOR COACH LINES

YEAR 1948

RAIL LINES:

Line:	Miles Operated	TOTAL REVENUE		EXPENSES & TAXES		NET	
		Amount	Cents Per Mile	Amount	Cents Per Mile	Amount	Cents Per Mile
<u>INTERURBAN RAIL LINES:</u>							
Pasadena Oak Knoll .....	551,690	\$ 405,182	73.44	\$ 591,284	107.18	\$ (186,102)	(33.74)
Pasadena Short Line .....	489,133	456,374	93.30	530,761	108.51	(74,387)	(15.21)
L. A. -El M. -Baldwin Park .....	594,939	393,040	66.06	698,461	117.40	(305,421)	(51.34)
L. A. -Monrovia-Glendora .....	847,013	636,381	75.13	908,434	107.25	(272,053)	(32.12)
L. A. -Sierra Madre .....	143,068	97,772	68.34	180,864	126.42	(83,092)	(58.08)
L. A. -Long Beach .....	1,477,084	1,480,779	100.25	1,517,024	102.70	(36,245)	(2.45)
L. A. -San Pedro .....	1,096,159	1,028,375	93.82	1,180,566	107.70	(152,191)	(13.88)
Long Beach-San Pedro .....	241,356	161,237	66.80	238,170	98.68	(76,933)	(31.88)
L. A. -Santa Ana .....	723,015	536,553	74.21	824,559	114.04	(288,006)	(39.83)
Santa Monica Air Line .....	11,748	4,866	41.42	17,908	152.43	(13,042)	(111.01)
L. A. -Newport Beach .....	40,375	26,566	65.80	50,147	124.20	(23,581)	(58.40)
L. A. & L. B. S. S. Service .....	65,852	94,534	143.56	68,941	104.69	25,593	38.86
Other (Charter, Shop Train, etc.) .....	14,126	5,095	36.07	12,132	85.88	(7,037)	(49.81)
<b>Total Interurban Rail Lines .....</b>	<b>6,295,558</b>	<b>\$5,326,754</b>	<b>84.61</b>	<b>\$6,819,251</b>	<b>108.32</b>	<b>(\$1,492,497)</b>	<b>(23.71)</b>
<u>LOCAL RAIL LINES:</u>							
Watts-Sierra Vista .....	1,342,295	\$ 944,650	70.37	\$1,057,698	78.80	\$ (113,048)	(8.43)
Sub. -S. M. Blvd. -W. Hwd. -San Fern. Valley	1,783,006	1,153,084	64.67	1,408,976	79.02	(255,892)	(14.35)
L. A. -Glendale-Burbank .....	1,278,795	877,901	68.65	981,128	76.72	(103,227)	(8.07)
Venice Short Line .....	1,261,588	784,912	62.22	959,002	76.02	(174,090)	(13.80)
Sub. -Hwd. Blvd. -San Vicente Blvd. ....	2,591,328	1,914,240	73.87	2,139,007	82.54	(224,767)	(8.67)
<b>Total Local Rail Lines .....</b>	<b>8,257,012</b>	<b>\$ 5,674,787</b>	<b>68.73</b>	<b>\$ 6,545,811</b>	<b>79.28</b>	<b>(\$ 871,024)</b>	<b>(10.55)</b>
<b>TOTAL ALL RAIL LINES .....</b>	<b>14,552,570</b>	<b>\$11,001,541</b>	<b>75.60</b>	<b>\$13,365,062</b>	<b>91.84</b>	<b>(\$2,363,521)</b>	<b>(16.24)</b>

(RED FIGURES)

CHART XI.

Line:	Miles Operated	*TOTAL REVENUE		EXPENSES & TAXES		NET	
		Amount	Cents Per Mile	Amount	Cents Per Mile	Amount	Cents Per Mile
<u>MOTOR COACH LINES:</u>							
Pasadena-Alhambra-S.P. Station .....	22,840	\$ 9,632	42.17	\$ 15,002	65.68	\$ (5,370)	(23.51)
Garfield-Highland Park .....	293,063	117,367	40.05	156,569	53.43	(39,202)	(13.38)
Alhambra-Temple City .....	1,002,465	538,133	53.68	488,446	48.72	49,687	4.96
Long Beach-Huntington Park .....	765,588	485,696	63.44	383,694	50.12	102,002	13.32
L. A. -Balboa .....	581,804	214,679	36.90	286,286	49.21	(71,607)	(12.31)
L. A. -Sunland .....	940,574	478,834	50.91	469,942	49.96	8,892	.95
L. A. -Santa Ana .....	1,785,330	919,913	51.53	898,702	50.34	21,211	1.19
Long Beach-Riverside .....	340,901	166,835	48.94	141,590	41.53	25,245	7.41
Long Beach-Pasadena .....	372,411	169,140	45.42	166,295	44.65	2,845	.76
Riverside-Arlington .....	722,792	296,760	41.06	318,524	44.07	(21,764)	(3.01)
L. A. -El M. -Pomon. -S. B. -Riverside .....	4,049,083	2,157,852	53.29	1,913,772	47.26	244,080	6.03
Pasadena-Pomona .....	74,032	26,386	35.64	33,336	45.03	(6,950)	(9.39)
San Marino-Sierra Madre .....	40,957	12,409	30.30	20,341	49.66	(7,932)	(19.37)
L. A. -Santa Monica .....	1,809,073	952,459	52.65	920,765	50.90	31,694	1.75
L. A. -Beverly-Sunset Blvd. ....	159,934	56,679	35.44	77,070	48.19	(20,391)	(12.75)
Western-Franklin .....	151,388	84,943	56.11	83,824	55.37	1,119	.74
L. A. -Redondo Beach .....	1,426,078	627,165	43.98	759,446	53.25	(132,281)	(9.28)
Emery Park .....	49,516	15,009	30.31	22,718	45.88	(7,709)	(15.57)
Hollywood-Ventura Blvd. ....	550,040	238,795	43.41	252,481	45.90	(13,686)	(2.49)
North Hollywood .....	209,336	72,590	34.68	100,377	47.95	(27,787)	(13.27)
Van Nuys-Canoga Park .....	130,128	44,709	34.36	53,782	41.33	(9,073)	(6.97)
Van Nuys-San Fernando .....	94,366	31,084	32.94	40,870	43.31	(9,786)	(10.37)
Van Nuys-Birmingham Hospital .....	88,496	38,883	43.94	44,062	49.79	(5,179)	(5.85)
L. A. -No. Hwd. -Van Nuys .....	506,183	226,617	44.77	258,582	51.08	(31,965)	(6.31)
No. Hwd. -Studio City - S. O. ....	30,762	7,638	24.83	12,951	42.10	(5,313)	(17.27)
Hollywood-Bev. Hills-University .....	434,882	226,287	52.03	246,061	56.58	(19,774)	(4.55)
Total .....	16,632,022	\$8,216,494	49.40	\$8,165,488	49.09	\$ 51,006	.31

\*--Includes "Other Revenues" allocated on car-mile basis.

Bureau of Research  
April 27, 1949

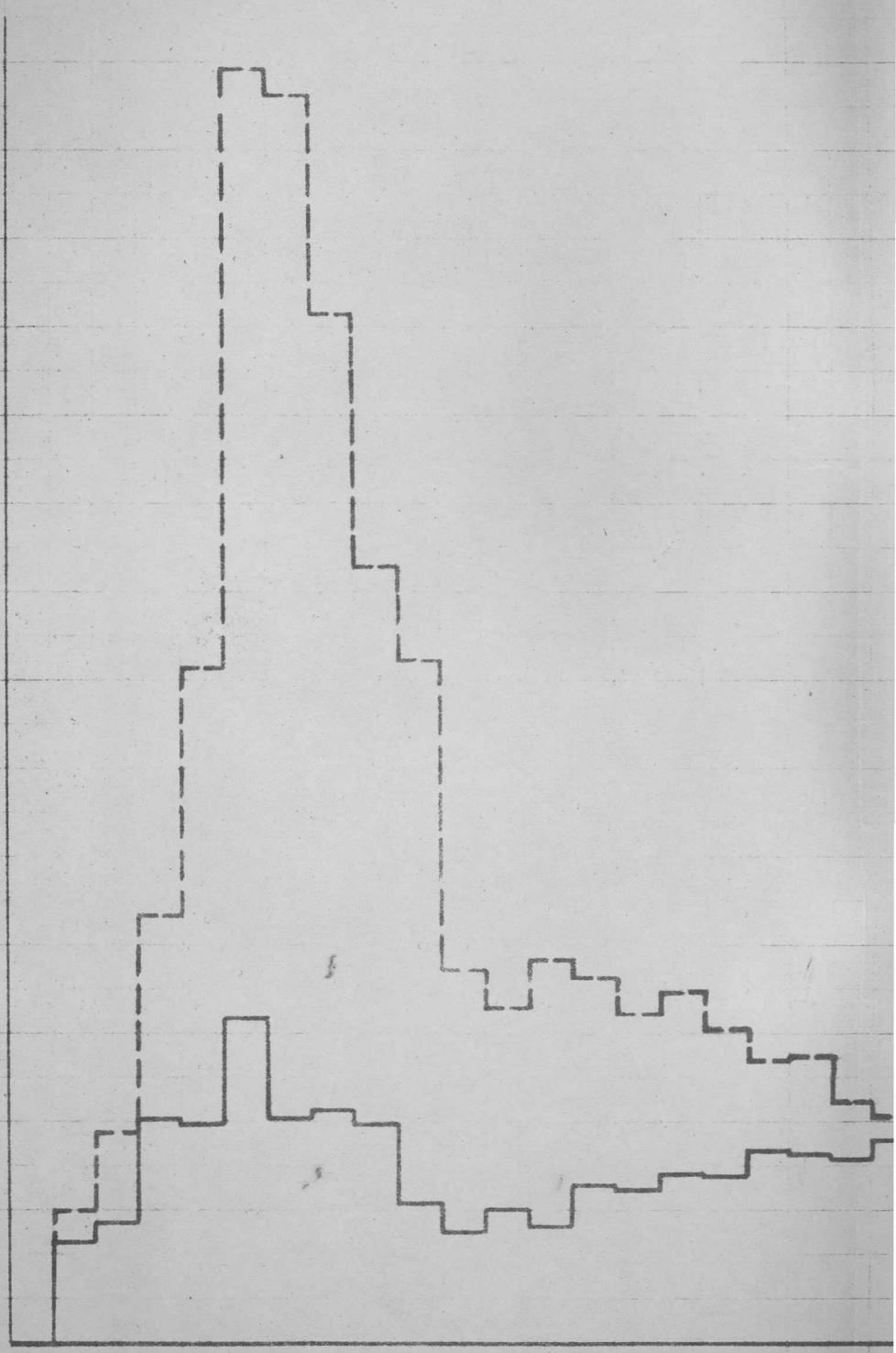
(RED FIGURES)

CHART XI.  
(Contd.)

PASSENGERS

7 500  
7 000  
6 500  
6 000  
5 500  
5 000  
4 500  
4 000  
3 500  
3 000  
2 500  
2 000  
1 500  
1 000  
500  
0

6 7 8 9 10 11 12  
AM N



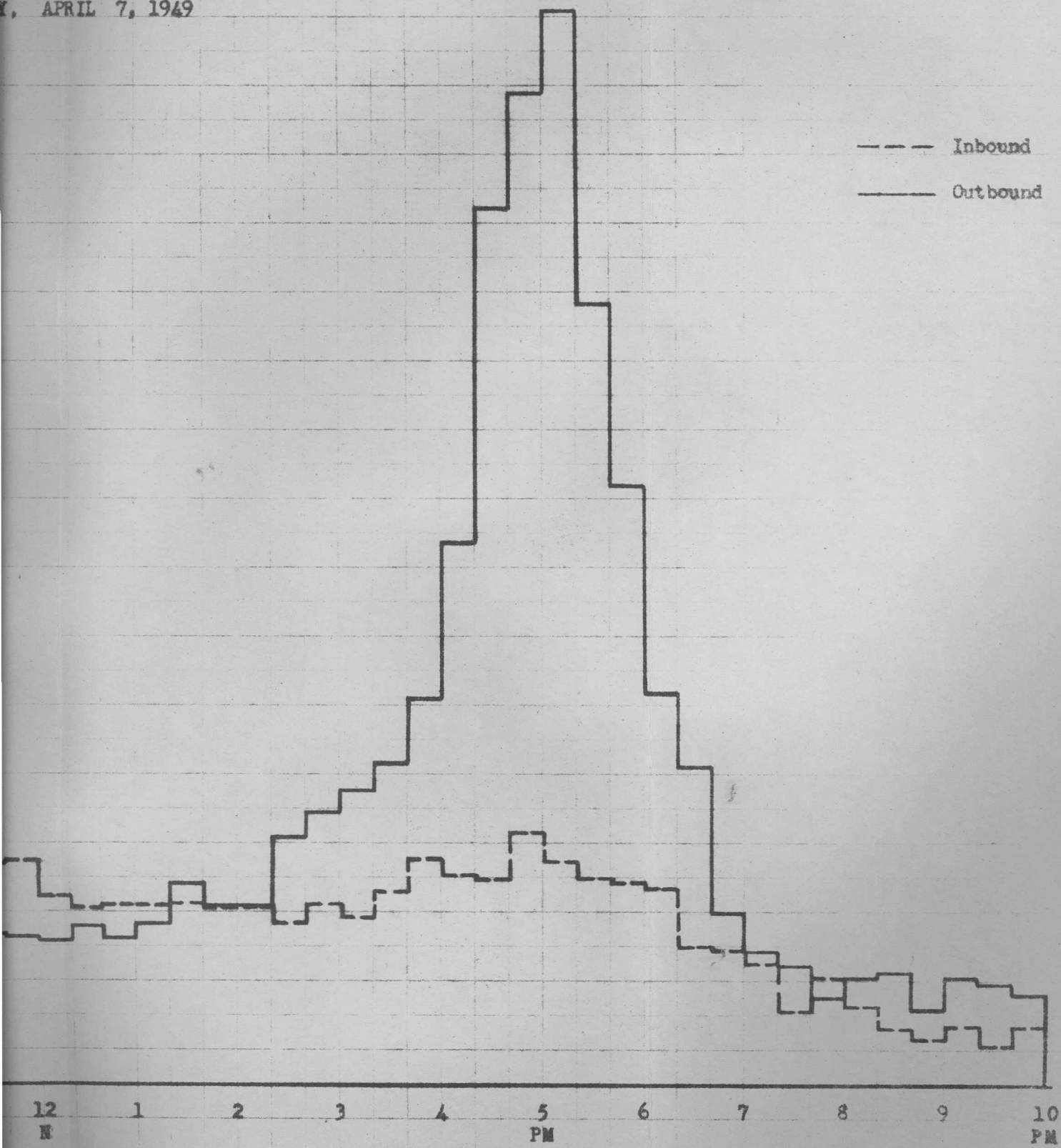
ENCLOSURE 100-3-10 TO THE HALF INCH  
FOR THE BUREAU OF RESEARCH, BUREAU OF THE PACIFIC ELECTRIC RAILROAD  
MADE IN U.S.A.  
100-3-10-100-1

ELECTRIC RAILWAY COMPANY

LEAVING LOS ANGELES DOWNTOWN AREA

AND MOTOR COACH LINES

APRIL 7, 1949



## Area of Chart II

Productive

133 squares

24% of Area

Total

560 squares

100% of Area

## Vehicles in Revenue Service.

Per Cent of Coaches in Revenue Service  
(May 6, 1949 Motor Coach Equipment)

516 Total 100.0%

Less 44 Spares - 8.5%

Less (12.1%) Deadhead - 12.1%

79.4%

Motor Coaches in  
Revenue Service.

Per Cent of Rail Cars in Revenue Service  
(May 2, 1949 Rail Passenger Equipment)

445 Total 100.0%

Less 83 Spares - 18.6%

Less 5% Deadhead - 5.0%

76.4%

Rail Cars in Revenue  
Service

Bureau of Research  
May 10, 1949



@ 14,387.62 @ 14,604.62

	% of 24 Hr.	Vehicles		Rail Cars	Coaches	Rail Car	Coach	PASSENGER	EQUIPMENT	INVESTMENT
		Line 30	Line 52			Investment	Investment			
						\$	\$			\$
	1.0 70	34.72		340		4891,790.80				
	1.0		29.00		410		6,987,894.16			10,878,685
	4.9	32.12		314		4,517,717.68				9,628,748
	4.9		25.00		354		5,170,036.48			8,308,555
	10.1	28.18		276		3,970,983.17				5,738,728
	10.1		21.00		297		4,337,571.14			4,061,735
	15.6	25.79		252		3,675,680.74				3,859,440
	15.6		16.00		226		3,300,644.17			3,714,696
	20.1	21.00		204		2,963,849.77				3,263,335
	20.1		13.46		190		2,774,877.80			2,590,908
	24.0	18.00		176		2,537,711.17				1,940,028
	24.0		12.00		170		2,481,786.40			1,744,992
	29.9	15.00		147		2,114,980.14				1,548,496
	29.9		11.18		158		2,307,579.96			1,331,423
	33.7	13.00		127		1,877,777.74				980,183
	33.7		10.87		153		2,134,506.86			733,913
	39.9	12.00		117		1,683,351.54				224,245
	39.9		10.55		149		2,176,088.38			
	45.0	11.34		111		1,597,076.87				
	45.0		10.28		145		2,117,669.90			
	51.0	10.00		97.9		1,408,648.00				
	51.0		9.00		127		1,854,786.74			
	53.8	9.60		94.0		1,357,436.78				
	53.8		6.00		84.8		1,738,471.78			
	60.8	8.00		78.3		1,176,560.65				
	60.8		3.94		55.7		813,477.33			
	65.6	7.00		68.5		985,551.97				
	65.6		3.68		52.0		759,440.74			
	69.8	6.00		58.7		844,553.79				
	69.8		3.41		48.2		703,947.68			
	76.0	5.06		49.5		717,187.19				
	76.0		3.00		42.4		619,735.89			
	80.1	4.03		39.4		566,877.73				
	80.1		2.00		28.3		413,310.75			
	85.1	2.74		36.6		576,586.89				
	85.1		1.00		14.2		707,386.60			
	94.1	1.00		9.8		1,409,981.68				
	94.1		0.40		5.7		83,746.33			

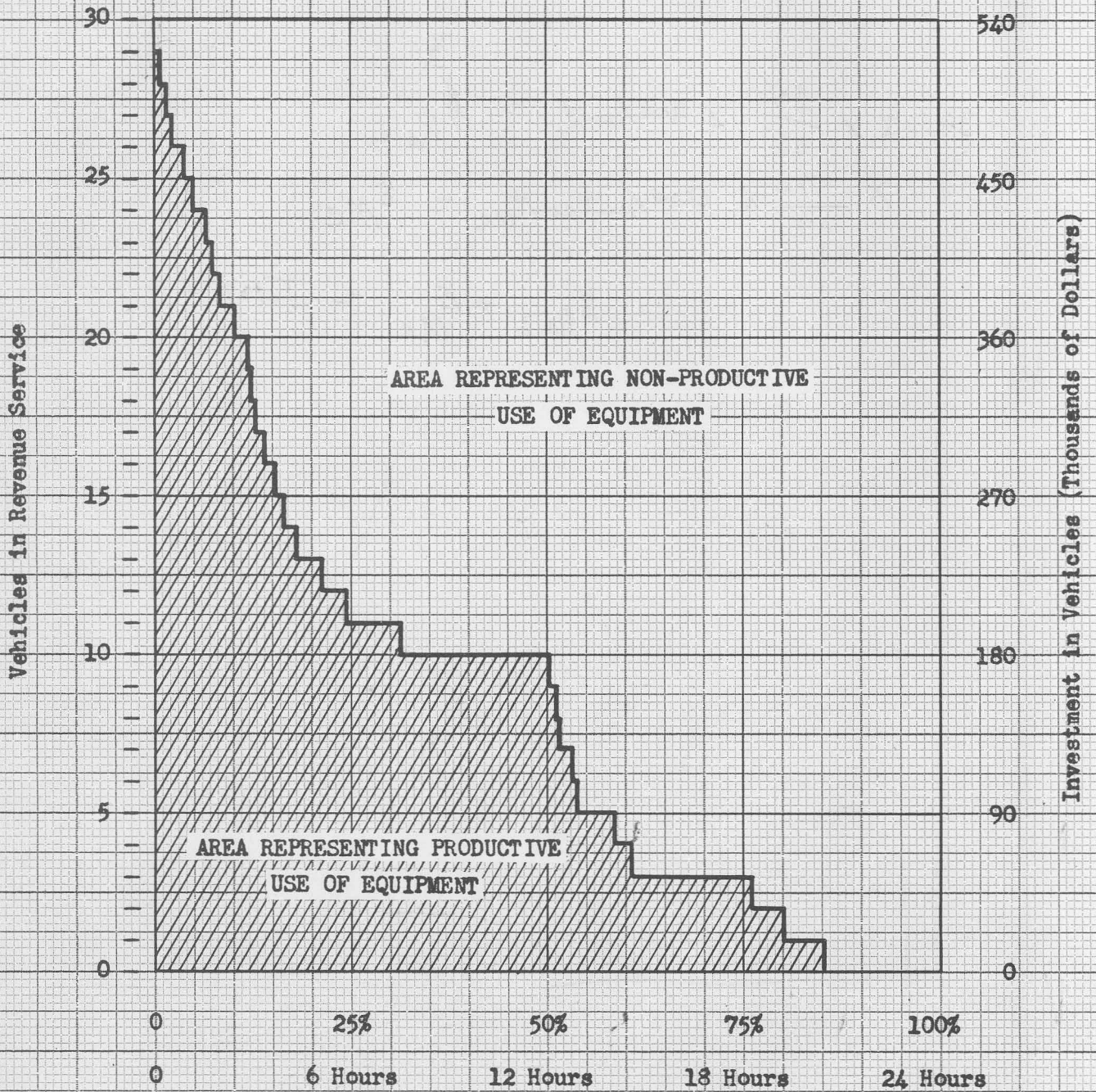
*Chart A  
Work sheet*

*Estimated Investment  
in Passenger Vehicles  
in Revenue Service*

*all Vehicles Owned {*

445  
510  
516  
6,402,491  
7,535,984

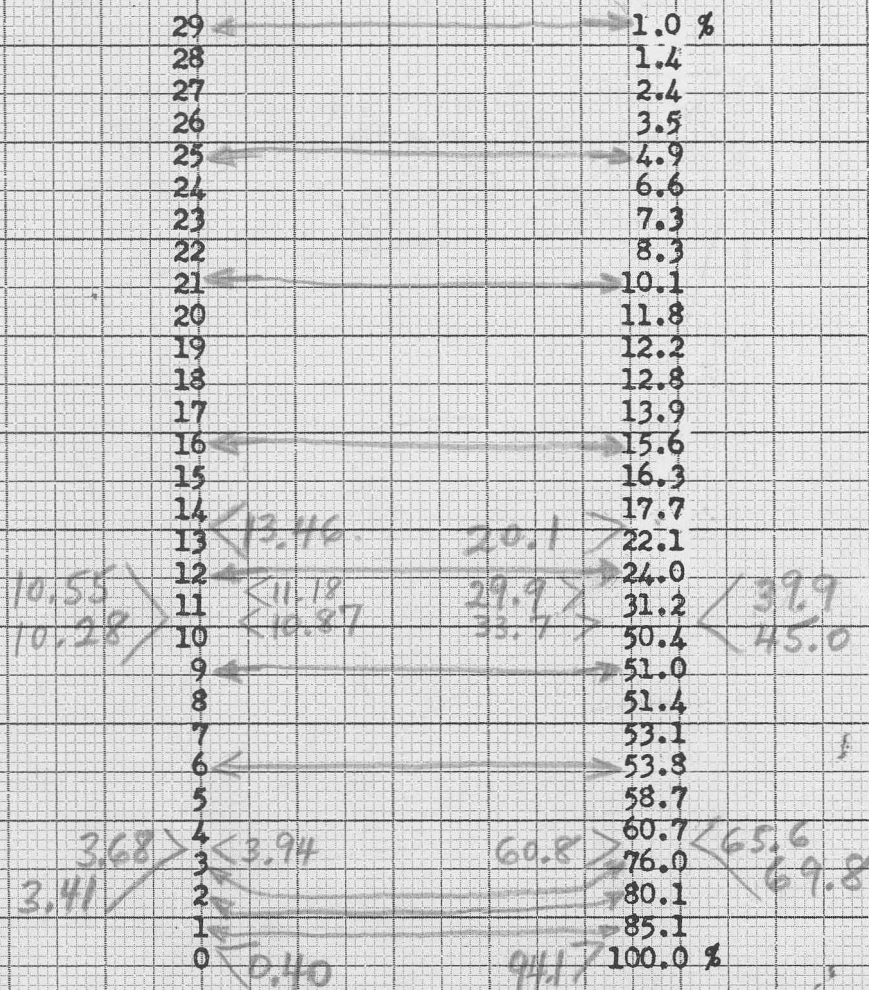
*Bureau of  
Research  
May 10, 1949*



Railway Company  
Temple City - Arcadia Line  
Revenue Service # by Totals

Investment in Vehicles (Thousands of Dollars)

Vehicles In Revenue Service #	Aggregate of Portions of 24 Hours Vehicles are in Revenue Service #
-------------------------------------	---------------------------------------------------------------------------

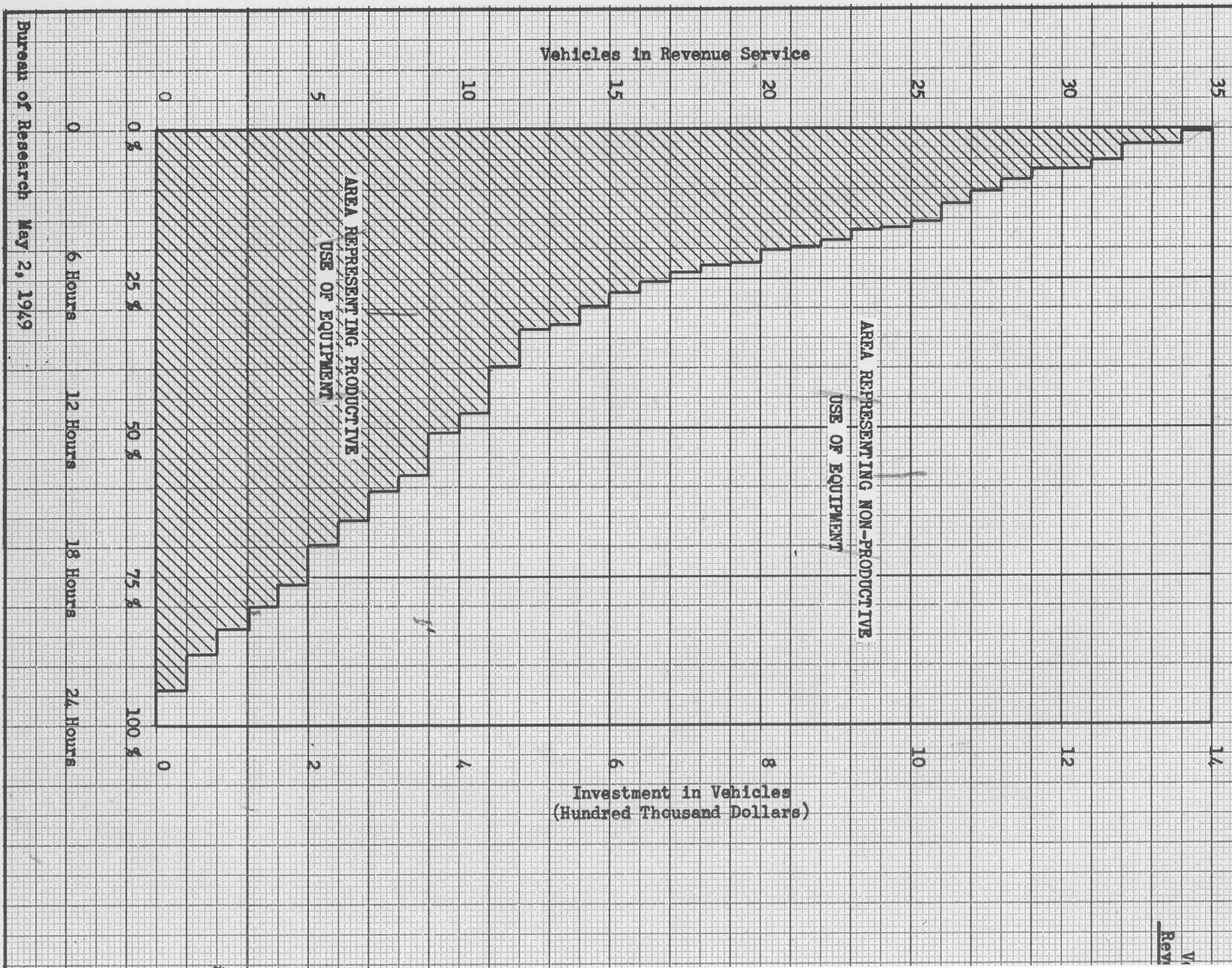


Values based on operations of Thursday, March 17, 1949

# -Revenue Service Consists of Running Time and Layover

Pacific Electric Railway Company  
 Venice Short Line  
 Vehicles in Revenue Service #

V  
 Rev



Vehicles in Revenue Service

Aggregate Portion of 24 Hours Vehicles are in Revenue Service %

35	34.72	0.3 %	1.0	7
34		2.8		2.5
33		2.8	4.9	
32	32.12	5.2		
31		6.9		
30		6.9		
29	28.18	8.7	10.1	
28		10.4		
27		12.5		
26	25.79	15.3	15.6	
25		16.7		
24		17.0		
23		18.6		
22		19.8		
21	←	20.1	←	
20		22.6		
19		22.9		
18	←	24.0	←	
17		25.7		
16		27.4		
15	←	29.9	←	
14		32.6		
13	←	33.7	←	
12		39.9	←	
11	11.34	47.6	45.0	
10	← 9.60	51.0	←	
9		58.0	53.8	
8	←	60.8	←	
7	←	65.6	←	
6	←	69.8	←	
5	5.06	76.4	76.0	
4	4.03	80.2	80.1	
3		84.0		
2	2.74	88.2	85.1	
1	←	94.1	←	
0		100.0 %		

Values Based on Operations of Thursday, March 17, 1949

Revenue Service Consists of Running Time and Layover

*Ex. #11*

*5/12/49*

PR 3-D1(8)(SD)

REPORT ON  
ENGINEERING AND ECONOMIC FEATURES  
OF  
PASSENGER TRANSPORTATION OPERATIONS, SERVICE AND FACILITIES

ON THE

SANTA ANA LINE  
NEWPORT BEACH LINE  
LONG BEACH LINE  
SAN PEDRO LINE  
WATTS LOCAL LINE  
*BELLFLOWER LINE*

*Not underscored*

OF  
*METROPOLITAN COACH LINES*  
PACIFIC ELECTRIC RAILWAY COMPANY

LOS ANGELES, CALIFORNIA

COMPARING

1. - Present Rail Operations
2. - Rail Operations with One-Man P.C.C. Cars
3. - Modernized Motor Coach Operation

SUBMITTED TO

MR. O. A. SMITH, PRESIDENT

January 31, 1949

Bureau of Research  
No. 49-2

Arthur C. Jenkins  
Consulting Engineer

*Metropolitan Coach Lines*  
Pacific Electric Railway Company

REPORT ON RAIL  
SOUTHERN DISTRICT LINES

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\* \* \* \*



*Metropolitan Coach Lines*  
Pacific Electric Railway Company

COMPARATIVE ECONOMICS, SERVICE AND  
OPERATING RESULTS

*1 space*

SOUTHERN DISTRICT PASSENGER RAIL LINES

A - BASIC CONSIDERATIONS

PURPOSE AND SCOPE OF STUDY

The purpose of this study is to analyze the financial and operational characteristics of passenger rail lines of the Southern District of Pacific Electric Railway Company, to determine the extent to which they contribute to the system loss on passenger rail operations, and to develop whatever means may be available to eliminate the loss by rearrangement of operations and modernization of facilities and service. The studies have been conducted with full recognition of the necessity for maintaining the highest possible standard of service to the public at lowest reasonable fares commensurate with the cost of operations.

In line with previous studies of this same series, the scope of analysis has been extended to include the possibilities of new type rail cars of the P.C.C. design as compared with present rail equipment, and the use of motor coaches in replacement of rail operations. The use of conventional P.C.C. type cars was not given full consideration in this instance as urban type of equipment would not be adaptable to the long-haul high-speed operation between Los Angeles and points as far south as Santa Ana, Long Beach and San Pedro. The results of the study do not indicate the desirability, as a part of the primary stages of modernization, to substitute motor coaches for rail service on all lines of the Southern District.

In connection with the Southern District, more so than the Northern District, the motor coach operations presently conducted bear a closer relationship to the over-all problem. In the Southern District, motor coach lines of the Company already operate between Los Angeles and Santa Ana and also between Los Angeles and Newport Beach. The nature of the problem is less involved with respect to the Newport Beach Line, but is much more difficult when considering alternate highway service to Santa Ana, due to the absence of parallel highways immediately adjacent to the rail line.

FUNDAMENTAL PREMISE

In connection with the Southern District the same general concept of objective exists as applies to other rail lines of the system. It has been accepted as a basic assumption in conducting the survey and in deriving the

*service by private enterprise*

conclusions and recommendations set forth herein, that the only way in which the public ~~generally~~ can continue to be supplied with passenger transportation of any character by Pacific Electric Railway Company or any other carrier, is for the physical and financial elements of the operation to be adjusted to the extent necessary to produce a reasonable profit to the operator. To propound the theory that standards of service are paramount to the financial solvency of the carrier who is required to provide that service, is tantamount to depriving private industry of its fundamental incentive to remain in business and its inherent rights under the principle of free enterprise upon which the foundation of the economic system of the Country is established.

*There are*

*involved.* The problem can be epitomized as consisting of two primary responsibilities: <sup>one is</sup> First, that of the carrier to discharge its obligation to the public in the most efficient and effective manner through the exercise of prudent and farsighted managerial discretion; and the <sup>other is</sup> second, the obligation of the persons benefiting from the service to pay a sufficient amount in return to offset the cost of providing it and in addition, to assure the Company of a reasonable measure of profit. To attain the desired balance of interests and equities, it is essential that the problems of both principals, and the restrictions under which they must function, be thoroughly understood, and the superficial effects of minutia be subordinated to the paramount issues that go to the more profound consideration of survival or extinction of the transportation system.

#### FINANCIAL REHABILITATION AND SERVICE MODERNIZATION REQUIREMENTS

The general status of the Company's financial condition has been described in the report on the Venice Short Line, No. PR 3-D1(8)(a), the report on the Northern District Lines, No. PR 3-D1(8)(d,e,f,g), and other exhibits submitted in evidence before the Public Utilities Commission in current proceedings to avoid repetition those considerations will not be repeated herein but reference to them is urged.

To provide an indication of the necessity for conducting this survey, mention will be made only of the major financial picture. Passenger rail service on the lines of Pacific Electric Railway Company for the year of 1947 suffered an operating loss of approximately \$3,500,000. Although some relief was experienced during 1948 as a result of the increase in fares that became effective on February 1st of that year and economies effected through concerted effort on behalf of all departments, most recent figures indicate that during the twelve months' period ending October 31, 1948, passenger rail lines had incurred a loss of \$2,900,000. Of that loss 77% was chargeable to interurban rail lines and 23% to the so-called local lines.

*of* In view of these losses it would not have been prudent for the Company to launch upon a program of rail modernization without first making a careful analysis of the financial possibilities of the future. Maintenance of track, and roadway and facilities on the Southern District follow along the same general line as those of other Districts of the system. Except for the Long Beach and San Pedro Lines, maintenance is considerably below proper standard for continued satisfactory rail passenger service and the cost <sup>of</sup> ~~involved to~~ completely rehabilitate <sup>of</sup> on a satisfactory basis is not justified under the existing conditions of patronage and earnings, or under the potential earning or traffic possibilities of the area served.

*continuing decline of*

## GENERAL MODERNIZATION PROGRAM

This report on the Southern District interurban lines and the Watts Local Line is one of several reports covering the entire rail passenger operation. Other studies and reports will cover the existing motor coach lines of the system which also are incurring operating losses. The urgency, however, is greater on the interurban passenger rail lines and for that reason they have been accorded prior consideration.

## PUBLIC UTILITIES COMMISSION PROCEEDINGS

This study falls within the scope of the Company's general modernization program which is directly related to the proceedings before the Public Utilities Commission of the State of California in Applications Nos. 23053 and 27466, and Case No. 4843. The Commission's Decision No. 41152, dated January 19, 1948, in those proceedings, and exhibits submitted by Commission and Company witnesses prior thereto, are all closely related to this report and those others of the same series. There is also a direct relationship between the subject matter herein and exhibits and testimony submitted in evidence before the Commission at the hearing held in Los Angeles on October 13, 1948, in connection with the Company's application for extension of time on certain provisions of the Commission's order. Particular reference is directed to Exhibits Nos. 46, 47, 48 and 49, and testimony pertaining to them.

## TYPES OF OPERATION CONSIDERED

A number of types of operation were considered in studying the Southern District lines, including complete replacement of rail equipment with motor coach operation and also partial discontinuance of service on certain lines. In view of the peculiarities of the area served and the arrangement of the lines themselves, the problem has been considerably different from that found in the Northern or Western Districts.

Also, as indicated above, it would not be practicable to use the light-weight small-capacity P.C.C. type cars designed for urban operation, on the long-haul service of the principal Southern District lines. Use of such equipment, however, could be adapted to the southern end of the Watts-Sierra Vista Line which has been considered to remain as a rail operation for the present.

As to the Santa Ana Line, a careful analysis of statistics and earning condition indicates the desirability of complete discontinuance of rail service. Consideration has been given to the feasibility of cutting the rail service back to Bellflower. However, such an operation could not be conducted at a profit and it was concluded that the only ultimate solution is complete discontinuance of rail passenger service on the line.

On the Newport Beach Line there is only one round trip daily during winter and two during summer operated by rail and it is considered desirable to completely discontinue that service and absorb the traffic on the existing motor coach line by addition of schedules.

As to the Long Beach and San Pedro Lines, consideration was given to the possibility of substituting motor coaches for rail service but in view of the

relatively good condition of track and roadway and the fact that a considerable expenditure has been made recently in completely overhauling and rehabilitating the large-sized type 300 and 400 steel rail cars for the service, and further in view of the fact that these two lines combined possess better than average earning potentialities, it was considered desirable to retain them at least for the time being in rail operation.

#### METHODS OF COMPUTATION

The methods of computation of financial estimates contained in this report are the same as those used and described in the Venice Short Line and the Northern District reports and it is suggested that reference be made thereto rather than to repeat the complete data herein. Suffice it to say that the estimates contained in this report are based, to the fullest extent possible, upon actual conditions, actual schedules, traffic checks made during representative periods, and the application of most recent wage rates to the schedules and run assignments computed for the purpose.

#### DESCRIPTION OF SOUTHERN DISTRICT LINES

The Southern District rail lines consist of the following:

Los Angeles-Long Beach Line  
Los Angeles-San Pedro Line  
Los Angeles-Balboa Line *Bellflower Line*  
~~Los Angeles-Santa Ana Line~~  
Los Angeles-Watts Local Line

~~Detailed specifications of these lines will be found in a following section.~~  
In general they may be described at this point as radiating from Los Angeles into the area to the south, all operating over common track between the Los Angeles Main Street Passenger Terminal and Watts. At Watts the ~~Santa Ana~~ *Bellflower* Line diverges and proceeds southeasterly over a diagonal route to ~~Santa Ana~~ *Bellflower*. From Watts the San Pedro and ~~Newport Beach~~ *Long Beach* lines proceed over common track to Dominguez Junction. At that point the San Pedro Line diverges and proceeds southwesterly to San Pedro. From Dominguez Junction the Long Beach and ~~Newport Beach~~ Lines proceed southerly to the Willow Street Junction at which ~~point the latter diverges from the Long Beach Line and proceeds southeasterly along the ocean front to Newport Beach. The track has been removed between Newport Beach and Balboa and motor coach service was substituted for rail operation sometime ago. From Willow Street Junction the Long Beach Line proceeds along American Avenue for a relatively short distance through the main business section of Long Beach to a terminal near the ocean front. The relative locations and lengths of the lines can be observed by reference to the map attached to the Appendix.~~ *thence*

Between Los Angeles and Watts the lines operate over a four-track right-of-way which traverses a completely built-up industrial and manufacturing area, with flanking residential sections. On the ~~Santa Ana~~ *Bellflower* Line between Watts and the Los Angeles River a residential area is traversed and between Los Angeles River and ~~Garden Grove~~ *also residential* the territory is largely occupied by agricultural activities, dairy farms, grazing areas and citrus groves. Along the line south of Bellflower the population density is very light, the heaviest concentration being at the town of Garden Grove a few miles north of Santa

Ana. The Santa Ana Line is unique in that none of its length between the Los Angeles River and Santa Ana is parallel to automobile highways. It crosses almost all of the north and south, and east and west highways on a diagonal, making it virtually impossible to establish a motor coach operation that would parallel the line directly throughout its entire length or for any small portion of its length.

After leaving Watts on the San Pedro <sup>and</sup> Long Beach ~~and Newport Beach~~ Lines, the territory is quite sparsely settled with exception of the City of Compton and the more thickly populated areas near Long Beach and the industrial area of San Pedro and Wilmington.

Beyond Willow Street the line to Newport Beach is basically a freight line and passenger service consists of only one round-trip per day during winter and two during summer. The Watts Local Line is the southern end of the Watts-Sierra Vista Local Line. For purpose of this study it has been contemplated that the northern end of the line to Sierra Vista would be converted to motor coach operation and the Watts end retained as rail.

## B - FINANCIAL ANALYSIS

### FINANCIAL ESTIMATES

#### PRESENT STATUS OF NET EARNINGS

The general earning status of the Southern District Lines has been referred to in a previous section under Basic Considerations relating the Southern District to other Districts and showing the financial results of operation for the twelve months' period ending October 31, 1948.

~~In connection with the economic analyses made for the purpose of this report, a complete annual operating cost and revenue statement has been prepared on an estimated basis projected into the coming twelve months' period. These calculations have been made upon the basis described above as to the method of computation.~~ <sup>have</sup> *as shown by*

~~Santa Ana Line~~ <sup>Bill Hester</sup> It will be noted from Table No. 1 of the Appendix, ~~that rail passenger operations, if continued on the Santa Ana Line will incur an annual loss of \$204,079.~~ Due to the impossibility of establishing a motor coach service directly paralleling the rail line that would provide all present patrons with continued service, a direct comparison of motor coach costs in replacement service cannot be computed. The situation is one where the passenger rail line is to be abandoned and the traffic between Santa Ana and Los Angeles will be taken care of by an amplification of existing motor coach operations to the extent required to meet traffic demands. Intermediate points must be served by other means. ?

It is estimated that the additional service by motor coach will operate at a profit of \$2,400 annually. Under these conditions, the financial improvement will be essentially the elimination of loss that would be experienced under continued operation by rail. Estimates of financial results of operation as shown in detail by Table No. 1 of the Appendix are summarized as follows:

In summary form, the net financial results of operation of the lines involved, is shown by the following tabulation:

Summary of Comparative Financial Results of Operations

<u>Type of Operation</u>	<u>Per Cent Load Factor</u>	<u>Net Operating Income</u>	<u>No. of Units Required</u>
Present Rail	Present - 100%	( \$204,079 )	18
	150	( 166,692 )	14
One-Man Rail	Present - 100	( 135,781 )	23
	150	( 98,042 )	18
One-Man Rail to Bellflower	Present - 100	( 76,597 )	15
	(1 hr. Base)	( 101,834 )	15
	(30 min. Base)	( 38,441 )	11
	- 150	( 64,697 )	11
	(1 hr. Base)	( 38,441 )	11
	(30 min. Base)	( 64,697 )	11
Motor Coach	Present	\$ 2,386	3

(RED FIGURES)

The above figures apply to the end results of operation on the Santa Ana Line alone and do not include the corresponding figures that might apply to the Long Beach, San Pedro and the Watts Local Lines.

Estimates were made of the results that would accrue from cutting the Santa Ana Line back to Bellflower instead of eliminating the line entirely. The results are shown in detail on Table No. 1. Briefly, the data can be summarized as follows:

One-Man Operation to Bellflower

<u>Plan</u>	<u>Net Operating Loss</u>
<u>Hourly Base Service</u>	
Present Load Factors	\$ 76,597
Proposed Load Factors	38,441
<u>Half Hourly Base Service</u>	
Present Load Factors	101,834
Proposed Load Factors	64,697

It will be seen from this summary that short line service to Bellflower cannot be conducted profitably under one-man operation. Actually, there is serious question as to whether one-man cars would be permitted on this line due to freight service and other complications.

Watts Local Line - Under present operations the <sup>Local</sup> Watts-Sierra Vista Local rail line is estimated to incur an annual operating loss of \$20,445. By separating the north and south ends of the line and using one-man operation on the Watts end, it is estimated that an operating profit would be realized in amount of \$169,800 annually. If it should develop that one-man operation cannot be effected, then that profit would be reduced to about \$100,800.

Long Beach, San Pedro and Newport Beach Lines - Table No. 2 of the Appendix shows the financial results of operation as estimated for the Long Beach, the San Pedro and the Newport Beach passenger rail lines. Annual

operating net for these lines is estimated at a \$33,295 profit, \$79,224 loss, and \$21,567 loss, respectively. These figures indicate that combining the Long Beach and San Pedro Lines during off-peak periods might well eliminate the loss for the San Pedro Line or at least, materially reduce it.

As to the Newport Beach Line there is no hope of converting the loss into a profit under continued rail service. Actually, even upon discontinuance of rail service and absorption of the traffic by the existing motor coach line, the latter will continue to operate at a loss of more than \$80,000 annually. At present the motor coach line is operated at an annual loss of \$75,000. Under the circumstances it might be wise to turn the operation over to some other carrier already operating on restrictions between Long Beach and Balboa.

#### OPERATING RATIO AND EQUIVALENT FARE INCREASE

Upon the basis of the estimates made relative to the Santa Ana Line, it appears that the overall financial improvement will be approximately \$206,500 annually. Elimination of the present heavy annual loss is, of course, a real gain and to obtain the same net financial improvement through an increase in fares would require a 44.5 per cent increase; and correspondingly, to effect the same improvement through reduction in cost of operation would require a curtailment of 30.5 per cent of operating expenses. It is obvious that neither one nor the other of these could be accomplished.

#### C - PRESENT AND PROPOSED OPERATIONS

##### PRESENT ROUTES

Santa Ana Rail Line - From Main Street Station in Los Angeles, the Santa Ana Line operates via elevated structure to San Pedro Street, thence in paved city streets along San Pedro Street, Ninth Street and Olympic Boulevard to Hooper Avenue, thence southerly over private right-of-way paralleling Long Beach Avenue, Santa Ana Boulevard, Fernwood Avenue (Lynwood) and continuing in a diagonal direction through Clearwater, Bellflower, ~~Artesia, and Garden Grove to Artesia Street, Santa Ana, thence in paved city street along Fourth Street to Pacific Electric's Santa Ana Station.~~

7.19. On the four-track system over private right-of-way between Olympic Boulevard and Hooper Avenue in Los Angeles, and 103rd Street in Watts, the Santa Ana Line service is operated on the inside pair of tracks, with double-track operation over 0.74 miles from Watts to Socorro, and single-track operation for ~~22.82~~ miles from Socorro to King Street at the western city limit of Santa Ana. From King Street to Santa Ana station, the line is double track, for a distance of 2.53 miles.

Bellflower.

From the Los Angeles River (which lies a little east of Lynwood) to Santa Ana, the Santa Ana Line passes through agricultural areas, with little residential or commercial development, except in the communities of Clearwater, Bellflower, Artesia, Garden Grove, and Santa Ana. Industries along the line are infrequent. Freight service is operated over the entire length of the line from Los Angeles to Santa Ana and beyond to Greenville.

Newport Beach Rail Line - This line follows the same route as the Long

Beach Line between Los Angeles and Willow Street in Long Beach, at which point it branches easterly through Long Beach to Seal Beach, thence follow- in the ocean front to Newport Beach. From approximately Willow Street to Newport Beach, the line is single track.

Only one round trip per day, daily except Sundays, is operated on the line for the transportation of passengers, particularly between Los Angeles and East Long Beach, Seal Beach, Huntington Beach, and Newport. The principal passenger transportation service between such points is provided by the Los Angeles-Balboa Motor Coach Line.

Numerous industries are located on the section of this line east of Willow Street in East Long Beach, Seal Beach, Huntington Beach and Newport Beach. Freight service is provided over the entire line between Los Angeles and Newport Beach.

Newport Beach Motor Coach Line - Motor coach service is now operated from Main Street Station in Los Angeles, via 6th Street, Boyle Avenue, 8th Street, Olympic Boulevard, Anaheim-Telegraph Road, Lakewood Boulevard and Pacific Coast Highway through a portion of Long Beach, thence through Seal Beach, Sunset Beach, Huntington Beach, and Newport Beach to Balboa. There is also an alternate route through Belmont Shore (Long Beach), via Ximeno Avenue, 2nd Street, Central Avenue and Main Street (Seal Beach) to Pacific Coast Highway.

Population along the route is centered in the communities of East Los Angeles, West Bellflower, Lakewood Village, Belmont Shore (a part of the City of Long Beach), Seal Beach, Sunset Beach, Huntington Beach, Newport Beach and Balboa. Between such communities there is much territory that is sparsely settled or undeveloped in any way and little or no traffic is produced. With exception of the Belmont Shore and Newport-Balboa areas, the density of population is comparatively low in the communities named. From Seal Beach to Balboa, the beach towns are popular summer resorts, with many residents remaining there only during summer months. Whereas, in the early years of the rail line there was relatively heavy recreational travel, that traffic now moves largely by automobile.

The route serves the Vultee Aircraft plant near Downey and the former Douglas Aircraft plant at Lakewood Village, but since the war little passenger traffic is developed by these industries.

#### PRESENT SERVICE

##### Santa Ana Rail Line

Length of route .....	15.33 miles to Bellflower
	33.49 miles to Santa Ana
Number of trains (daily except Saturdays and Sundays):	
	28 LA to Bellflower
	22 LA to Santa Ana
	29 Bellflower to LA
	22 Santa Ana to LA

(Santa Ana Rail Line continued next page)



(Santa Ana Rail Line continued from page 8)

LOS ANGELES to - - - - -	Daily Except Saturdays and Sundays							
	AM PEAK		BASE		PM PEAK		NIGHT	
	Bell- flower	Santa Ana	Bell- flower	Santa Ana	Bell- flower	Santa Ana	Bell- flower	Santa Ana
Scheduled running time .....	40"Ltd 49"Loc	82"Ltd 91"Loc	45"	91"	41"Ltd 47"Loc	88"Ltd 92"Loc	44"	85"
Cars required .....	--17--		--4--		--14--		--3--	
( 4 - 1200 Class) (13 - 300-400-450 Class)								
Average miles per hr.	23.0Ltd 18.8Loc	27.9	20.4	22.1	22.4Ltd 19.6Loc	25.8	20.9	23.6
Approximate headways	20-30"	30-40"	30-60"	60"	20-30"	25-35"	70-80"	70-80"

Newport Beach Rail Line

Length of Route . . . . . 38.0 miles

Number of trains (daily except Sundays):

- Winter - 1 - LA to Newport
- 1 - Newport to LA
- Summer - 2 - LA to Newport
- 2 - Newport to LA

Scheduled running time - approximately 1 hr. 25 minutes

Cars required: 2 - 1200-Class

Average miles per hour - 26.8

Newport Beach Motor Coach Line

	via Pacific Coast Highway		via Ximeno Ave. and 2nd Street	
	Seal Beach	Balboa	Seal Beach	Balboa
Length of route .....	27.4	43.35	29.0	45.1
Number of one-way trips (daily except Saturdays and Sundays)				
Outbound	2	1	*21	9
Inbound	2	2	#22	7
Scheduled running time .....	61"	1'34"	1'6"- 1'16"	1'40"- 1'49"
Motor coaches required - 15 (various types)				
Average miles per hour .....	26.9	27.6	26.4- 22.9	27.0- 24.8

\* - includes 2 trips to Lakewood Village

# - includes 2 trips from 7th & Ximeno and  
3 trips from Lakewood Village

Seal Beach trips include trips running through  
to or from Balboa.

PROPOSED ROUTES AND SERVICE

Santa Ana Line - In the event of discontinuance of through rail passen-  
ger service between Los Angeles and Santa Ana, it is proposed to establish

additional limited motor coach service between such cities direct via Firestone Boulevard and Santa Ana Boulevard, serving only Santa Ana.

For the most part, Pacific Electric now operates its Los Angeles-Santa Ana motor coach service over the route proposed, the exceptions being on Firestone Boulevard and Santa Ana Boulevard between Buena Park and Santa Ana.

	<u>Limited Route via Firestone and Santa Ana Blvds.</u>
Length of route .....	33.4 miles
Number of one-way trips per day (daily except Saturdays and Sundays) ..... Outbound	3
Inbound	3
Scheduled running time .....	115"
Average miles per hour .....	30.8 miles
Number of coaches required .....	3

Additional Motor Coach Service LA-Newport Beach - Should present Los Angeles-Newport Beach rail passenger service be discontinued, it is proposed to establish one additional round trip by motor coach between Los Angeles and Balboa, and two additional round trips by motor coach between Los Angeles and Seal Beach to meet winter traffic requirements and proportionately more schedules during summer months when travel increases.

TRAFFIC CHARACTERISTICS AND TRENDS

As a part of the appendix of this report there will be found a number of statistical tables showing the characteristics of traffic volume, revenue, and other data on the several Southern District lines for a period of years from 1938 to and including 1948, with monthly breakdown from January 1947 to and including October of 1948. Percentages of increase or decrease in revenue passengers by months during 1947 and 1948 compared with the same month of the previous year are shown on each of the statements referred to.

It is significant to note that with exception of the Newport Beach Line there has been a material reduction each month in the number of passengers carried as compared with the same month of the previous year on each of the Southern District rail lines, particularly the Watts Local Line, the San Pedro Line and the Long Beach Line. On the latter two lines the percentage decrease has been in excess of 10 per cent for each month of the year of 1948, averaging for the eleven months 15.51 per cent decrease on the San Pedro Line; 23.10 per cent on the Long Beach Line; and for a ten months' period ending October 31, 1948, an average decrease of 19.74 per cent on the Watts end of the Watts-Sierra Vista Line. The percentage of decrease on the Santa Ana Line has not been as heavy as on the other main Southern District Lines. However, the traffic on the Santa Ana Line, as indicated by the statistical table, indicates that there has been almost a standard monthly pattern established which has not fluctuated to any considerable extent. This would indicate that on that line the traffic carried has been reduced to a post-war minimum of necessity riders and that although there has been a decrease, on the average, for the first ten months of 1948 of 10.51 per cent, the rate of diminution is not as great as on the other heavier volume lines.

There is a distinct difference between the revenue in cents per car mile

on the Santa Ana Line as compared with the other two main Southern District Lines. For the ten months' period of 1948 the average revenue per mile was only 65.68 cents on the Santa Ana Line as compared with 89.24 cents on the San Pedro Line and 93.40 cents on the Long Beach Line. This is another indication of the need for concentrated attention upon the Santa Ana Line.

Looking further to the Newport Beach Line, it will be noted that the revenue per car mile is only an average of 58.15 cents for the first eleven months of 1948.

Traffic checks were made on the Santa Ana Rail Line and the results are shown by Table No. 9 and Chart No. IV, in the Appendix. The check shows that intermediate points between Santa Ana and Bellflower contributed only 20.6 per cent of the total traffic; that 38.8 per cent originated in Santa Ana, and 40.8 per cent originated at Bellflower and west. It should be kept in mind when referring to this traffic data that there are 22 round trips daily on week days between Los Angeles and Santa Ana and 28 between Los Angeles and Bellflower.

The ratio of passengers to seats on the Santa Ana Rail Line is shown by Charts in the Appendix.

#### EQUIPMENT AND FACILITIES

Equipment presently used on the Southern District Lines consists of thirty units of 300, 400 and 1200 Class cars on the Long Beach Line; twenty-six units of the 300, 400 and 1200 Class cars on the San Pedro Line; and three units of 1200 Class on the Newport Beach Line. On the Santa Ana Line a maximum of eighteen units are required. During the base period four units of 1200 Class are used and during the peak period ten units of the 300, 400 and 450 Class cars are operated.

As to assignment of rail passenger cars, no change will be necessary on the Southern District rail lines that will remain in operation. The Long Beach and San Pedro Lines will continue to be equipped with the type of cars presently in operation.

There has been some consideration given to the possible advisability of using 600 Class cars on the Long Beach and San Pedro Lines in the event that the Northern District replacement program is authorized by the Public Utilities Commission and motor coach service is placed in operation on the line involved. If that is accomplished, there will be a surplus of 600 Class cars available. Careful consideration of all of the elements involved, however, indicate that there would be no advantage in using the 600 Class cars on the Long Beach and San Pedro Lines. This is because of the fact that the large capacity steel rail cars of the 300 and 400 Class that have recently been completely rebuilt and equipped for operation on the Long Beach and San Pedro Lines are in excellent condition and have a higher economic passenger capacity than the 600 Class cars.

As to the motor coaches to be used on the Santa Ana and Newport Beach Lines, they will be of the conventional type of modern design.

The 300, 400 and 450 Class rail cars used on the Southern District Lines are of heavy duty all-steel construction, built for long distance interurban

service. They were obtained from the San Francisco Bay Area, some of them formerly having been operated on the Northwestern Pacific Railway inter-urban passenger service in Marin County and others were formerly operated by Interurban Electric Railway Company between San Francisco and Oakland in commutation service. These cars were put into service on Pacific Electric operations during the war when the heavy traffic of war industries in the Long Beach-San Pedro-Wilmington Area overtaxed the facilities then available. Subsequent to the war these cars were put through the shops at Torrance and completely rehabilitated as to their interiors, including installation of new and modern overhead lighting, completely new seats and installation of interior panelling both overhead and on the sides. Approximately \$7,500 was spent on each car in this program. With this reconstruction work the cars should be capable of providing satisfactory service with no unreasonable maintenance cost for a considerable number of years.

As to other facilities in connection with the Southern District Lines it is not contemplated that any change will be made except removal of passenger station facilities on the Santa Ana Line and the Newport Beach Line where not required for motor coach operation, and eventual conversion from electric power to diesel locomotive power in freight operations on those two lines.

Rail service on the Long Beach, San Pedro and Watts Local Lines will continue to be operated from and to the Main Street Passenger Terminal in Los Angeles over the present route via San Pedro Avenue and the rail ramp to the station.

In the event that the Sierra Vista end of the Watts-Sierra Vista Line is replaced by motor coaches as recommended in the Northern District Report, the Watts end of the line should be rerouted to follow the same tracks as the Long Beach and San Pedro Lines to the rear of the Main Street Terminal, thereby eliminating rail operations on Ninth Street and Main Street.

#### FREIGHT OPERATION

Heavy freight service is conducted over the Southern District rail lines, particularly between Amoco Junction and Watts along the four-track right-of-way and between Watts and the Long Beach-Wilmington-San Pedro Area. A relatively heavy freight traffic is also conducted on the Santa Ana Line. Freight service is also performed on the Newport Beach Line between Long Beach and Newport Beach. For the year of 1947 gross freight revenue on the Santa Ana Line amounted to \$290,000, which is only about \$86,000 more than the estimated operating loss on passenger operations. Out of each dollar of gross freight revenue only about 16.5 cents is retained as operating net which would mean that on the Santa Ana Line only \$47,800 of operating profit would accrue. This is, of course, not sufficient to justify maintaining the passenger loss of \$204,000, if the problem of keeping both freight and passenger or losing both.

Under the proposed rearrangement of operations there will be no appreciable change in freight service excepting on the Santa Ana Line. Under present conditions the operation of passenger and freight service jointly over the single track portion of the line results in interference with both passenger and freight operation. By elimination of passenger service it will be possible to materially expedite freight movements, eliminating the delays that are

now required in providing for meeting of freight and passenger trains. This expedited freight operation will result in some reduction in freight costs by cutting down the number of crew hours.

#### PROSPECTS OF FUTURE DEVELOPMENT

A review of the history of the Santa Ana Line indicates conclusively that the future holds no reasonable prospects for substantial increase in passenger traffic and certainly does not possess favorable potentialities as to improved passenger earning conditions. As indicated above, the area served by this line is predominantly agricultural with sparsely settled residential areas at long intervals apart. Its primary function from a passenger carrying standpoint is as a connection between Santa Ana and Los Angeles.

This line is typical of other rail lines of the system presently existing and already discontinued. Population and commercial development, in accordance with modern trends, have taken place along the principal highway routes and in general those communities that formerly thrived along the rail line, with exception of Bellflower and Garden Grove, have deteriorated and even in those two communities the business centers have developed toward the principal automotive arteries.

#### OTHER OPERATORS SERVING THE AREA

There is an appreciable amount of traffic between Garden Grove and Santa Ana of a local character, but many miles are wasted between Los Angeles and Garden Grove to carry those local passengers which could easily be accommodated by extension of lines of the local Santa Ana motor coach operator.

A survey has been made of other operators in the general area served by the Santa Ana Line and it develops that there exists an extensive network of independent operators serving the same communities served by the rail line of Pacific Electric. This is particularly true in the area surrounding Bellflower and communities to the immediate south.

No doubt satisfactory arrangements could be worked out to extend the service of these independent carriers so as to adequately meet requirements of the communities that would otherwise be left without service by discontinuance of the Santa Ana passenger rail line. Even if such were not possible, the traffic is not sufficient to justify continued rail service.

#### SIMILARITY TO CONDITIONS IN OTHER AREAS

The principal problem involved in considering discontinuance of passenger service on the Santa Ana Line is the absence of parallel highways in the immediate vicinity of the line. The advisability of discontinuing passenger service on this line has been considered previously on numerous occasions over a period of years extending prior to World War II. In each instance the inability to provide a parallel service has been the predominant factor in discarding the proposal. Conditions have now developed to a point where this consideration can no longer be allowed to control.

#### PRIOR PROCEEDINGS

Elimination of rail passenger service on this line will result in a situation typical of that with which the Company has been confronted on other

passenger rail lines where inadequacy of traffic has justified discontinuance of passenger rail service, and the State Railroad Commission authorized abandonment without substitute service. As examples, attention is directed to the area formerly served by the Redondo Beach via Gardena Line and the Torrance line. In each of those instances the traffic was insufficient to justify continuation of rail service and it was discontinued without replacement by motor coach operation under provision of the Commission's Decision No. 32599 dated December 5, 1939.

In Exhibit No. 73 submitted by the Commission's Engineering Staff on March 31, 1939 in Application No. 21656, the Santa Ana Line was discussed at considerable length commencing at Page 26. Quoting from that report, this was said by the Commission Engineers:

"Combined patronage of both passenger and freight is not sufficient to justify continuation of the rail service."

"Even in spite of this condition of restrictive routes, consideration should be given to the abandonment of passenger rail service beyond Bellflower."

In view of the consolidated proceedings under which these matters are to be considered, it is necessary that reference be made to Exhibit No. 32 submitted by the Commission's Engineering Staff in this proceeding and point out certain conditions that are not apparent from that report. On Page 37 of the report, a tabulation is shown of the traffic and earning statistics of the Santa Ana Line from 1938 to and including 1946. Each statistical indication in that table shows a remarkable increase in 1946 as compared with 1939 with exception of the revenue per passenger. It points out that traffic on that line in 1945 was 723 per cent of that carried in 1940. Passenger revenue was shown to be \$635,905 in 1945 as compared with \$81,612 in 1940. Those figures standing alone without corresponding cost figures might give the wrong impression as to the value of this line in passenger service. For comparison of more recent figures, the passenger revenue for the year of 1947 was \$492,843 and the cost of operation exclusive of any share of bond interest or fixed charges, was \$792,257. Whereas, Exhibit 32 shows revenue per mile of \$0.56 in 1946, the cost of operation per mile in 1947 was \$0.9967 per mile. Revenue per mile for the year of 1947 was \$0.6195, which resulted in an operating net loss of 37.72 cents per each car mile operated. Under these conditions it is prohibitive to think of expending large sums for reconstruction of rail facilities or of establishing express service.

#### ALTERNATE OPERATION

As indicated heretofore, the intermediate traffic on the Santa Ana Line is extremely light, the principal volume being between the City of Santa Ana and Los Angeles. It is proposed herein that this need be met by establishing modern motor coach service between Santa Ana and Los Angeles on non-stop schedules operated over the most direct route during the morning and evening peak period of traffic. Motor coach operation is already provided between Santa Ana and Los Angeles over two alternate routes; however, they are not limited or express schedules and require a considerably longer time in transit than would be true on the proposed express schedules.

Some consideration has been given to the advisability of retaining rail

service on the Santa Ana Line as far south as Bellflower but such an operation would be conducted at a loss of about \$101,000 per year. Therefore, it is concluded that the appropriate action at this time is to discontinue passenger service on the Santa Ana Line throughout its entire length.

#### REHABILITATION REQUIREMENTS

The standard of maintenance of track and roadway on the Santa Ana Line is materially below par and to bring its condition up to a proper level for continued rail passenger service, whether with new equipment or old, will require a large expenditure during the coming few years. It is estimated that an immediate expenditure of approximately \$879,000 would be required, followed by a further cost of approximately \$218,000, or a total of \$1,097,000. The immediate requirements for rehabilitation on the Long Beach and San Pedro Lines are only about \$107,000. Details as to these costs are set forth in a table of the appendix.

For freight operation only on the Santa Ana Line, the present condition of track and roadway, with a normal maintenance program, will be satisfactory.

#### D - SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

##### CONCLUSIONS

Based upon the results of the survey conducted in connection with the Southern District passenger rail lines as set forth in this report, it is concluded that:

1. There is no justification, either present or potential, for continuation of passenger rail service on the Santa Ana Line.
2. Present operations of rail passenger service are conducted at an annual operating net loss of \$204,000.
3. Under no other form of rail operation can a profitable service be performed.
4. Continued rail passenger service to Bellflower only would be operated at a loss of \$102,000 annually.
5. For each car mile operated in passenger service during 1947 a loss of 37.72 cents was incurred.
6. Discontinuance of rail passenger service will permit abandonment of electrical substations and distribution facilities at material savings in cost of operation and maintenance, through use of diesel locomotives in freight operation.
7. There is no hope that development in the area served will ever produce sufficient revenue to justify continued rail passenger operation on the lines involved.
8. Capital and reconstruction expenditures of approximately \$894,000 on a nonprofitable rail line will be avoided.

9. There appears to be no prospect of obtaining sufficient financing to carry out the large expenditures for continued rail service.
10. The net financial improvement of motor coach substitution over present rail operation would be \$206,000 annually.
11. To bring the present deficit up to that reasonable return by fare adjustment would require an increase in rates of about 44.5 per cent, assuming no loss of patronage.
12. The differential in improved net income as between substitution of P.C.C. cars and motor coaches is so greatly in favor of the latter that controversial estimates of traffic stimulation and other relatively minor issues can be dispensed with completely.
13. By obtaining the required financial improvement through substitution of types of vehicles, drastic increases in passenger fares that would otherwise be mandatory, may be avoided.
14. Discontinuance of passenger rail service on the Santa Ana Line will present no different problems than those that existed in connection with other lines previously abandoned without substitute motor coach service. (C.R.C. Dec. 32599, 12-5-39).
15. The loading characteristics and traffic on this line are such that motor coach operation can meet all requirements in a highly satisfactory manner.
16. There is no feasible means of converting the losses of this line into a reasonable profit.
17. Rail passenger service should be continued on the Long Beach, San Pedro and Watts Local Lines for the present.
18. Pacific Electric Railway Company is not pioneering this movement from rails to highways, but is actually bringing up the rear in the procession after having suffered financial adversity for a much longer period of years than its fellow operators have been able to survive.

#### RECOMMENDATIONS

Based upon the above conclusions and the results of the survey generally, it is recommended that:

1. Rail passenger service be discontinued in its entirety on the Santa Ana Line.
2. Expedited peak-hour limited-schedule service be established by motor coach between Santa Ana and Los Angeles over the most direct route using equipment of most modern type designed for comfort and convenience in long-haul service.



3. Permit the local Santa Ana operator to extend service between Santa Ana and Garden Grove.
4. Permit existing independent carriers in the vicinity between Watts and Bellflower and at other points along the line to carry traffic on an unrestricted basis.
5. Discontinue rail passenger service on the Newport Beach Line.
6. Provide for the absorption of traffic now carried on the Newport Beach Rail Line on existing motor coach service between Los Angeles and Newport Beach.
7. At the earliest convenient time replace electric power facilities on freight operations of the Santa Ana Line and other exclusively freight lines of the Southern District with diesel locomotives.
8. To the extent possible without interference to important freight functions, abandon trackage on the Newport Beach Line.
9. Reroute the Watts Local rail line so as to operate from the rail terminal at the Main Street station over the ramp and along San Pedro Street on joint trackage with the Long Beach and San Pedro Lines.
10. Motor coach operation in replacement of rail service be routed as described herein and make use of the proposed expanded motor coach terminal facilities in the rear of the Main Street station.
11. Passenger rail service be continued on the Long Beach, San Pedro and Watts local lines for the present.
12. Consideration be given to establishing shuttle service on the San Pedro Line between San Pedro and Dominguez Junction during off-peak hours.

Respectfully submitted,

ARTHUR C. JENKINS  
CONSULTING ENGINEER

TABLE NO. 1

SANTA ANA LINE  
ESTIMATED ANNUAL FINANCIAL RESULTS FROM OPERATIONS

NO.	ITEM	PRESENT RAIL OPERATION		PROPOSED ONE-MAN RAIL OPERATION		PROPOSED ONE-MAN RAIL OPERATION LOS ANGELES -- BELLFLOWER				PROPOSED LOS ANGELES- SANTA ANA LTD. MOTOR COACH SERVICE
		PRESENT L.F.	PROPOSED L.F.	PRESENT L.F.	PROPOSED L.F.	PLAN 'A' HOURLY BASE SERVICE		PLAN 'B' 30-MIN. BASE SERVICE		PRESENT L.F.
						PRESENT L.F.	PROPOSED L.F.	PRESENT L.F.	PROPOSED L.F.	
1	PASSENGER REVENUE	\$467,176	\$467,176	\$467,176	\$467,176	\$233,588	\$233,588	\$233,588	\$233,588	\$ 45,990
2	OTHER REVENUE	5,446	5,446	5,446	5,446	2,723	2,723	2,723	2,723	621
3	TOTAL REVENUE	472,622	472,622	472,622	472,622	236,311	236,311	236,311	236,311	46,611
4	OPERATING EXPENSES & TAXES	676,701	639,314	608,403	570,660	312,908	274,752	338,145	301,008	44,225
5	NET INCOME OR LOSS	\$(204,079)	\$(166,692)	\$(135,781)	\$(98,042)	\$(76,597)	\$(38,441)	\$(101,834)	\$(64,697)	\$ 2,386
----- DETAIL OF OPERATING EXPENSES -----										
<u>I. WAY &amp; STRUCTURES</u>										
6	MAINTENANCE	\$ 88,858	\$ 88,858	\$ 88,858	\$ 88,858	\$ 37,437	\$ 37,437	\$ 37,437	\$ 37,437	\$ 192
7	DEPRECIATION	24,608	23,031	27,454	25,848	13,294	11,659	15,189	13,554	92
8	TOTAL WAY & STRUCTURES	113,466	111,889	116,312	114,706	50,731	49,096	52,626	50,991	284
<u>II. EQUIPMENT</u>										
9	MAINTENANCE	53,787	50,341	27,379	25,777	13,258	11,627	15,147	13,517	3,449
10	TIRES & TUBES	--	--	--	--	--	--	--	--	343
11	DEPRECIATION	9,213	8,623	46,000	36,000	30,000	22,000	30,000	22,000	7,714
12	OTHER EQUIPMENT COSTS	20,103	18,815	22,428	21,116	10,861	9,525	12,408	11,073	383
13	TOTAL EQUIPMENT	83,103	77,779	95,807	82,893	54,119	43,152	57,555	46,590	12,489
<u>III. POWER</u>										
14	POWER USED	44,827	41,954	35,103	33,050	16,998	14,908	19,421	17,330	--
15	OTHER POWER COSTS	24,325	22,766	19,048	17,934	9,224	8,090	10,539	9,404	--
16	TOTAL POWER	69,152	64,720	54,151	50,984	26,222	22,998	29,960	26,734	--
<u>IV. CONDUCTING TRANSPORTATION</u>										
17	TRAINMEN-OPERATORS WAGES	196,726	184,122	108,986	102,615	68,264	59,857	69,051	61,623	15,650
18	INSPECTING, CLEANING & LUBRICATING EQUIPMENT	49,753	46,565	55,507	52,261	26,879	23,573	30,710	27,404	2,560
19	FUEL & OIL	--	--	--	--	--	--	--	--	4,216
20	OTHER TRANSPORTATION COSTS	45,921	42,979	51,232	48,235	24,809	21,758	28,344	25,293	2,300
21	TOTAL CONDUCTING TRANSPORTATION	292,400	273,666	215,725	203,111	119,952	105,188	128,105	114,320	24,736
22	V. TRAFFIC	4,706	4,405	5,251	4,944	2,543	2,230	2,905	2,592	253
<u>VI. GENERAL</u>										
23	INJURIES & DAMAGES	33,550	31,400	37,430	35,241	18,125	15,896	20,708	18,479	767
24	OTHER GENERAL COSTS	52,846	49,460	58,958	55,509	28,550	25,039	32,619	29,108	1,533
25	TOTAL GENERAL	86,396	80,860	96,388	90,750	46,675	40,935	53,327	47,587	2,300
<u>TAXES</u>										
26	UNEMP. INS. & CARRIERS TAX ACT	26,813	25,330	24,104	22,607	12,400	10,887	13,401	11,928	1,526
27	L.A. CITY LICENSE	244	244	244	244	266	266	266	266	126
28	FRANCHISE TAX	421	421	421	421	--	--	--	--	--
29	LICENSE, WT. FEE, REGIS., ETC.	--	--	--	--	--	--	--	--	1,164
30	STATE 3% GROSS RECEIPTS TAX	--	--	--	--	--	--	--	--	1,347
31	TOTAL TAXES	27,478	25,995	24,769	23,272	12,666	11,153	13,667	12,194	4,163
32	TOTAL OPERATING EXPENSES & TAXES	\$676,701	\$639,314	\$608,403	\$570,660	\$312,908	\$274,752	\$338,145	\$301,008	\$ 44,225
33	CLASS OF EQUIPMENT	300-400- 1200	300-400- 1200	P.C.C.	P.C.C.	P.C.C.	P.C.C.	P.C.C.	P.C.C.	MOTOR COACHES
34	NUMBER OF UNITS, INCL. SPARES	18	14	23	18	15	11	15	11	3
35	MILEAGE	672,338	629,261	750,100	706,226	363,229	318,558	414,999	370,328	75,650
36	AVERAGE MILES PER UNIT	37,352	44,947	32,613	39,235	24,215	28,960	27,667	33,666	25,550

( ) - FIGURES IN BRACKETS INDICATE LOSS.

TABLE NO. 2

ESTIMATED ANNUAL FINANCIAL RESULTS FROM OPERATIONS

Item	Present Passenger Rail Operations		
	LA-Long Beach (1)	LA-San Pedro (2)	LA-Newport Bch. (3)
(1) Passenger Revenue .....	\$1,300,400	\$ 959,890	\$ 23,800
(2) Other Revenues .....	11,543	9,096	329
(3) Total Revenue .....	\$1,311,943	\$ 968,986	\$ 24,129
(4) Operating Expenses & Taxes..	1,278,648	1,048,210	45,696
(5) Net Income or Loss .....	\$ 33,295	(\$ 79,224)	(\$ 21,567)

(RED FIGURES)

Detail of Operating Expenses

<u>I. WAY &amp; STRUCTURES</u>			
(6) Maintenance .....	\$ 107,721	\$ 74,429	*
(7) Depreciation .....	52,155	41,101	*
(8) Total Way & Structures..	\$ 159,876	\$ 115,530	*
<u>II. EQUIPMENT</u>			
(9) Maintenance .....	\$ 114,000	\$ 89,840	\$ 3,250
(10) Depreciation .....	9,847	10,433	2,148
(11) Other Equipment Costs.....	42,608	33,578	1,215
(12) Total Equipment .....	\$ 166,455	\$ 133,851	\$ 6,613
<u>III. POWER</u>			
(13) Power Used .....	\$ 100,126	\$ 78,718	\$ 2,626
(14) Other Power Costs.....	54,332	42,716	11,132
(15) Total Power .....	\$ 154,458	\$ 121,434	\$ 13,758
<u>IV. CONDUCTING TRANSPORTATION</u>			
(16) Trainmen's Wages .....	\$ 304,380	\$ 288,499	\$ 12,187
(17) Inspecting, Cleaning & Lubricating Cars .....	105,450	83,102	3,006
(18) Other Transportation Costs .	97,328	76,701	2,775
(19) Total Conductg. Transp....	\$ 507,158	\$ 448,302	\$ 17,968
<u>V. TRAFFIC</u> .....	\$ 9,975	\$ 7,861	\$ 284
<u>VI. GENERAL</u>			
(20) Injuries & Damages .....	\$ 71,108	\$ 56,038	\$ 2,027
(21) Other General Costs .....	112,005	88,268	3,193
(22) Total General .....	\$ 183,113	\$ 144,306	\$ 5,220
<u>TAXES</u> .....	\$ 97,613	\$ 76,926	\$ 1,853
(23) <u>TOTAL OPERATING EXPENSES &amp; TAXES</u> .....	\$1,278,648	\$1,048,210	\$ 45,696
(24) Class of Equipment .....	300-400-1200	300-400-1200	1200
(25) Number of Units .....	30	26	3
(26) Mileage .....	1,425,000	1,123,000	40,624
(27) Average Miles Per Unit .....	47,500	43,192	13,541

TABLE NO. 7

ESTIMATED COSTS OF ADDITIONAL FACILITIES AND  
EQUIPMENT REQUIRED

Item	Rail Operations Continued with P.C.C. Cars - One-Man Operated -				Proposed Motor Coach Operations
	L.A.-Santa Ana		L.A.-Bellflower		
	- A -	- B -	- A -	- B -	
	(1)	(2)	(3)	(4)	
(1) P.C.C. Cars Re- quired @\$40,000	\$ 920,000	\$ 720,000	\$ 600,000	\$ 440,000	-
(2) Motor Coaches Re- quired @18,000					\$108,000
(3) Additional Track Facilities - 8th & Hooper					15,000
(4) Immediate Track Expense	403,156	403,156	96,942	96,942	
(5) Subsequent Track Expense	217,844	217,844	184,462	184,462	
(6) Block Signal Installation	-	-	-	-	
(a)Watts-Bellflower	180,000	180,000	180,000	180,000	
(b)Bellflower-Santa Ana	200,000	200,000	-	-	
(c)Siding Tracks	96,000	96,000	-	-	
(7) Total Estimated Cost .....	\$2,017,000	\$1,817,000	\$1,061,404	\$ 901,404	\$123,000
(8) Total Excluding Subsequent Track Program .....	\$1,799,156	\$1,599,156	\$ 876,942	\$ 716,942	

A - Present Load Standards  
B - Proposed Revised Load Standards

TABLE NO. 8

REHABILITATION AND DEFERRED MAINTENANCE  
SOUTHERN DISTRICT

SANTA ANA LINE

<u>Item</u>	<u>Section</u>		<u>Immediate</u>	<u>Future</u>	<u>Total</u>
	<u>From</u>	<u>To</u>			
Watts - Santa Ana			(1)	(2)	(3)
(1)	Watts	Bellflower	\$ 276,942	\$184,462	\$ 461,404
(2)	Bellflower	Santa Ana	602,214	33,382	635,596
		Total	\$ 879,156	\$217,844	\$1,097,000

*Check 37*  
*38*  
*38*  
*461,404*  
*432,838*  
*203,258*

LONG BEACH LINE

6th & San Pedro-Morgan Yard

(4)	6th & San Pedro	9th & San Pedro	\$ 28,464	\$113,856	\$ 142,320
(5)	9th & San Pedro	9th & Hooper	5,937	-	5,937
(6)	9th & Hooper	Watts	26,501	106,006	132,507
(7)	Watts	Dominguez Jct.	14,833	59,330	74,163
(8)	Dominguez Jct.	Morgan Yard, Long Beach	12,827	51,306	64,133
(9)		Total	\$ 88,562	\$330,498	\$ 419,060

SAN PEDRO LINE

(10)	Dominguez Jct.	San Pedro	\$ 18,860	\$ 75,441	\$ 94,301
(11)		Combined Total	\$ 986,578	\$623,783	\$1,610,361

Get no. of trips + cars

TABLE NO. 9

CHECK OF ON AND OFF PASSENGERS  
L.A.-SANTA ANA RAIL LINE (INBOUND ONLY)  
MONDAY, AUGUST 9, 1948

Stops	Psgrs.	Accu- mulated Psgrs.	Psgrs.	Accu- mulated Psgrs.	Psgrs. On Board
	On (1)	On (2)	Off (3)	Off (4)	(5)
Santa Ana (Station to Artesia St.)	668	668	84	84	584
West Santa Ana	1	669	7	91	578
King Street	-	669	8	99	570
Willowick	-	669	2	101	568
Harbor Blvd.	3	672	24	125	547
Emerald Avenue	1	673	2	127	546
Garden Grove Rd.	-	673	8	135	538
Garden Grove Sta.	48	721	142	277	444
Stanford Avenue	1	722	-	277	445
Mesto	2	724	-	277	447
Harperville	4	728	9	286	442
Cordorniz	1	729	7	293	436
Vignola	-	729	2	295	434
Katella	-	729	-	295	434
Stanton	30	759	49	344	415
S.P. Crossing	-	759	-	344	415
Lobo	3	762	1	345	417
Hansen	8	770	16	361	409
Shirley	2	772	-	361	411
Miller Street	2	774	1	362	412
Cypress	57	831	15	377	454
Moody	8	839	3	380	459
Del Amo Street	4	843	-	380	463
Crescentia	5	848	1	381	467
Norwalk	9	857	-	381	476
Artesia Sta.	137	994	31	412	582
16th Street, Artesia	4	998	-	412	586
Gridley Road	2	1000	-	412	588
Studebaker Road	2	1002	-	412	590
Palo Verde Avenue	4	1006	2	414	592
Woodruff Avenue	18	1024	3	417	607
Bellflower Sta.	316	1340	89	506	834
Clark Avenue	18	1358	1	507	851
Lakewood Blvd.	24	1382	7	514	868
Downey Avenue	6	1388	10	524	864
Clearwater-Paramount Blvd.	109	1497	14	538	959
Hollydale-Garfield	97	1594	8	546	1048
Morton-Wright Rd.	20	1614	4	550	1064
Central Gardens-Atlantic	112	1726	12	562	1164

Continued on next page.

TABLE NO. 9 (Continued)

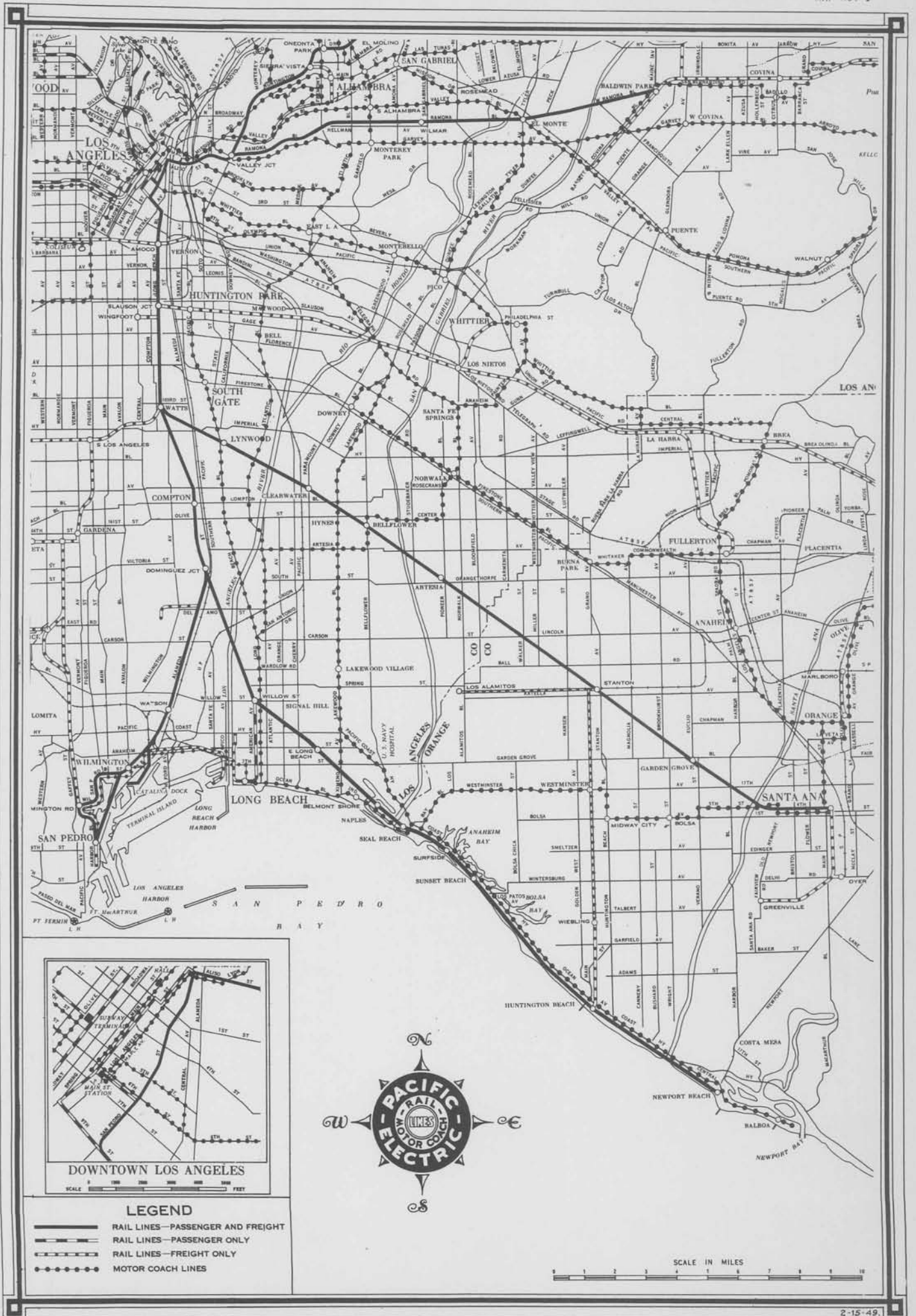
<u>Stops</u>	<u>Psgs. On</u> (1)	<u>Accu- mulated Psgs On</u> (2)	<u>Psgs. Off</u> (3)	<u>Accu- mulated Psgs. Off</u> (4)	<u>Psgs. On Board</u> (5)
Caress Avenue	73	1799	1	563	1236
Lugo-Bullis Road	99	1898	8	571	1327
Lynwood Station	329	2227	140	711	1516
Modejeska Park	26	2253	2	713	1540
Imperial Highway	18	2271	5	718	1563
Palomar-Alameda Street	113	2384	27	745	1639
Socorro	78	2462	5	750	1712
Wilmington Avenue	19	2481	4	754	1727
Watts	285	2766	97	851	1915
Slauson Avenue	42	2808	57	908	1900
Vernon Avenue	18	2826	63	971	1855
Los Angeles	4	2830	1859	2830	0

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2481

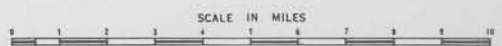
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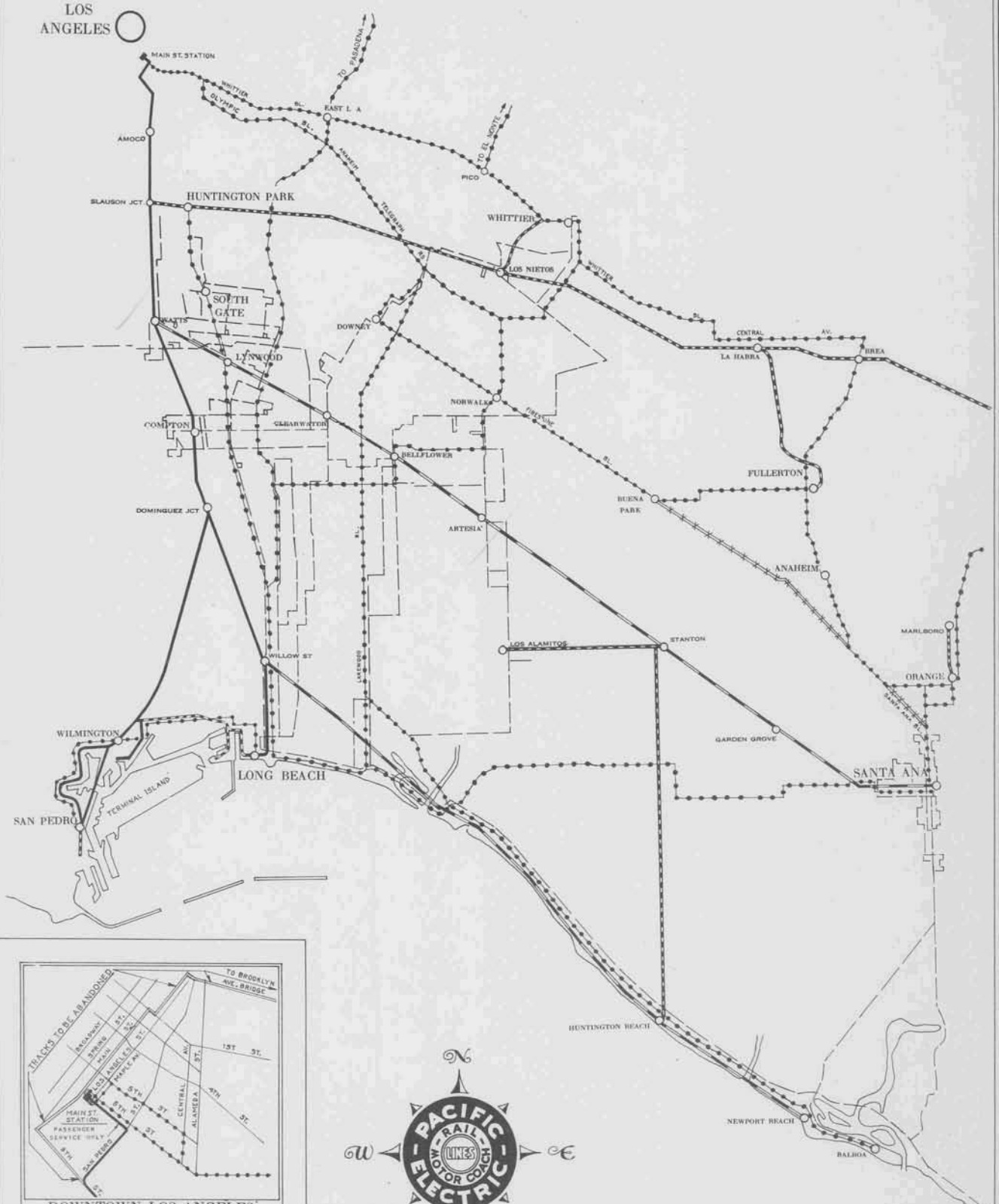


- LEGEND**
- RAIL LINES—PASSENGER AND FREIGHT
  - RAIL LINES—PASSENGER ONLY
  - RAIL LINES—FREIGHT ONLY
  - MOTOR COACH LINES





LOS ANGELES



DOWNTOWN LOS ANGELES

SCALE 0 100 200 300 400 500 600 700 800 900 1000 FEET

LEGEND

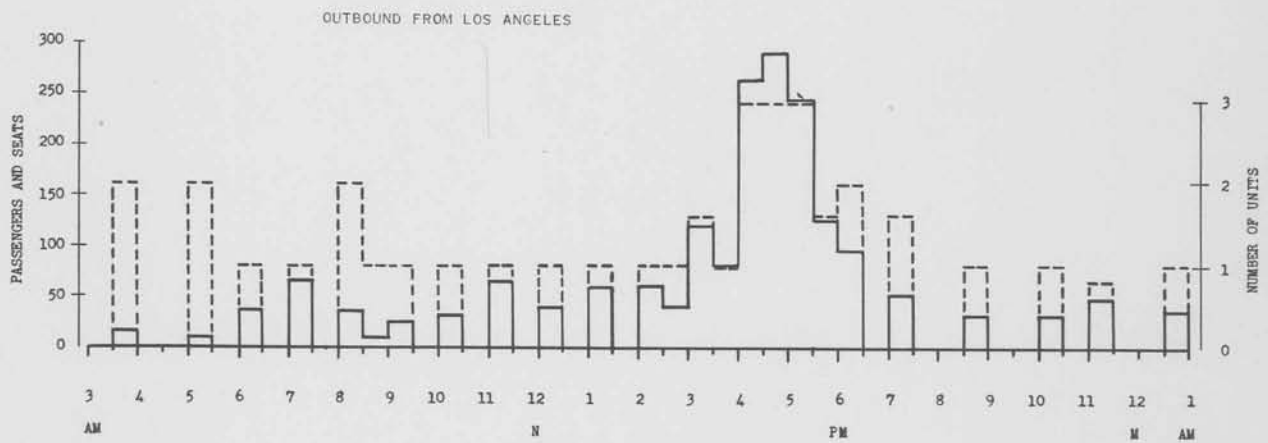
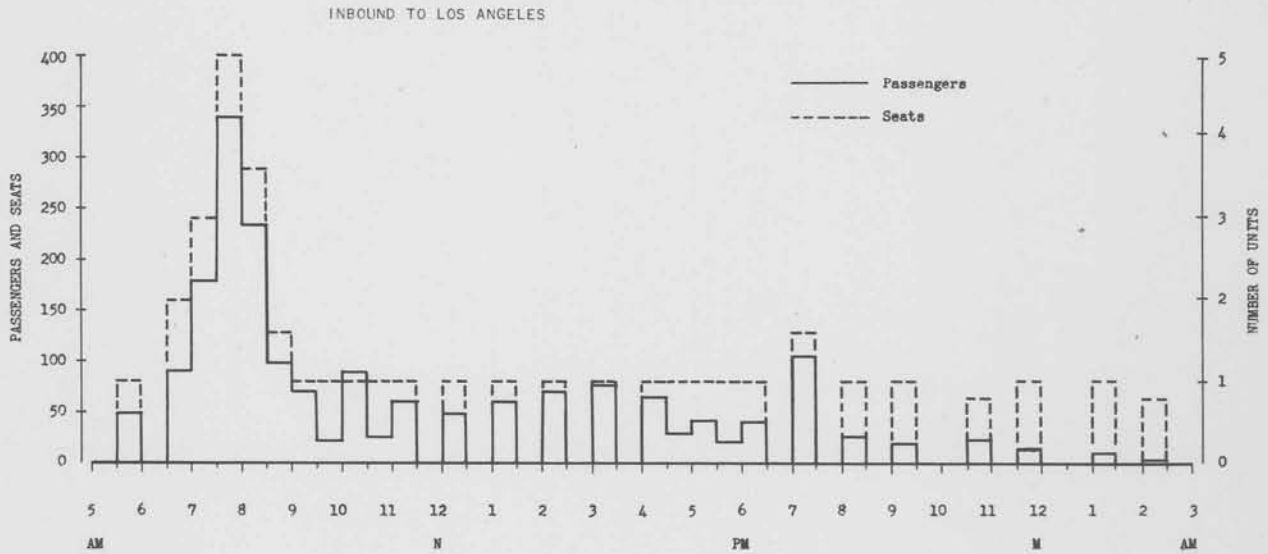
- PRESENT PASSENGER AND FREIGHT RAIL SERVICE.
- - - - - PRESENT FREIGHT RAIL SERVICE.
- PRESENT MOTOR COACH SERVICE.
- PROPOSED PASSENGER RAIL SERVICE ABANDONMENT.
- PROPOSED ADDITIONAL MOTOR COACH ROUTE.
- FOREIGN TIGER MOTOR COACH LINES.

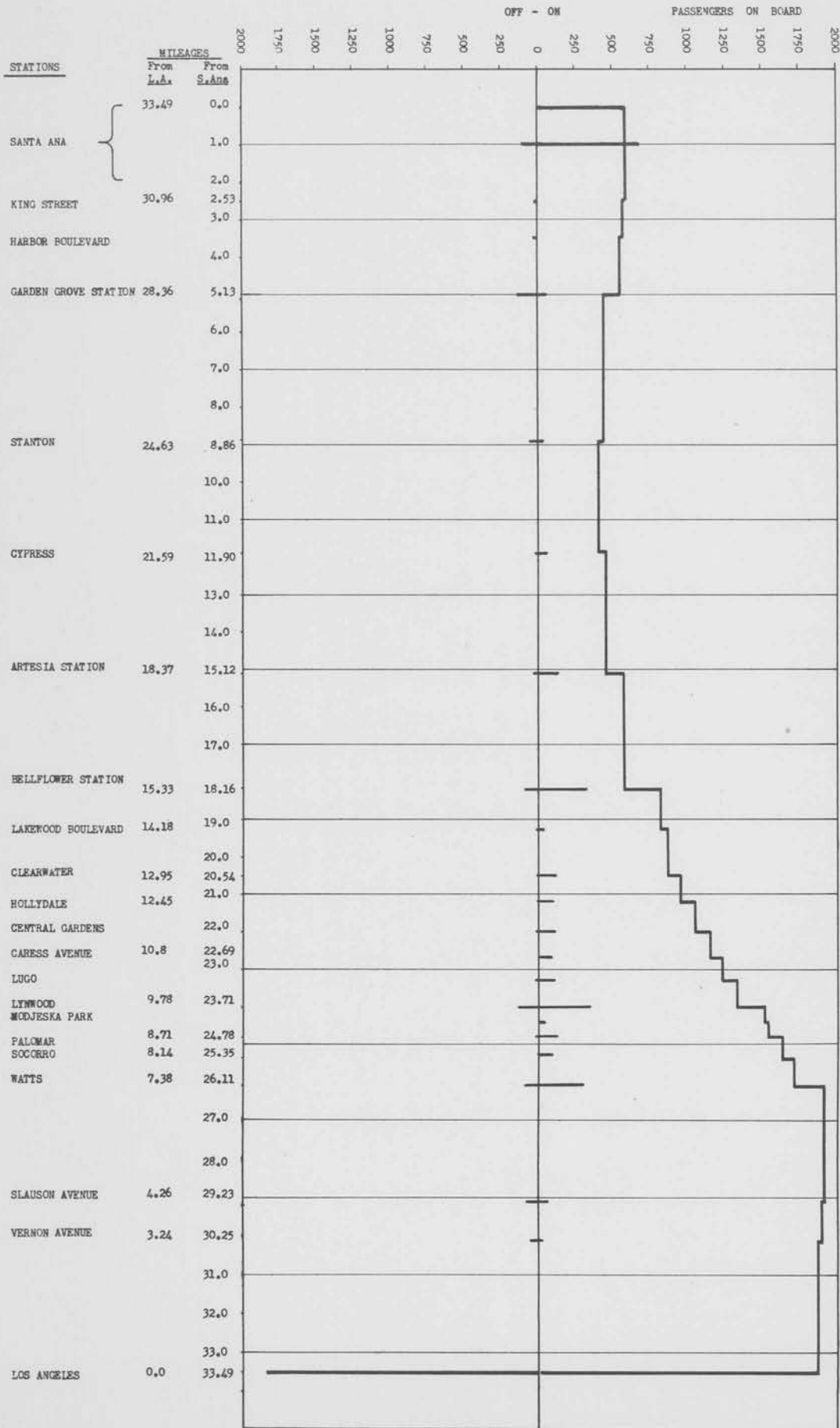


PACIFIC ELECTRIC RAILWAY COMPANY  
 LOS ANGELES-SANTA ANA LINE

PASSENGERS, SEATS, AND UNITS OF EQUIPMENT  
 ARRIVING AT WATTS INBOUND AND LEAVING WATTS, OUTBOUND  
 BY HALF-HOUR PERIODS ON WEDNESDAY, OCTOBER 20, 1948

CHART NO. III





PACIFIC ELECTRIC RAILWAY COMPANY  
 LOS ANGELES -- SANTA ANA LINE  
 PASSENGERS ON, OFF, AND ON BOARD CARS (ALL INBOUND TRIPS)  
 MONDAY, AUGUST 9, 1948  
 CHART NO. IV

SANTA ANA RAIL LINE

PRESENT OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

*See A attached*

	Amount	Cents Per C.M.
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other oper.	\$ 88,858	13.21
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	24,608	3.66
<u>Maintenance of Equipment</u>		
Class % Car-Miles		
300 61 410,126		
400 8 53,787		
1200 31 208,425		
Total: 100 672,338 @ 8.00% per C.M.	53,787	8.00
<u>Depreciation - Equipment (Incl. rent of leased units)</u>		
Based on class rate per C.M.		
Class Car-Miles Cents per C.M.		
300 410,126 .29	\$1,189	
400 53,787 .62	333	
1200 208,425 3.69	7,691	
Total: 672,338	9,213	1.37
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37 & 38 - 1st 7 months 1948	20,103	2.99
<u>Power Used</u>		
Class Car-Miles Weight Ton-Miles @ 188 W.H.T.M.		
300 410,126 56 t 22,967,056		
400 53,787 60 t 3,227,220		
1200 208,425 54 t 11,254,950		
Total: 672,338 37,449,226 7,040,454		
Cost based on \$.006367 per K.W. Hrs.	44,827	6.67
<u>Other Power Costs - Incl. Distribution, Sub-station operation &amp; depreciation @ \$.003455 per K. W. Hr.</u>	24,325	3.62
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time - Based on line average per C. M. - 1st 6 months 1948; plus increase effective October 16, 1948	196,726	29.26
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	49,753	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	45,921	6.83
<u>Traffic</u>		
Based on I/U system rate per c.m. 1st 7 months 1948	4,706	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	33,550	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	52,846	7.86
<b>Operating Expenses</b>	<b>\$ 649,223</b>	<b>96.56</b>
<u>Taxes</u>		
U.I. & C.T.A., based on ratio of Acct. 215(6 & 7) to operating expenses (rail line proportion) 4.13% of above	\$26,813	
Franchise Tax	421	
L.A. City License on Pass. Rev.	244	4.09
<b>Total Operating Expenses &amp; Taxes</b>	<b>\$676,701</b>	<b>100.65</b>
Car-Miles 300-400-1200 Class	672,338	
Number of Units 16 / 2 spares	18	
Average Miles per Unit Total	37,352	

(A)

SANTA ANA LINE

Maintenance of Way and Structures

Costs are accumulated under various Code Numbers designated in accord with "Formula governing separation of Rail Service, Railway Operating Revenues, Expenses, etc."

Where Codes are "common" to "Freight" and "Passenger," allocation was made on Ton-Mile basis.

Following (3) codes are involved in Santa Ana Line, all being common to Freight and Passenger.

- No. 400 - 6th & Main Terminal to 9th & Hooper - common with other lines
- 401 - Long Beach Line - 8th Str. to Watts - " " " "
- 120 - Watts-Santa Ana - exclusive use

Charges were allocated to Santa Ana Line as follows, based on  $\frac{1}{2}$  of Year 1947 and first 6 months of 1948 (not by months)

	Code No.			TOTAL
	400	401	120	
Year 1947	\$5,521	\$10,277	\$59,390	\$75,188
$\frac{1}{2}$ of above	2,760	5,139	29,695	37,594
1st 6 Mos. 1948	2,138	4,940	44,186	51,264
	\$4,898	\$10,079	\$73,881	\$ 88,858

Year 1947	(Passenger	\$59,390	76% ♦
	(Freight	18,720	
	( Total	\$78,110	

First 6 Months 1948	(Passenger	\$44,186	74% ♦
	(Freight	15,237	
	( Total	\$59,423	

SANTA ANA RAIL LINE  
PRESENT OPERATION AND PROPOSED LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other oper.	\$ 88,858	14.12
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	23,031	3.66
<u>Maintenance of Equipment</u>		
<u>Class</u> <u>%</u> <u>Car-Miles</u>		
300      61      383,849		
400      8      50,341		
1200      31      195,071		
Total: 100      629,261 @ 8.00¢ per C.M.	50,341	8.00
<u>Depreciation - Equipment (Incl. rent of leased units)</u>		
Based on class rate per C.M.	Cents	
<u>Class</u> <u>Car-Miles</u> <u>Per C.M.</u>		
300      383,849      .29      \$1,113		
400      50,341      .62      312		
1200      195,071      3.69      7,198		
Total: 629,261	8,623	1.37
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 - 1st 7 months of 1948	18,815	2.99
<u>Power Used</u>		
<u>Class</u> <u>Car-Miles</u> <u>Weight</u> <u>Ton-Miles @ 188 W.H.T.M.</u> <u>K.W. Hrs.</u>		
300      383,849      56 t      21,495,544		
400      50,341      60 t      3,020,460		
1200      195,071      54 t      10,533,834		
Total: 629,261      35,049,838      6,589,369		
Cost based on \$.006367 per K.W. Hr.	41,954	6.67
<u>Other Power Costs - Incl. Distribution, Sub-station Operation &amp; Depreciation @ \$.003455 per K.W. Hr.</u>	22,766	3.62
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time. Based on line average per C. M. 1st 6 months of 1948; plus increase effective October 16, 1948	184,122	29.26
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	46,565	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months of 1948	42,979	6.85
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	4,405	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	31,400	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	49,460	7.86
<u>Operating Expenses</u>	<u>\$613,319</u>	<u>97.47</u>
<u>Taxes</u>		
U.I. & C.T.A. based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above	\$25,330	
Franchise Tax	421	
L.A. City License on Pass. Rev.	244	
	<u>25,995</u>	<u>4.13</u>
<u>Total Operating Expenses &amp; Taxes</u>	<u>\$639,314</u>	<u>101.60</u>
Car Miles      300-400-1200 Class	629,261	
Number of Units      12 / 2 spares	14	
Average Miles per Unit      Total	44,947	

SANTA ANA RAIL LINE

PROPOSED ONE-MAN RAIL OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS-ONE YEAR -

	<u>Amount</u>	<u>Cents</u> <u>Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of Facilities used in common with other operations	\$ 88,858	11.85
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	27,454	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	27,379	3.65
<u>Depreciation - Equipment</u>		
23 units @ \$40,000 - \$920,000. Investment spread over 20 year life	46,000	6.13
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 1st 7 months 1948	22,428	2.99
<u>Power Used</u>		
	K.W. Hrs.	
<u>Car-Miles</u> <u>Weight</u> <u>Ton-Miles @ 355 W.H.T.M.</u>		
750,100      21 t      15,752,100	5,513,235	
	5,513,235 @ \$.006367	35,103
<u>Other Power Costs- Incl. Distribution, Sub-station, Operation &amp; Depreciation @ \$.003455 per K.W. Hr.</u>	19,048	2.54
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time; plus increase effective October 16, 1948	108,986	14.53
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	55,507	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C. M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	51,232	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	5,251	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	37,430	4.99
<u>Other General Costs</u>		
Based on I/U system cost rate per C.M. 1st 7 mos. '48	58,958	7.86
<u>Operating Expenses</u>	\$583,634	77.81
<u>Taxes</u>		
U.I. & C.T.A. based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above	\$24,104	
Franchise Tax	421	
L.A. City License on Pass. Rev.	244	
	24,769	3.30
<u>Total Operating Expenses &amp; Taxes</u>	\$608,403	81.11
Car Miles	750,100	
P.C.C.		
Number of Units	21 / 2 spares	23
Average Miles per Unit	Total	32,613

SANTA ANA RAIL LINE

PROPOSED ONE-MAN RAIL OPERATION AND PROPOSED LOAD FACTOR  
FULL COST BASIS- ONE YEAR -

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other operations	\$ 88,858	12.58
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	25,848	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	25,777	3.65
<u>Depreciation - Equipment</u>		
18 units @ \$40,000 \$720,000. Investment spread over 20 year life	36,000	5.10
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 - 1st 7 months 1948	21,116	2.99
<u>Power Used</u>		
	K.W. Hrs.	
<u>Car-Miles</u> <u>Weight</u> <u>Ton-Miles @ 350 W.H.T.M.</u>		
706,226      21 t      14,830,746	5,190,761 @ \$.006367	33,050
Other Power Costs - Incl. Distribution, Sub-station operation & depreciation @ \$.003455 per K.W. Hr.	17,934	2.54
<u>Trainmen's Wages</u>		
Incl vacation & proportion of misc. time. Based on line average per C.M.; plus increase effective Oct. 16, 1948. Same rate per C.M. as present operat.	102,615	14.53
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	52,261	7.40
<u>Other Transportation Cost</u>		
Based on I/U system rate per C.M. for Accts. 63068-69-73-78 1st 7 months 1948	48,235	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	4,944	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	35,241	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	55,509	7.86
<u>Operating Expenses</u>	<u>\$547,388</u>	<u>77.51</u>
<u>Taxes</u>		
U.I. & C.T.A., based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion) 4.13% of above	\$22,607	
Franchise Tax	421	
L.A. City License on Pass. Rev.	244	
	<u>23,272</u>	<u>3.29</u>
<u>Total Operating Expenses &amp; Taxes</u>	<u>\$570,660</u>	<u>80.80</u>
<u>Car Miles</u>	706,226	
<u>Number of Units</u> 16 / 2 spares	18	
<u>Average Miles per Unit</u> Total	39,235	



LOS ANGELES-BELLFLOWER RAIL LINE

PROPOSED ONE-MAN OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

PLAN "A"  
HOURLY  
BASE  
SERVICE  
Cents  
Per C.M.

	<u>Amount</u>	<u>Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other lines	\$ 37,437	10.31
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	13,294	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	13,258	3.65
<u>Depreciation - Equipment</u>		
15 units @ \$40,000 - \$600,000. Investment spread over 20 year life	30,000	8.26
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37- 38 1st 7 months of 1948	10,861	2.99
<u>Power Used</u>		
	K.W. Hrs.	
<u>Car Miles</u> <u>Weight</u> <u>Ton-Miles</u> <u>350 W.H.T.M.</u>		
363,229      21 t      7,627,809      2,669,733 @ \$.006367	16,998	4.68
<u>Other Power Costs - Incl. Distribution, Sub-station operation and depreciation @ \$.003455 per K.W. Hr.</u>	9,224	2.54
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time; plus increase effective Oct. 16, 1948	68,264	18.79
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	26,879	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69- 72-73-78 1st 7 months 1948	24,809	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	2,543	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	18,125	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	28,550	7.86
	<u>Operating Expenses</u>	<u>\$300,242</u>
<u>Taxes:</u>		
U.I. & C.T.A., based on ratio of Accts. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above	\$12,400	
L.A. City License on Pass. Rev.	266	
	<u>12,666</u>	<u>3.49</u>
	<u>Total Operating Expenses &amp; Taxes</u>	<u>\$312,908</u>
		<u>86.15</u>
 <u>Car Miles</u>	<u>P.C.C.</u>	363,229
 <u>Number of Units</u> 13 / 2 spares		15
 <u>Average Miles per Unit</u>	<u>Total</u>	24,215

LOS ANGELES-BELLFLOWER RAIL LINE

PLAN "A"  
HOURLY BASE  
SERVICE

PROPOSED ONE-MAN OPERATION AND PROPOSED LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other operations	\$ 37,437	11.75
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	11,659	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	11,627	3.65
<u>Depreciation - Equipment</u>		
11 units @ \$40,000 - \$440,000. Investment spread over 20 year life	22,000	6.91
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 1st 7 months of 1948	9,525	2.99
<u>Power Used</u>		
Car-Miles      Weight      Ton-Miles@ 350 W.H.T.M.      K.W. Hrs.		
318,558      21 t      6,689,718      2,341,401 @ \$.006367	14,908	4.68
<u>Other Power Costs - Incl. Distribution, Sub-station operation &amp; Depreciation @ \$.003455 per K.W.Hr.</u>		
	8,090	2.54
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time; plus increase effective Oct. 16, 1948	59,857	18.79
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	23,573	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	21,758	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	2,230	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	15,896	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	25,039	7.86
<u>Operating Expenses</u>	\$263,599	82.75
<u>Taxes</u>		
U.I. & C.T.A. , based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above	\$10,887	
L.A. City License on Pass. Rev.	266	11,153
		3.50
<u>Total Operating Expenses &amp; Taxes</u>	\$274,752	86.25
Car Miles      P.C.C.	318,558	
Number of Units      9 / 2 spares		
Average Miles per Unit      Total	28,960	

LOS ANGELES-BELFLOWER RAIL LINE

PLAN "B"  
30-MINUTE  
BASE SERVICE

PROPOSED ONE-MAN OPERATION AND PROPOSED LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other operations	\$ 37,437	10.11
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	13,554	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	13,517	3.65
<u>Depreciation - Equipment</u>		
11 units @ \$40,000 \$440,000. Investment spread over 20 year life	22,000	5.94
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 1st 7 months 1948	11,073	2.99
<u>Power Used</u>		
Car-Miles Weight Ton-Miles @ 350 W.H.T.M. K.W. Hrs.		
370,328 21 t 7,776,888 2,721,911 @ \$.006367	17,330	4.68
<u>Other Power Costs - Incl. Distribution, Sub-station operation &amp; depreciation @ \$.003455 per K.W. Hr.</u>	9,404	2.54
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time; plus increase effective Oct. 16, 1948	61,623	16.64
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	27,404	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	25,293	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	2,592	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	18,479	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	29,108	7.86
<u>Operating Expenses</u>	\$288,814	77.99
<u>Taxes</u>		
U.I. & C.T.A., based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above \$11,928		
L.A. City License on Pass. Rev. 266	12,194	3.29
<u>Total Operating Expenses &amp; Taxes</u>	\$301,008	81.28
 Car Miles P.C.C.	 370,328	
Number of Units 9 / 2 spares	11	
Average Miles per Unit Total	33,666	

LOS ANGELES-BALLFLOWER RAIL LINE

PLAN "B"  
30-MINUTE  
BASE SERVICE

PROPOSED ONE-MAN OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS -ONE YEAR-

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Proportion of facilities used in common with other operations	\$ 37,437	9.02
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	15,189	3.66
<u>Maintenance of Equipment</u>		
Based on class rate per C.M. 1st 8 months 1948	15,147	3.65
<u>Depreciation - Equipment</u>		
15 units @ \$40,000 \$600,000. Investment spread over 20 year life	30,000	7.23
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 1st 7 months 1948	12,408	2.99
<u>Power Used</u>		
	K.W. Hrs.	
<u>Car Miles</u> <u>Weight</u> <u>Ton-Miles @ 350 W.H.T.M.</u>		
414,999      21 t      8,714,979	3,050,243 @ \$.006367	19,421
Other Power Costs - Incl. Distribution, Sub-station operation & depreciation @ \$.00 3455 per K.W. Hr.	10,539	2.54
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time; plus increase effective Oct. 16, 1948	69,051	16.64
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	30,710	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	28,344	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months '48	2,905	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	20,708	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	32,619	7.86
<b>Operating Expenses</b>	<b>\$324,478</b>	<b>78.19</b>
<u>Taxes</u>		
U.I. & C.T.A., based on ratio of Acct. 215 (6 & 7) to operating expenses (rail line proportion)		
4.13% of above	\$13,401	
L.A. City License on Pass. Rev.	266	
	<u>13,667</u>	<u>3.29</u>
<b>Total Operating Expenses &amp; Taxes</b>	<b>\$338,145</b>	<b>81.48</b>
 Car Miles	 P.C.C.	 414,999
Number of Units	13 / 2 spares	15
Average Miles per Unit	Total	27,667

SANTA ANA LINE

PROPOSED MOTOR COACH OPERATIONS

PRESENT LOAD FACTOR  
FULL COST BASIS -ONE YEAR -

	<u>Amount</u>	<u>Cents Per Mile</u>
<u>Maintenance of Way &amp; Structures</u>	\$ 192	.25
<u>Depreciation of Way &amp; Structures</u>	92	.12
<u>Repairs to Coaches</u> Avg. per mile for approx. 7 years	3,449	4.50
<u>Tires &amp; Tubes</u>	943	1.23
<u>Depreciation - Coaches</u> 3 units @ \$18,000 \$54,000. Investment spread over 7 year life	7,714	10.06
<u>Other Equipment Costs</u>	383	.50
<u>Operators' Wages</u> Includes vacation & misc. time	15,660	20.43
<u>Fuel &amp; Oil</u> Based on performance and cost of fuel	4,216	5.50
<u>Inspecting, Cleaning &amp; Lubricating Equipment</u> Based on system cost per mile	2,560	3.34
<u>Other Transportation Costs</u>	2,300	3.00
<u>Traffic</u>	253	.33
<u>Injuries &amp; Damages</u>	767	1.00
<u>Other General Costs</u>	1,533	2.00
<b>Operating Expenses</b>	<b>\$40,062</b>	<b>52.26</b>
 <u>Taxes</u>		
U.I. & C.T.A., based on ratio of Acct. 215 (6 & 7) to operating expenses (motor coach proportion) 3.81% of above	\$ 1,526	
License, Weight Fee, Registration, etc 3 units @ \$388	1,164	
L.A. City License on Pass. Rev.	126	
State 3% on Gross Receipts	<u>1,347</u>	<u>5.43</u>
<b>Total Operating Expenses &amp; Taxes</b>	<b>\$44,225</b>	<b>57.69</b>
 Motor Coach Miles	 76,650	
Number of Units	3	
Average Miles per Unit	25,550	

LONG BEACH RAIL LINE  
PRESENT OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS - ONE YEAR-

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Based on 1st 8 months of 1948	\$ 107,721	7.56
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	52,155	3.66
<u>Maintenance of Equipment</u>		
Based on estimated cost per C.M.	114,000	8.00
<u>Depreciation - Equipment (Incl. rent of leased units)</u>		
Based on class rate per C.M.		
<u>Class</u> <u>%</u> <u>Car Miles</u> <u>Per C.M.</u>		
300    25    356,250    .29	\$1,033	
400    70    997,500    .62	6,185	
1200    5    71,250    3.69	2,629	
Total:    1,425,000	9,847	.69
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38 - 1st 7 months of 1948	42,608	2.99
<u>Power Used</u>		
<u>Class</u> <u>Car Miles</u> <u>Weight</u> <u>Ton-Miles</u> <u>K.W. Hrs.</u> @ 188 W.H.T.M.		
300    356,250    56 t    19,950,000		
400    997,500    60 t    59,850,000		
1200    71,250    54 t    3,847,500		
Total:    1,425,000    83,647,500    15,725,730		
Cost based on \$.006367 per K.W. Hr.	100,126	7.03
<u>Other Power Costs - Incl. Distribution, Sub-station Operation &amp; Depreciation @ \$.003455 per K.W. Hr.</u>	54,332	3.81
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time - Based on line average per C.M. 1st 8 months 1948 including increase effective Oct. 16, 1948	304,380	21.36
<u>Inspecting, Cleaning &amp; Lubr. Cars</u>		
Based on system rate per C.M.	105,450	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months of 1948	97,328	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	9,975	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	71,108	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	112,005	7.86
<u>Operating Expenses</u>	<u>\$1,181,035</u>	<u>82.88</u>
<u>Taxes</u>		
Based on average per C.M. 1st 6 months 1948	97,613	6.85
<u>Total Operating Expenses &amp; Taxes</u>	<u>\$1,278,648</u>	<u>89.73</u>
Car Miles    300-400-1200 Class	1,425,000	
Number of Units    27 / 3 spares	30	
Average Miles per Unit    Total	47,500	

SAN PEDRO RAIL LINE  
INCLUDING WILMINGTON-SAN PEDRO S. S. SERVICE  
PRESENT OPERATION AND PRESENT LOAD FACTOR  
FULL COST BASIS - ONE YEAR -

	<u>Amount</u>	<u>Cents Per C.M.</u>
<u>Maintenance of Way &amp; Structures</u>		
Based on 1st 8 months 1948	\$ 74,429	6.63
<u>Depreciation of Way &amp; Structures</u>		
Based on I/U system rate per C.M.	41,101	3.66
<u>Maintenance of Equipment</u>		
Based on estimated cost per C.M.	89,840	8.00
<u>Depreciation - Equipment (Incl. rent of leased units)</u>		
Based on class rate per C.M.		
<u>Class</u> <u>%</u> <u>Car Miles</u> <u>Per C.M.</u>		
300    18    202,140    .29	\$586.00	
400    70    786,100    .62	4,874.00	
1200   12   134,760    3.69	4,973.00	
Total: 1,123,000	10,433	.93
<u>Other Equipment Costs</u>		
Based on I/U system rate per C.M. for Accts. 29-32-36-37-38- 1st 7 months 1948	33,578	2.99
<u>Power Used</u>		
		K.W. Hrs.
<u>Class</u> <u>Car Miles</u> <u>Weight</u> <u>Ton-Miles @ 188 W.H.T.M.</u>		
300    202,140    56 t    11,319,840		
400    786,100    60 t    47,166,000		
1200   134,760    54 t    7,277,040		
Total: 1,123,000	65,762,880	12,363,421 @
Other Power Costs - Incl. Distribution, sub-station operation & Depreciation @ \$.003455 per K.W. Hr.	78,718	7.01
\$ .006367	42,716	3.80
<u>Trainmen's Wages</u>		
Incl. vacation & proportion of misc. time - Based on line average per C.M. 1st 8 months 1948, including increase effective Oct. 16, 1948	288,499	25.69
<u>Inspecting, Cleaning &amp; Lubricating Cars</u>		
Based on system rate per C.M.	83,102	7.40
<u>Other Transportation Costs</u>		
Based on I/U system rate per C.M. for Accts. 63-66-68-69-72-73-78 1st 7 months 1948	76,701	6.83
<u>Traffic</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	7,861	.70
<u>Injuries &amp; Damages</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	56,038	4.99
<u>Other General Costs</u>		
Based on I/U system rate per C.M. 1st 7 months 1948	88,268	7.86
Operating Expenses	\$971,284	86.49
<u>Taxes</u>		
Based on average per C.M. 1st 6 months 1948	76,926	6.85
Total Operating Expenses & Taxes	<u>\$1,048,210</u>	<u>93.34</u>
Car Miles    300-400-1200 class	1,123,000	
Number of Units    23 / 3 spares		26
Average Miles per Unit    Total		43,192

PACIFIC ELECTRIC RAILWAY COMPANY

ANALYSIS OF OPERATIONS

LINE 54 - LONG BEACH-HUNTINGTON PARK MOTOR COACH LINE

ROUTE: Northbound - From Long Beach loading zone on east side of Pacific Av. between Ocean Bl. and 1st St. via Pacific Av., 1st St., American Av., Long Beach Bl., Pacific Bl., Randolph St., Rugby Av., Belgrave Av., and Pacific Bl. to Pacific Bl. and Randolph St., Huntington Park.

Southbound - From Pacific Bl. and Randolph St., Huntington Park, via Pacific Bl., Long Beach Bl., American Ave., Ocean Bl., and Pacific Av., to Long Beach loading zone.

ROUTE LENGTH - Northbound 15.90 miles (incl. 0.30 mile Huntington Park loop).  
Southbound 15.70 miles.

EQUIPMENT ASSIGNED: June 2, 1948

	<u>No. Units</u>	<u>Class Equipment</u>
Base .....	8 )	( 10 - 2220 (White)
Peak .....	17 )	( 7 - 2300 (White)

EQUIPMENT ACTUALLY USED AND MILES OPERATED (June, 1948):

<u>Class</u>	<u>Miles Operated</u>	
2220 White	62,790	99.96%
2300 White	22	.04
	<u>62,812</u>	<u>100.00%</u>

Miles per coach assigned - peak - 3,700.  
 Ratio, peak to base equipment requirements - 2.125

REVENUE AND PASSENGERS:

Passengers Carried During a Typical Week

<u>1948</u>		<u>Passengers</u>	<u>%</u>	
June	13	Sunday	6,792	11.23%
	14	Monday	8,351	13.81
	15	Tuesday	8,665	14.33
	16	Wednesday	8,833	14.61
	17	Thursday	9,205	15.23
	18	Friday	9,602	15.88
	19	Saturday	<u>9,012</u>	<u>14.91</u>
			60,460	100.00%

Total Revenue Passengers Carried:

Transfer .....	538
Fare .....	<u>249,990</u>
Total .....	250,528
Passenger Revenue .....	\$39,683.64
Revenue per Mile .....	63.18 cents
Revenue per Passenger .....	15.84 cents
Passengers per Mile .....	3.98
Revenue per Month per Coach ..	\$ 2,334.00



OPERATING ASSIGNMENTS:

	<u>Northbound</u>		<u>Southbound</u>	
	<u>Scheduled Trips</u>	<u>Scheduled Doubles</u>	<u>Scheduled Trips</u>	<u>Scheduled Doubles</u>
Weekdays .....	82	1	83	0
Saturdays .....	81	0	81	0
Sundays .....	53	3	53	3

Additional doubles added as required.

<u>Scheduled Time</u>	<u>A.M. Peak</u>	<u>Day Base</u>	<u>P.M. Peak</u>	<u>Night Base</u>
Minutes .....	64½	63½	64½	53
Scheduled Speed MPH.	14.6	14.8	14.6	17.7

Average Time to Attain Speeds in Operation:

<u>Speed</u>	<u>Time</u>	<u>Average Acceleration</u>
0 to 20 MPH	9.3 sec.	2.1 MPH/SEC.
0 to 30 MPH	19.4 sec.	1.5 MPH/SEC.

(Coach 2233 - Hydro-Torque Drive)

Actual Operating Time - Friday, July 23, 1948:

Values averaged from trips scheduled to  
Leave L.B. 9:15 A.M; HP 10:29 A.M; L.B. 12:15 P.M; HP 1:29 P.M.

	<u>Number</u>		<u>Time</u>		
	<u>Per Mile</u>	<u>Per Trip</u>	<u>Per Stop</u>	<u>Per Trip</u>	
Operating Time .....				60 Min. 07 Sec.	100%
Loading Stops .....	1.45	22.8	6.1 Sec.*	6 Min. 32 Sec.	10.8%
Unloading Stops .....	1.58	24.7	3.6 Sec.*	3 Min. 50 Sec.	6.4%
Traffic Delays .....	1.61	25.2	16.8 Sec.	7 Min. 05 Sec.	11.8%
Time in Motion .....				42 Min. 40 Sec.	71.0%
Passengers .....	4.09	64			
Total Stops .....	3.24	50.8	20.1 Sec.	17 Min. 27 Sec.	29%

\* - per passenger

ANALYSIS OF MOTOR COACH ASSIGNMENTS IN EFFECT JULY 29, 1948:

Running Time	48,322 Hours	67.69%
Layover	7,622	10.68
Lunch	1,908	2.67
Other Dead Time	9,454	13.24
Deadhead Passengers	2,644	3.71
Work as Directed	476	0.67
Premium	951	1.33
Adjustment	9	.01
<b>Total</b>	<b>71,386 Hours</b>	<b>100.00%</b>

OPERATORS' HOURS AND WAGES:

Regular	5,618 hours	87.3 %
Overtime	818 "	12.7
Total	6,436 "	100.00%

Wages per hour - \$1.4803  
Wages per mile - .1517

OUT-OF-POCKET COSTS, JUNE, 1948:

	<u>Amount</u>	<u>Cents per Mile</u>
Equipment Repairs	\$ 1,156	1.84
Tires and Tubes	766	1.22
Depreciation	2,048	3.26
Inspecting and Servicing	2,098	3.34
Crew Wages	9,527	15.17
Gasoline	3,555	5.66
Lubrication	113	0.18
Taxes	<u>2,199</u>	<u>3.50</u>
<u>Total</u>	<u>\$21,462</u>	<u>34.17</u>
Estimated Full Cost	\$29,767	47.39
Net Income Estimated	9,917	15.79

Exhibit No. 46

Witness Jenkins

Oct. 13, 1948

Before The  
Public Utilities Commission of The State of California  
Applications Nos. 23053 and 27466  
Case No. 4843

SUMMARY OF RECOMMENDED PROCEDURE

AS CONTAINED IN

PRELIMINARY REPORT ON ENGINEERING AND ECONOMIC ANALYSIS

of

PACIFIC ELECTRIC RAILWAY COMPANY

Submitted to Mr. O. A. Smith, President,  
by  
Arthur C. Jenkins, Consulting Engineer  
on  
July 15, 1948

Pacific Electric Railway Company  
Los Angeles, California  
October 13, 1948

SUMMARY RPT

PRELIMINARY REPORT ON ENGINEERING AND ECONOMIC ANALYSIS

CHAPTER "E"  
SUMMARY OF RECOMMENDED PROCEDURE

I. PREFACE

It has been the objective of the foregoing treatise to resolve the complex financial problem of Pacific Electric Railway Company into its several constituent elements and to lay the foundation for a logical inspection of the several contributing factors through a carefully executed series of analyses to reveal the offending features in order that they may be subjected to remedial treatment that will be productive of the maximum financial potentialities.

This section is devoted to a summarization of the salient features developed in previous sections and presents a concise outline of the course of procedure considered to possess the most productive capabilities in arriving at a determination of the facts upon which final action should depend.

Interjected among the factual data discussed in the foregoing sections are expressions of opinion. To establish the validity of these preliminary conclusions, it is imperative that the company proceed upon a systematic program of studies that will substitute in the place of personal opinion, absolute facts and figures that are beyond the realm of conjecture, prepared in such fashion as to be definitely conclusive. Certain of the theories that have been injected into this preliminary report are based upon actual experience and in principle are in need of no further proof. The extent of the benefits that may be derived from application of those theories, however, must be established so that the extent of their individual contribution to the overall relief sought can be known and action with respect to other features of the program may be guided accordingly.

It is not expected that this report sets forth all of the many segments of the problem. No doubt there will be numerous possibilities present themselves as the various studies suggested herein proceed toward completion. During the period of preliminary analysis a number of matters have been developed and discussed and gotten under way in advance of completion of this report or the final report. Some of the studies recommended hereunder have already been commenced and are well under way with favorable results already in evidence. They are included, however, so as to render the list complete.

In laying out the program as to what appears to be the most logical arrangement of the various individual studies, it is recognized that there is a close relationship between the various individual subjects and that a certain decision on one may influence the decisions on others. Conditions may develop as the survey proceeds that will necessitate rearrangement of the items included and may alter the nature of the individual studies. The whole program must possess a degree of flexibility that will accommodate any such requirements.

As pointed out previously, freight operations are self-supporting under current conditions. Although there may be some possible sources of greater financial benefit through analysis of that branch of service, this preliminary report deals almost in its entirety with the more serious problem of passenger operations, which is the primary source of loss.

A starting point must be established from which to project the analysis forward, with a definite outline of the various components arranged in the chronological order of their importance to the company, giving full consideration to both its financial status, proper correlation between the various physical properties involved, and the importance of maintaining proper public relations.

The principal controlling considerations confronting the company in contemplating this comprehensive survey are:

1. Increasing revenue through an increase in passenger fares.
2. Increasing revenue by adoption of an incentive program and advertising.
3. Reduction in cost of operations through adjustments to physical properties, service, personnel organization, and procedures.
4. Maintaining a proper relationship between earnings and capital investment.
5. Rearrangement of corporate structure to effect economies and permit greater freedom of action.

Although it would appear advisable under current conditions to defer the filing of an application for increased passenger fares until after the results of all other possibilities are known, sight must not be lost of the fact that there may be an unavoidable increase in wage rates thrown upon the company in the near future and the only means of quick financial relief may be through increased rates. With this in mind as a probable occurrence, one of the projects listed below for number one priority is the preparation of the necessary features of a rate application.

A balance must be established in arranging the order of priority of the various studies listed, so as to give consideration to the immediate financial needs of the company as compared with those that can appropriately be placed in the long-range category.

## II. GENERAL ELEMENTS REQUIRING ANALYSIS

In summary form the general elements embraced by the survey, that must be accorded consideration in formulating the detailed course of procedure, are listed below in the sequence of their importance. Due to the urgent need for immediate relief, Item 7 should be moved up into the position of Item 5 despite the possible criticism that may emanate from the Public Utilities Commission.

1. Determine the approximate rate base upon which a reasonable return should properly be expected.
2. Establish the extent by which present earnings fall short of meeting that reasonable margin of profit.
3. Break down the various phases of the company's operations to determine the extent to which each measures up to a reasonable return.
4. Arrange the various phases in the order of their relative degree of adversity.
5. With respect to each phase, conduct a careful investigation to determine the extent to which economies can be effected under present mode of operation through modification of operations, service, facilities, organization, and procedure.
6. If the aggregate loss is not eliminated, estimate the probable amount of financial improvement possible in each phase of operations through increased rates.
7. For those phases of operation determined to be impossible of conversion to a profitable earning status under present operating conditions, consider the effects of substitution of motor coaches for rail cars, consolidation of motor coaches and rail lines, curtailment or abandonment of individual routes in whole or in part, and complete disposal of passenger operations.

### III. PROJECTS RECOMMENDED FOR STUDY AND REPORT

The various elements of the company's operations that are considered to require detailed study have been arranged below under several general classifications. Under each general classification the items have been segregated and placed in separate study groups, each identified by a project number. Those phases included under each project number should be the subject of joint study when consisting of more than one, and a separate report should be prepared covering each project.

Each study should develop all of the necessary factual data related to the subject in sufficient detail to establish the conclusions beyond equivocation, but not to the extent of including data that is superfluous to the desired result. Such essential supporting data should be systematically compiled in the report with logical discussion leading up to the final conclusions so that if required it can be submitted intact as an exhibit to the Board of Directors or the Public Utilities Commission in complete and convincing form.

For ease of identification, project numbers have been assigned to the various phases of the study as listed below. The general prefix is PR3 which will apply to all projects and reports. For further identification, this prefix is followed by the letter identifying the group and then by the numeral representing the sequence numerically under the group; i.e., PR3-A1. The individual report covering the project will carry the same designation except that a decimal will replace the dash; i.e., PR3.A1. This preliminary report will be designated as No. PR 3.1.

#### IV. PRIORITY

Each project number listed below is preceded by a number in parenthesis. These numbers indicate the order of priority of each project based upon the assumption that they would be processed consecutively. From a practical point of view it will be desirable to proceed with more than one project at a time. The priority numbers will therefore only serve as a general guide.

The various projects fall into two general classes: (1) those requiring Public Utilities Commission application and authority for final action; and (2) those that are within company control. Arrangement of studies should give consideration to appropriate grouping for most expeditious handling in these two categories.

##### (A) PUBLIC UTILITIES COMMISSION RECOMMENDATIONS AND ORDERS

- (1) PR3-A1. Analyse and Take Appropriate Action on PUC Recommendations and Orders
  1. Determine all pertinent facts and figures.
  2. Submit a statement of expected chronological compliance with provisions of Commission Order and Recommendations.
- (2) PR3-A2. File Application for Extension of Time and Modification of Order
- (3) PR3-A3. Prepare for Formal Hearing on Application
  1. Exhibits and Evidence.
  2. Witnesses.

##### (B) OPERATIONS AND SERVICE

- (4) PR3-B1. Service Standards and Load Factor
  1. Proper standing distance in time and miles.
  2. Load factor as it affects schedule speed, earnings, equipment requirements, and cost of operations.
  3. Relationship between load factor and profit.
  4. Reaction of passengers to restrictive load factor.
  5. Load factor involved not only passengers aboard vehicles, but also those awaiting to board.
  6. Load factor applied to Pacific Electric compared with those on other properties.
  7. Relationship between standard of service and fare charged.
- (4) PR3-B2. Service Standards and Traffic Volume
  1. Determination of maximum load points and traffic volume.
  2. Express service and equipment turnbacks according to traffic pattern.
  3. Establish staggered stops for local and express motor coach service.
  4. Actual delay of passenger rail service by freight operation.
  5. Theoretical cost due to service delays.
  6. Consider alteration of procedure to allow for use of rear exit doors of motor coaches.

(C) ORGANIZATION, PERSONNEL AND PROCEDURE

(5) PR3-C1. Revision of Schedule Bureau

1. Present organization and personnel.
2. Present practices and procedures.
3. Field traffic checking and information channels.
4. Position on general organization chart.
5. Need for modernization and more expeditious action.
6. Elimination of unnecessary details of time-table construction and other clerical work.
7. Need for direction from higher authority and corresponding support.
8. Desirability of raising to higher level of authority.
9. Adoption of up-to-date and modern techniques in service control, based on current traffic pattern and requirements.

(5) PR3-C2. Field Supervision and Dispatching

(7) PR3-C3. Division Superintendence and Procedure

(17) PR3-C4. Shop Personnel and Procedure

(17) PR3-C5. Torrance Personnel and Procedure

(17) PR3-C6. Operational Personnel and Procedure

(17) PR3-C7. Executive Personnel and Procedure

1. Establish separate freight and passenger departments.
2. Place separate general superintendents in charge of each.
3. Create position of Vice President in Charge of Operations.

(17) PR3-C8. Personnel and Procedure of Other Departments

(17) PR3-C9. Labor Time and Cost Studies

(19) PR3-C10. Accounting Forms, Procedure, Office Efficiency, and Cost Accounting

1. Eliminate unnecessary statements.
2. Adopt fullest use of modern methods of office equipment, procedure, and efficiency.
3. Depart to fullest extent possible from cumbersome railroad accounting practices, procedures and restrictions.
4. Install latest developments in accounting forms and records at division headquarters and other field activities.
5. Revise passenger traffic analysis form to provide greater accuracy and more refinement in developing statistics by lines, particularly at motor coach divisions.

(18) PR3-C11. Public Relations

(20) PR3-C12. Economies through Flat Rate Personnel Reduction Applied to All Departments



(D) MODIFICATION OF PHYSICAL FACILITIES AND OPERATIONS

(9) PR3-D1. Substitution of Motor Coaches for Rail Cars

1. Local lines.
2. Interurban lines.
3. Expenses and revenue by individual lines under present conditions.
4. Expenses and revenue under present operations with revised schedules and service.
5. Expenses and revenue under present operations with increased maximum allowable load factor.
6. Expenses and revenue under possible rearrangement of existing rail operations.
7. Expenses and revenue under motor coach substitution at maximum allowable load factor and increased load factor.
8. Order of Priority:
  - (a) Venice Short Line.
  - (b) Hollywood Boulevard Vineyard.
  - (c) Santa Monica Boulevard.
  - (d) Sierra Madre.
  - (e) Monrovia Glendora.
  - (f) Watts Sierra Vista.
  - (g) Pasadena.
  - (h) San Fernando Valley.
  - (i) Glendale Burbank.
9. Valuation and retirement of physical facilities.
10. Cost of substitution equipment.
11. Estimate of rehabilitation to be avoided.
12. Release of useable rail equipment for other lines.
13. Downtown off-street terminal versus through operation.
14. Routes and service.

(9) PR3-D2. One-Man Car Operation

1. Application to:
  - (a) Venice Short Line.
  - (b) Hollywood Boulevard Vineyard.
  - (c) Santa Monica Boulevard.
  - (d) Glendale Burbank.
  - (e) San Fernando Valley.
2. Labor Union involvements.
3. Effect upon expenses and revenue.
4. Availability of presently owned equipment and cost of conversion of cars and track circuits.
5. Comparative financial aspects, using new PCC type cars.
6. Comparison with financial aspects under motor coach operation.
7. Cost of necessary track rehabilitation under one-man rail operation.
8. Effect upon public relations.

(12) PR3-D3. Rail Trunk and Motor Coach Feeder Lines

1. Application to:
  - (a) El Monte Baldwin Park Line with connection at El Monte or Baldwin Park.
  - (b) Monrovia Glendora line with connection at Oneonta Park or Sierra Vista.
  - (c) San Fernando Valley line with connection at North Hollywood or Universal City.

2. Reduction in:
  - (a) Miles of track.
  - (b) Rail car miles.
  - (c) Motor Coach miles.
  - (d) Investment in fixed facilities.
  - (f) Number of rail cars required.
  - (g) Maintenance of track, roadway, and overhead.
  - (h) Rail and motor coach operating expense.
  - (i) Running time.
3. Effect upon traffic and revenue.
4. Amount of track and roadway rehabilitation eliminated.
5. Investment in motor coach equipment.
6. Release of rail equipment.
7. Effect upon public relations.

(9) PR3-D4. Off-Street Terminals

1. Cost of physical facilities and expense of maintaining and operating.
2. Difficulty of ingress and egress.
3. Maximum capacity of existing facilities.
4. Possibility of expanding capacity of existing facilities.
5. Available location, cost, and effect upon service of obtaining additional off-street terminals.
6. Congestion of access streets.
7. Comparative advantages and disadvantages of through routes, eliminating off-street terminals.

(22) PR3-D5. Abandonment of Non-Profitable Lines

1. Identification of lines or portions of lines with insufficient traffic to justify continued operation.
2. Alternate means of transportation available to traffic on lines considered for abandonment.
3. Reduction in book value of fixed facilities.
4. Estimate of rehabilitation cost that would be avoided.
5. Equipment that would be released by abandonment.
6. Effect upon expenses, revenue, traffic, freight operations, and public relations.
7. Eliminate passenger service on Santa Monica Air Line.
8. Eliminate passenger service on Newport Beach Line.

(12) PR3-D6. Rearrangement of Motor Coach Routes

1. Analyze all motor coach lines to determine extent of duplication and improper routing as weighed against traffic requirements.
2. Effect upon expenses, revenue, traffic, and public relations.
3. Equipment released.

(24) PR3-D7. Consolidation and Relocation of Shops

1. Analyze functions of equipment repair, maintenance, servicing and overhaul at Torrance, Macy Street, Hollywood, Santa Monica, Watts, and other locations to determine the extent, volume and nature of work done and possibility of combining activities for economy and relocating facilities near to strategic centers of operation.
2. Study redesign of motor coach facilities at Macy Street, Hollywood, and Santa Monica, with possible consideration of relocation.

(16) PR3-D8. Maintenance and Painting of Equipment and Facilities

( 8) PR3-D9. Operating Division Headquarters

(14) PR3-D10. Operating Procedure at Los Angeles Terminals

1. Study vehicle movement, laning, and positioning for possible improvement in flow and convenience of passengers.
2. Establishment of lanes and identified stalls with overhead numbers visible to passengers, with mechanical or electrical direction devices at Main Street Terminal.
3. Analyze dispatching procedure for better coordination and systematic handling of equipment and informing of passengers.
4. Devise a system of route designation and run identification.

(15) PR3-D11. Rail Equipment Assignments

1. Present assignment of cars by lines.
2. Elimination of wooden-body cars.
3. Cost of new equipment to replace older rail cars, including wooden-body cars.
4. Definite program of equipment assignment, abandonment, or replacement, based upon results of other studies involving motor coach substitution, one-man car operation, and abandonment of service.

(E) PASSENGER FARES, RATES, TARIFFS AND PROCEDURE

(11) PR3-E1. Application for Increase in Fares

1. Theory of application - zone adjustment or uniform percentage.
2. Study of various methods of fare collection under zone system.
3. Estimate of probable revenue increase.
4. Effect of latest increases upon traffic and revenue.
5. Rate base and rate of return.
6. Exhibits and testimony.
7. Estimate of increase in cost due to increases in wages and materials.
8. Extent of free transportation.
9. Summarization of all other economy and revenue producing measures explored.

(11) PR3-E2. Adjustment of Rate Structure

1. General simplification.
2. Elimination of commutation, excursion, and round trip fares.
3. Estimate of effect upon revenue, expenses, and traffic.
4. Advantages and disadvantages, and effect upon public relations.

(11) PR3-E3. Elimination of Inter-Company Transfers

1. Glendale and Pasadena.
2. Estimate of effect upon revenue, expenses, and public relations.
3. Advantages and disadvantages.

- (11) PR3-E4. Elimination of Inter-Carrier Affiliations
1. Joint tariffs, ticket sales, and baggage handling.
  2. Estimate of effect upon revenue, expenses, and public relations.
  3. Release from Interstate Commerce regulations.
- (11) PR3-E5. Elimination of Commission Agents and Station Agencies
1. Relationship to freight operations.
  2. Estimate of effect upon revenue, expenses, and public relations.
  3. Abandonment of physical facilities.
- (11) PR3-E6. Fare Collection and Ticket Sales
1. Elimination of ticket sales at Main Street and Subway terminals.
  2. Direct collection of fares at terminals through fare boxes in buses.
  3. Collection at concentration points through portable fare boxes.
  4. Analysis of general fare collection procedure en route, including zone fares.
- (11) PR3-E7. Simplification of Tariffs
1. Elimination of joint tariffs.
  2. Revision of company tariffs to eliminate complications and duplication.

(F) REVENUE, COST AND SERVICE ANALYSES

- (26) PR3-F1. Analysis of Prorate Formula.
- (4) PR3-F2. Comparative Cost Analyses
1. Commutation versus straight cash fares at 100 per cent load factor and higher.
  2. Complete cost and revenue study on typical rail and motor coach lines for comparison with system averages and use in rate case.
  3. Cost of operating interurban service under conditions of:
    - (a) Multiple-unit trains.
    - (b) Single-unit trains.
    - (c) One-man cars.
    - (d) Motor coaches.
- (6) PR3-F3. Economies through Service Adjustments
1. Analyze each individual rail and motor coach line to eliminate unnecessary service and effect economies.
  2. Examine existing schedules and traffic on each line and prepare new schedules where required.
  3. Use procedure applied to Baldwin Park Line.
- (6) PR3-F4. Consolidation of Local and Interurban Rail Service at Night

(G) CORPORATE STRUCTURE AND PROPERTY DISPOSAL

(21) PR3-G1. Formation of Separate Corporations

1. Legal Aspects.
2. Division of properties, service and organization.
3. Restrictions of bond indentures and other financial elements.
4. Complete separation from Southern Pacific Company.
5. Involvement of labor unions and Federal employment acts.
6. Estimate of time required to complete separation.
7. Estimate of overall financial gain.
8. Summarization of advantages and disadvantages.

(10) PR3-G2. Sale or Division of Los Angeles Motor Coach Company

1. Extent of physical facilities involved.
2. Legal aspects.
3. Desires of Los Angeles Transit Lines.
4. Valuation and appraisal of Pacific Electric Railway portion.
5. Effect upon public relations.
6. Financial analysis of earnings, rate of return, and value based on capitalization of earnings and other considerations.
7. Advantages and disadvantages.

(22) PR3-G3. Sale of Pacific Electric Railway's Los Angeles Local Lines

1. Extent of physical facilities involved.
2. Condition of facilities and cost of rehabilitation.
3. Legal aspects.
4. Desires of Los Angeles Transit Lines.
5. Effect upon public relations.
6. Financial analysis of earnings, rate of return, and value based on capitalization of present and possible future earnings and other considerations.
7. Advantages and disadvantages.

(25) PR3-G4. Disposal of All Passenger Operations

1. Extent of physical facilities involved.
2. Legal aspects.
3. Restrictions and limitations of bond indentures and other corporate conditions.
4. Condition of facilities and cost of rehabilitation.
5. Effect on public relations.
6. Financial analysis of earnings, rate of return, and value based on capitalization of present and possible future earnings and other considerations.
7. Advantages and disadvantages.

Exhibit No.

47

Witness

Jenkins  
Oct. 13, 1948

Before The  
Public Utilities Commission of The State of California  
Applications Nos. 23053 and 27466  
Case No. 4843

CONDENSED EXCERPTS FROM  
PRELIMINARY REPORT ON ENGINEERING AND ECONOMIC ANALYSIS  
OF  
PACIFIC ELECTRIC RAILWAY COMPANY

Submitted to Mr. O. A. Smith, President  
by  
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Pacific Electric Railway Company  
Los Angeles, California  
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CONDENSED EXCERPTS

From

PRELIMINARY REPORT

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PRELIMINARY REPORT

ON

ENGINEERING AND ECONOMIC ANALYSIS

A. BASIC CONSIDERATIONS

PRECEPT

In view of the need for immediate final decision by the company on certain elements of the overall problem that have been in process of negotiation with the Public Utilities Commission of the State of California and the desirability of coordinating this special survey with other phases of the company's operations that have been actively under study by the company, it was requested by Mr. O. A. Smith, President of Pacific Electric Railway Company, at a conference in his office on May 21, 1948, that a preliminary report be submitted setting forth the findings thus far developed and outlining recommendations as to a suggested plan of procedure to be followed in carrying the final analysis through to completion.

The study thus far has encompassed:

- (a) A review of the company's financial statements over the period of years from 1939 to date.
- (b) An analysis of the proceedings before the Public Utilities Commission of the State of California, commencing with Application No. 21656 and including all subsequent matters involving applications, decisions, exhibits, and reports in connection with both formal and informal matters.
- (c) Preliminary field inspection of shops, division headquarters, track and other facilities.
- (d) Exploratory conferences with key department heads and executives.
- (e) Conferences with various members of the Public Utilities Commission and its technical staff.
- (f) General review of the passenger fare structure.
- (g) A general review of the methods of operation in passenger service.
- (h) A review of the organizational consist as between passenger and freight operations, and inter-departmental coordination.

In covering these various phases it has been possible to bring out certain basic elements that appear to be contributing to the company's adverse financial status, to isolate the principal sources of loss and to develop a concept of the mode of attack that should be followed in systematically exploring the numerous sources of financial and operational improvements that appear to be worthy of consideration.



The scope of this preliminary report will be confined to a discussion of those elements and its purpose is to provide a presentation of findings with general recommendations as to the course of pursuit considered to be appropriate in proceeding with the final studies looking toward ultimate realization of maximum financial rehabilitation and most efficient utilization of facilities. By reason of the widespread scope of the system and the magnitude of its operations, there are a multitude of ramifications, each presenting many facets that must be individually accorded close scrutiny in the search for an ultimate arrangement that will be productive of the maximum potentialities of the area served and an equitable balance between revenue and cost of service.

It should be clearly understood that this preliminary report is not intended to serve as a representation of final conclusions, but only as a guide in proceeding with the various phases of study considered to be necessary in arriving at the final conclusions and recommendations embracing the overall problem. Certain opinions are expressed herein, and in some cases, with considerable emphasis. Where such is the case, the basis of opinion is on known results derived from actual experience which can be considered as established fact without further proof.

#### PROSPECTS FOR THE FUTURE

Although at this stage of the survey it is not possible to predict the full measure of cost reduction that will ultimately be reached, observations to date indicate that the financial future of the company is by no means hopeless, providing that concerted effort is exerted to break down the barriers to recovery that have been increasing with passage of time, and that a vigorous program is instituted to remove what may appear to be unsurmountable obstacles in the way of adverse public reaction, corporate limitations and legal restrictions. Fullest advantage must be taken of the economies available through organizational revision, conversion of costly rail operations to motor coach service, one-man car operation, and other means. This ray of hope can, of course, be overshadowed by an adverse trend in freight earnings if such should develop and the favorable predictions contained herein as to system financial improvement is premised upon the assumption that freight will continue to be profitable.

One of the highly important elements of the process is the necessity for a return in financial and operational thinking to the fundamental concepts of the basic economic elements constituting the formula upon which all enterprises must be conducted if the interests of the investors are to be fully protected and the financial integrity of the industry insured. In launching an action program sight must not be lost of either the inherent right of private industry to expect a reasonable return upon its invested capital as a reward for the dedication of its facilities and service to the general public, or the industry's obligation to conduct its business on the highest level of efficiency and economy. There is no law which forces, either directly or through interpretation of its intent, the continuation of a prudently managed private corporation that brings in less revenue than the cost required to perform the service offered.

Unfortunately, in the transportation industry during the past few decades there has been a growing tendency to depart from the principle of basic earning rights of private capital and to assume that such companies should be content to earn only sufficient revenue to offset direct costs of conducting the business. Many transportation enterprises have not even been able to maintain a break-even status and consequently have been forced to dissipate their capital by falling back on depreciation allowance for survival. After having been subjected to financial privation for many years there has been a corresponding tendency on behalf of the operators to lose sight of their inherent right to a reasonable return.

As indicated above, private capital under prudent management cannot be expected or required to provide a service in the nature of a public utility for the interest of the general public when the returns from such service are insufficient to support the operation. When the earnings of such an enterprise reach a level where they are less than the cost of providing the service and there is no possibility of betterment through increased fares, and if the public considers that such a service is essential to the welfare of the people of the territory served and cannot be dispensed with, then it is the responsibility of the public to either assume the burden of continuing the operation or to share in the cost of providing it through the furnishing of a subsidy.

#### NATURE OF FINAL SURVEY AND REPORT

To lay the necessary ground work upon which to base a revitalization of the financial and physical structure of the company it is imperative that a program be developed that will disclose not only the nature of those harmful elements that are beyond the direct control of the company, but also, and perhaps of greater importance, those deficiencies that are within the reach of company correction. This means attacking each individual factor that is in any way responsible for creating the deficit. This process must be closely related to the standard of service provided in order that the cumulative effects are prevented from defeating the purpose for which intended, through harmful diversion or reduction in traffic handled.

Similarly, all possibilities of bolstering up the total revenue must be explored, giving full consideration to modern methods of merchandizing and traffic inducement. After these things have been done and the company is convinced that it has exhausted all reasonable potentialities through ordinary means, then the case for drastic action, if indicated to be necessary, must be carefully drawn together and pursued relentlessly. It is intended that the final report in this comprehensive survey will cover all essential features required to build up the case along the lines referred to.

There are two possible courses of action in carrying the result of this survey forward from this point of preliminary summarization. Submission of a final and comprehensive report might be deferred until all phases of the survey have been completed so that the composite picture may be presented at one time. The other, and more logical approach to the problem, in view of the seriousness of the company's present status, is to proceed with a series of interim studies and reports, each one of which will be completed separately covering some one of the many individual phases of the overall problem. After

From the point of view of the stockholders and bondholders, on the face of the combined annual showing, it would appear upon superficial inspection to be to their advantage to abandon completely all phases of the operations excepting the Los Angeles Motor Coach Lines and the Pacific Electric Building. By doing so an operating loss of \$837,000 would have been converted to an operating profit of \$663,000, or a betterment of \$1,500,000.

Further reference to the 1947 annual statement indicates that a profit of \$1,850,000 was realized for the year on freight operations. This, when combined with net from Los Angeles Motor Coach Lines and the Pacific Electric Building, results in a net profit of \$2,500,000. From a broader scope of analysis, upon the face of these statements, the logical course of procedure for the company to follow would appear to be complete abandonment of all passenger operations. By doing so the company would have converted an annual loss of \$837,000 into a profit of \$3,500,000. No such action should be given serious consideration, however, until every possible means of eliminating the losses in passenger service have been fully explored and the cause found to be hopeless.

#### ANALYSIS OF FINANCIAL STATUS

To approach the problem of bringing the company's revenues into a more favorable relationship with costs of doing business, some measurement of proper ratio must be established to indicate the ultimate earnings to which the company is reasonably entitled, and then an effort should be made to attain the closest possible approach to that goal.

In doing this we must start from the consolidated earning statements and then progressively separate out the various phases of operation to isolate those that are contributing most heavily to the company's oppressive financial condition. Each phase so disassociated from the others must be carefully analyzed in all of its aspects and a determination made of the amount of revenue it should produce to satisfactorily place it on a reasonable earning basis. This should entail an estimate of the investment in fixed facilities necessary to perform the services of each branch and a relationship between such estimate and net earnings should be developed, to arrive at a reasonable rate of return.

In establishing an estimate of rate base or valuation, an involved process of computation is not justified where the gap between a full reasonable rate of return and actual return, is so great as on this property. The computation can be rough and any tendency away from actual should be directed toward the conservative side.

These ideal earning figures so developed for each phase of the operation should then be established as the ultimate goal and every effort should be consistently and continuously exerted to reduce the void between actual and that goal. In proceeding toward that end, the total amount of deficiency in each branch should be set up which would indicate the amount of money that would be required to bridge the gap either through increased revenue or decreased operating expenses, or a combination of both.

A rough calculation should then be made of the amount and percentage of increased rates that would be required to offset the deficit and the percentage decrease in expenses that would be required to accomplish the same purpose. Concerted action should then be taken to reduce the magnitude of expenses by a degree equal, if possible, to the extent of the deficit. If after exhausting all possibilities in this field, the deficit still persists, consideration should be given to its further reduction or elimination through increased rates of passenger fare. Increased fares should be given immediate consideration as a means of offsetting increased costs that may develop through further upward trend of wage rates.

Together with the study of economizing on expenses generally, full consideration should be given to rearrangement of service and operations and substitution of buses for rail cars, or in some cases, outright abandonment or disposal of operations and facilities as previously mentioned.

Reduction of operating expenses should involve the judicial curtailment of man hours in all departments, but not to the extent of creating further deficiencies where such already exist in certain quarters. To effect the fullest measure of such economies, a carefully conducted time-cost study should be made on each phase of work in each department. However, the status of the company's financial condition is such as to require immediate action and the protracted delay incident to a complete time-cost study cannot be accepted at this time. Therefore, more or less arbitrary reduction methods must be used as an intermediate step to insure a reasonable margin of safety in the shortest possible interval of time.

In view of the precarious financial situation, a general review must be made of the operations as a whole and immediate steps taken to attack those features that hold greatest promise of quick relief.

The financial statements for the year of 1947 may be used as a guide in analyzing the various elements responsible for the losses incurred. Although the showing may not be wholly indicative of the immediate current financial status, it does produce the necessary basis upon which to proceed in outlining a method of search for improvement.

For the year of 1947 the consolidated financial statement for the system operations produced the following results:

CONSOLIDATED OPERATIONS

Year 1947

Operating Revenue	\$ 33,798,485.06	
Operating Expenses	31,775,759.03	
Net Revenue - Operations	2,022,726.03	
Operating Taxes	2,860,332.75	
Operating Income	837,606.72	LOSS
Non-Operating Income	369,806.85	
Gross Income	467,799.87	LOSS
Deductions from Gross Income	1,292,273.11	
NET INCOME	\$ 1,760,072.98	LOSS

This consolidated summary shows that the total cost of conducting the business for the year was \$1,760,072.98 less than the amount of revenue earned.

Directing attention first to the operating revenue, the annual amount of \$33,798,485.06 can be segregated between the various sources from which it was obtained as set forth below:

<u>OPERATING REVENUE</u>			
Year 1947			
<u>Freight</u>			
P. E. Ry. Freight	\$12,206,796.21		
Harbor Belt Line	<u>53,013.13</u>		
Total Freight Revenue		\$ 12,259,809.34	36.1 %
<u>Passenger</u>			
L.A.M.C.	2,283,246.04	10.8 %	
P.E.Ry.Motor Coach	7,668,976.38	36.1	
P.E.Ry. Rail	<u>11,261,628.73</u>	<u>53.1</u>	
Total Passgr. Revenue		100.0 %	21,213,851.15 63.0
<u>Pacific Electric Building</u>			<u>324,824.57 0.9</u>
TOTAL OPERATING REVENUE			\$ 33,798,485.06 100.0 %

Of the total operating revenue 36.1 per cent was derived from freight operations and 63.0 per cent from passenger service. Of the passenger revenue 53.1 per cent was produced by rail operations; 36.1 per cent by Pacific Electric Motor Coach Operations; and 10.8 per cent from Los Angeles Motor Coach Lines.

Segregating operating expenses into the same categories as shown above for revenue, the following is obtained:

<u>OPERATING EXPENSES</u>			
Year 1947			
<u>Freight</u>			
P.E.Ry. Freight	\$ 9,160,992.61		
Harbor Belt Line	<u>288,819.35</u>		
Total Freight Expense		\$ 9,449,811.96	29.7%
<u>Passenger</u>			
L.A.M.C.	1,629,474.72	7.4 %	
P.E.Ry.Motor Coach	6,916,077.24	31.2	
P.E.Ry. Rail	<u>13,596,142.38</u>	<u>61.4</u>	
Total Passgr. Expense		100.0 %	22,141,694.34 69.7
<u>Pacific Electric Building</u>			<u>184,252.73 0.6</u>
TOTAL OPERATING EXPENSES			\$ 31,775,759.03 100.0

Whereas passenger rail service brought in only 53.1 per cent of the revenue, it was responsible for 61.4 per cent of operating expenses. Los Angeles Motor Coach Lines brought in 10.8 per cent of revenue, but represented only 7.4 per cent of expenses; and Company Motor Coach operations brought in 36.1 per cent of revenue and represented 31.2 per cent of operating costs.

Based upon these comparisons of revenues and expenses, it is obvious that passenger rail operations are not carrying their full share of the financial burden.

Carrying the comparison on to an end result shows operating income for the various phases of business to be as follows:

<u>OPERATING INCOME</u>			
<u>Year 1947</u>			
<u>Freight</u>			
P.E.Ry. Freight	\$ 2,119,605.59		
Harbor Belt Line	268,058.48	LOSS	
Total Freight			\$ 1,851,547.11
<u>Passenger</u>			
L.A.M.C.	559,071.58		
P.E.Ry. Motor Coach	73,241.36		
P.E.Ry. Rail	3,426,188.91	LOSS	
Total Passenger			\$ 2,793,875.97 LOSS
Pacific Electric Building			<u>104,722.14</u>
TOTAL OPERATING INCOME			\$ 837,606.72 LOSS

Whereas freight operations for the year produced an operating income amounting to 15.1 per cent of revenue earned, passenger operations were conducted at a loss amounting to 13.1 per cent of revenue earned. Los Angeles Motor Coach Lines, producing only 6.8 per cent of the system revenue, contributed 20.3 per cent of the profit from profitable operations. Its operating income represented 30.1 per cent of that earned by freight operations, whereas its operating expense was only 5 per cent of system total as compared with 29.7 per cent for freight. The Pacific Electric Building, although it produced only a revenue amounting to 0.9 per cent of the total, contributed a profit to operating income of \$104,722.14.

Further analyzing the deficit from passenger operations, Los Angeles Motor Coach Lines produced a profit to operating income of 24.4 per cent of revenue; Company Motor Coach operations produced a profit of slightly less than one per cent of operating revenue; whereas passenger rail service resulted in a deficit of 30.5 per cent of revenue earned. This analysis immediately identifies rail passenger service as being the phase of the business which requires most urgent attention.

Taxes applying to the various operations for the year 1947 are as follows:

<u>OPERATING TAXES</u>			
<u>Year 1947</u>			
<u>Freight</u>			
P.E.Ry. Freight	\$ 926,198.01		
Harbor Belt Line	<u>32,252.26</u>		
Total Freight		\$958,450.27 <sup>(1)</sup>	33.5%
<u>Passenger</u>			
L.A.M.C.	94,699.74	5.1%	
P.E.Ry. Motor Coach	679,657.78	36.4	
P.E.Ry. Rail	<u>1,091,675.26</u>	<u>58.5</u>	
Total Passenger		100.0	
Pacific Electric Building		1,866,032.78 <sup>(2)</sup>	65.3
TOTAL OPERATING TAXES		<u>35,849.70</u>	<u>1.2</u>
		\$2,860,332.75 <sup>(3)</sup>	100.0

(1) 7.8% of Freight Revenue; (2) 8.8% of Pasgr. Revenue; (3) 8.5% of Total Revenue.

Stepping now to a further consideration of rail passenger operations, a breakdown has been made between interurban and local services as they are commonly designated and the results of the comparison are as follows:

<u>P. E. RAILWAY PASSENGER RAIL</u>			
<u>Year 1947</u>			
	<u>Interurban</u>	<u>Local</u>	<u>Total</u>
Operating Revenue	\$5,543,112.46	\$5,718,516.27	\$11,261,628.73
Operating Expenses	<u>7,501,085.76</u>	<u>6,095,056.62</u>	<u>13,596,142.38</u>
Net Revenue	\$1,957,973.30 LOSS	\$ 376,540.35 LOSS	2,334,513.65 LOSS
Per Cent	83.8	16.2	100.0
Cost per \$ of Revenue	\$1.35	\$1.06	\$1.20
Operating Taxes	\$ 592,299.07	\$ 499,376.19	\$1,091,675.26
Operating Income	2,550,272.37 LOSS	875,916.54 LOSS	3,426,188.91 LOSS
Per Cent	74.5	25.5	100.0
Cost per \$ of Revenue	\$1.46	\$1.15	\$1.30
Car Miles	6,892,099	8,873,487	15,765,586
Cost Per Car Mile	\$1.09	\$0.686	
" " " " incl Taxes	1.17	\$0.742	
Revenue Per Car Mile	\$0.726*	\$0.629*	
Increase in Revenue Needed to Break even	46.0%	15.3%	30.4%

\* Average from Passenger Traffic Analysis Statement.

The above analysis indicates that local operations contributed 25.5 per cent of the deficit and interurban, 74.5 per cent after taxes; but before taxes, interurban contributed 83.8 per cent. On this basis, before considering operating taxes, for each dollar of revenue earned by the interurban lines, it cost \$1.35 to provide the service; and for local operations for each dollar of revenue, the cost was \$1.06. When adding operating taxes, these costs increase respectively to \$1.46 and \$1.15. On a car mile basis the revenue for interurban was \$ .73 compared with a total cost of \$1.17, a difference of \$ .44; and on the locals the revenue was \$.63 compared to a cost of \$.74 a difference of \$.11.

This analysis shows that it would require a 46.0 per cent increase in operating revenue on the interurban rail lines to reach the break-even point, with no profit involved. On the local lines an increase in revenue of 15.3 per cent would be required to break even. Obviously it would not be good business to be content with revenue only sufficient to meet operating costs. A profit of at least 10% of gross revenue should be expected, which would mean an increase in operating revenues on interurban lines, of 56 per cent and on local lines, 25 percent.

Based upon an evaluation of the operations, the territory served, the present fare structure, and the probable reaction of the public to further increase in fares, it is quite clear that working from the revenue point of view only, it is impossible through increasing fares alone to reach the break-even point on the interurban operation and quite unlikely on the local lines. Therefore, assuming that the territory served is producing the maximum potential revenue within reasonable limits, the major course of attack must be directed toward reducing the cost of operations.

To approach the break-even point on the interurban rail service, cost of operations must be reduced by 34 per cent and on local service by approximately 15 per cent. It is not unreasonable to expect that such a reduction in operating expenses could be effected on the local rail lines through either introduction of one-man car operation or substitution of motor coaches for railcars on certain lines or portions of lines. As to the interurban operations, however, it is extremely doubtful as to whether enough economy could be effected in the cost of service as presently performed, to offset the deficits incurred. To realize an operating income of 10 per cent of gross revenue, expenses of interurban operation would need to be reduced by 41.4 per cent and local operations by 23.8 per cent. These percentages do not allow for net income after interest and other obligations.

Carrying the analysis further with respect to interurban rail lines alone the passenger traffic analysis statement shows an average revenue per car mile for the year of 1947 to be 72.57 cents, as below:



INTERURBAN OPERATIONS - RAIL

<u>Line</u>	<u>YEAR 1947</u>			<u>JANUARY 1948</u>		
	<u>Miles</u>	<u>Revenue</u>	<u>Rev/CM</u>	<u>Miles</u>	<u>Revenue</u>	<u>Rev/CM</u>
Pasadena-Oak Knoll	628,677	\$381,213	60.64¢	54,816	\$32,860	59.95¢
Pasadena Short Line	532,654	419,357	78.73	49,949	37,456	74.99
El Monte-Baldwin Park	651,200	306,989	47.14	53,443	25,143	47.05
Monrovia-Glendora	833,960	514,042	61.64	99,918	75,703	75.77
Sierra Madre	194,989	99,248	50.90	16,161	9,115	56.40
Long Beach	1,499,452	1,478,197	98.58	124,693	110,426	88.56
San Pedro	1,297,623	1,002,082	77.22	104,735	82,030	78.32
Long Beach-San Pedro	345,302	193,508	56.04	22,710	12,645	55.68
Santa Ana	795,527	492,841	61.95	64,750	38,214	59.02
LB-Wil.SP SS Serv.	5,382	4,067	75.57	317	239	75.67
LA-Newport Beach	33,747	18,457	54.69	2,980	1,684	56.52
AVERAGE			72.57¢			71.66¢

Only four lines of the eleven, produced a revenue per car mile above that average and none of the lines produced a sufficient amount of revenue to meet the full cost per car mile of operation.

Analyzing the showing by individual lines indicates a revenue per car mile of as low as 47 cents compared to an average cost per car mile of \$1.18. It is immediately evident that drastic steps must be taken with respect to all interurban lines even including those few in the higher earning bracket. It is imperative that immediate steps be taken with respect to those falling below the average earnings to bring them into more favorable financial balance.

In view of the wide discrepancy between earnings and cost of service, it appears to be utterly impossible to bring about the desired improvement through fare increases alone. The steps that must be followed are to effect immediately the fullest possible economies commensurate with good operating practice and most efficient utilization of facilities and man power. A considerable source of financial improvement can be realized through this procedure without changes in physical properties; however, even the most optimistic possibilities in this respect cannot place certain of the lines on a proper net earning basis by that means alone. This indicates clearly the necessity of resorting to the only remaining means of relief, which are substitution of motor coach service for rail operations or complete abandonment of these lines determined to be hopeless.

EARNINGS AS PERCENTAGE OF GROSS REVENUE

Referring back for a moment to the Summary Analysis of Operating Income, shown on page 10, the profit derived from Company motor coach operations, even though in the black for the year of 1947, falls far short of what should be considered a reasonable margin. Whereas the actual profit earned was less than one per cent of gross revenue, a net in the vicinity of ten per cent of gross should be reasonably expected. For comparison, Los Angeles Motor Coach Lines produced a profit amounting to almost 25 per cent of gross revenue.

is necessary beyond a question of doubt and the effectiveness of proving that the spread between the present earnings and those to which the company is reasonably entitled on a fair rate of return basis is so great that the intermediate latitude provides a field within which a definitely improved level of earnings could be approved without the lengthy and detailed investigation normally accorded such matters where a reasonable rate of return is involved.

The second consideration is one of great importance, consisting of the inherent obligation of the company to furnish its services to the public at the most economic cost and the highest degree of efficient performance.

#### REASONABLE RATE OF RETURN AND RATE BASE

Previous reference was made to the increase in revenue that would be required on the interurban and local passenger rail lines to arrive at a break-even point at current costs of operation and it was pointed out that the percentage of increase in fares necessary to accomplish that objective would without question defeat the purpose for which intended. It was indicated that as a rough measurement of the proper earnings to be expected from a property, approximately 10 to 15 per cent of gross revenue would probably represent a fairly reasonable net earning.

Looking at the possibilities from the angle normally accepted by regulatory authorities in determining proper rates of fare for service provided, and applying a reasonable rate of return to a reasonable rate base to determine what might be a proper net revenue, company estimates indicate that approximately \$29,000,000 is devoted exclusively to Passenger operations, \$22,500,000 devoted to passenger and freight, and \$21,200,000 devoted to freight exclusively; totaling \$72,700,000 as of approximately December 1945.

In the last rate proceeding before the Commission, its engineers, in Exhibit No. 33, under the heading of Investment, made the comment that:

"No segregation between investment chargeable to passenger and freight operations has ever been officially presented to the Commission, but a segregation of the operative properties as of December 31, 1945, made by the Company, was:

Property Devoted to Passenger Operations	\$ 40,274,310
" " " Freight	<u>32,469,175</u>
Total	\$72,743,485

Proceeding upon the basis that, as a rough guide, the \$40,000,000 is approximately right then a net revenue from passenger operations of approximately \$2,500,000 could be considered as reasonable, at a rate of return arbitrarily taken as 6 per cent.

In view of the deficit from passenger operations in amount of \$2,800,000 for 1947, the financial improvement necessary to reach the reasonable rate of return would be \$5,300,000. To realize this amount as a decrease in operating expenses would mean a reduction in cost of passenger

operations of 23.5 per cent or an increase in passenger revenue of 24.5 per cent. Whether approaching the problem from the point of view of a reasonable percentage of gross or a reasonable return on a reasonable rate base, the percentages of increase in revenue or decrease in expenses under present methods of operation and status of facilities appears to be highly improbable. Therefore, in considering the company's position with respect to a plea for financial relief, either through increased fares or substitution or a combination, its position is sound both as to the equities of the public and the company

#### COMPANY ENTITLED TO REASONABLE PROFIT

In all considerations the company should not lose sight of the fact that it is entitled to earn a reasonable return on its investment and that at no place in the statutes or decisions of the various regulatory authorities or courts, is there anything laid down that will require any public utility to subsidize the general public in the performance of service at a financial loss, after it has proven that it has taken all possible steps to perform that service in accordance with the most efficient and economic practices, and by use of the most modern facilities that can be justified.

It has been a well-established procedure in public utility operation and regulation to require a utility to maintain light feeder lines that are known to be incapable of financially supporting themselves, under the assumption that the good-paying lines would support the poor-paying lines. Those two assumptions, however, must go together and when the overall earning position of a company is such that its system operations are conducted at a loss, then there are no good-paying lines which can support the poor-paying lines and the theory is completely upset. Under these conditions the utility is justified in eliminating progressively the lesser paying lines until a point is reached where, in combination with other relief measures, a reasonable earning can be realized.

#### MAJOR ELEMENTS REQUIRING STUDY.

In view of the foregoing analysis it is obvious in accordance with the ordinary concept of business, that there is an immediate and direct need for quick and positive action that will either place each general phase of the company's operations on an independently profitable basis, or eliminate those portions of the operations which cannot be brought into a reasonable earning status. It is evident that the trend subsequent to World War II, particularly in passenger traffic is changing its course at a high rate of acceleration from wartime prosperity to the same pattern of heavy loss experienced prior to the war and that the degree of relief required to counteract the trend cannot be obtained through a proportionate increase in rates and fares.

In recognition of the basic limitations imposed upon the nature of the remedial action which can be taken, the following discussion embraces the various phases of the Company's operations that should be accorded careful study in developing a comprehensive plan of financial rehabilitation through modernization of facilities and operations. Modernization, in the sense used herein, means to bring service, operations and facilities into

a state of existence that will be productive of sufficient revenue to offset the full cost of operation plus a fair margin of profit. It does not necessarily mean the purchase of all new rail cars of P.C.C. type and complete reconstruction of track and electrical facilities. To the contrary it may mean complete abandonment of the existing rail facilities. It is the answer to this problem, among others, that the final studies suggested herein are intended to reveal.

#### MAJOR SOURCES OF RELIEF REACHING EXHAUSTION

In view of the history of passenger transportation operations in metropolitan areas over the past few decades, it is easy to see the developments that have been shaping the pattern of the industry's financial future. Due to the abnormally high ratio of labor cost to other costs in the passenger transportation field, the upward trend of wage rates and greater restrictions imposed upon operations through labor agreements have been largely responsible for decreasing the margin of profit and increasing the margin of costs in excess of revenue.

In an effort to meet that tendency the industry has progressively taken advantage one by one of the most productive means of financial improvement in an attempt to keep pace with conditions until now practically all sources of relief have been exhausted on most passenger transit operations. One of the earlier modes of relief was through financial reorganization as a means of cutting down the cost of borrowed money. The next most promising step was to convert rail operations from two-man cars to one-man cars as a means of reducing labor costs. As the grip of adversity tightened the one remaining ray of hope was grasped, through a swing from rail operations to rubber-tired vehicles to bring about a reduction in cost by eliminating maintenance of track and roadway, overhead distribution lines, and fixed facilities. With those possible sources of economy exhausted, it appears that the end of the rope has been reached and that further increases in the cost of doing business can only be met by paring down the extent of operations to eliminate progressively the lesser paying lines, increasing load factors, or going to larger capacity vehicles.

#### POSTWAR REHABILITATION PROGRAM.

Pacific Electric is in a somewhat favorable position as it has not proceeded to the fullest extent of the advantages that can be derived through this established pattern of financial betterment. Prior to the war the company's trend of financial adversity had reached extremely serious proportions and to combat its effects recourse was taken to the first two of the above mentioned avenues of escape. To a certain extent there was a revision made of the underlying financial structure. Combined with that action a program of substitution of rubber-tired vehicles for rail operation was launched. In each instance where substitutions were made, substantial reversal was experienced in the downward financial trend and losing lines were converted into profitable operations. However, the beneficial effects of the substitution program, although substantial, were, shortly after the program was instituted, completely overshadowed by the heavy profits derived from abnormal wartime traffic in both passenger and freight service,

and the program was brought to an end by wartime controls on transportation equipment and operations.

With the financial benefits of the war now in the past, the real problems of the future are coming into full view and it is immediately evident that the prewar modernization and financial rehabilitation program must be picked up and promptly carried through to its ultimate conclusion, supplemented by any and all modern developments in the art of transportation, business administration and procedural efficiency.

#### ABANDONMENT OF NON-PROFITABLE LINES

In the end analysis, if, after having taken advantage of all possible sources of financial improvements, a proper balance cannot be attained, then as a last resort steps should be taken to abandon passenger service in part or in whole on those lines which contribute most heavily to the loss. If substitution of motor coaches for rail service cannot bring the operating ratio into favorable position, then continued service cannot be justified. It is inescapable that on a major transportation system whose average operations are profitable, there will be certain individual lines, when considered by themselves, that must be conducted at a loss. The loss, however, is offset by the profits of other more substantial lines so that the net result averages out on the system to a reasonable rate of return. The old theory of the rich carrying the poor applies on those properties where the overall operation results in a reasonable profit.

On a property such as Pacific Electric, however, where the system operation is conducted at a loss, the theory of equalization breaks down and the Company is legally entitled to curtail or discontinue service on those lines contributing most heavily to its system loss until a point is reached where the overall business earns a reasonable profit. Therefore, in seeking the proper financial balance, serious consideration should be given, in the absence of adequate relief from other aggregate sources, to cutting down the magnitude of the passenger operations to the fullest extent necessary to produce the desired result.

Pacific Electric Railway Company

TABLE I

INCOME STATEMENT

: Year :	: Operating Income :	: Non-Operating Income :	: Interest on: Funded Debt :	: Other Deductions :	: Income to Profit :	: Loss :
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1916	\$2,261,823	\$ 52,567	\$2,835,898	\$460,950	-	\$ 982,458
1917	2,490,313	65,730	2,830,787	610,372	-	885,116
1918	1,692,189	150,974	2,818,542	772,813	-	1,748,192
1919	897,772	134,824	2,808,281	992,041	-	2,767,726
1920	2,714,411	91,432	3,727,251	236,637	-	1,158,045
1921	3,192,424	104,382	3,841,976	254,463	-	799,633
1922	3,542,207	98,215	3,912,135	304,276	-	575,989
1923	4,463,752	216,292	3,994,269	354,860	\$ 330,915	-
1924	3,714,351	292,163	4,143,720	454,979	-	592,185
1925	2,356,582	539,356	2,533,725	404,651	-	42,438
1926	1,563,161	381,788	2,704,393	336,589	-	1,096,033
1927	2,149,421	243,797	2,692,565	297,357	-	596,704
1928	1,296,204	384,523	2,631,439	282,341	-	1,233,053
1929	1,805,404	376,658	2,638,121	259,501	-	715,560
1930	610,512	331,484	2,652,669	259,149	-	1,969,822
1931	292,188	220,867	2,564,621	202,921	-	2,254,487
1932	(121,154)	197,125	2,484,608	188,909	-	2,597,546
1933	(156,986)	193,486	2,468,670	182,232	-	2,614,402
1934	(323,811)	159,146	2,449,035	165,622	-	2,779,322
1935	(202,516)	225,015	2,439,041	145,881	-	2,562,423
1936	(17,743)	316,074	2,441,883	140,953	-	2,284,505
1937	(687,962)	261,117	2,416,905	138,632	-	2,982,382
1938	(826,505)	126,876	2,403,362	145,393	-	3,248,384
1939	(608,989)	138,381	2,389,462	58,664	-	2,918,734
1940	(264,709)	220,043	2,373,857	124,597	-	2,543,120
1941	480,476	168,062	2,162,096	150,277	-	1,663,835
1942	3,447,097	159,220	1,876,245	183,265	1,546,807	-
1943	7,460,340	139,505	1,845,451	152,079	5,602,315	-
1944	3,420,514	184,925	1,572,706	110,539	1,922,194	-
1945	1,547,830	203,496	1,328,065	66,997	356,264	-
1946	485,615	668,108	1,227,254	145,348	-	218,879
1947	(837,607)	369,807	1,227,215	65,058	-	1,760,073
1948	878,604	434,803	1,227,200	53,127	33,180	-

( ) - Indicates RED figures.

Pacific Electric Railway Company

TABLE I-A

OPERATING INCOME  
SYSTEM

Year	System Total	Freight	PASSENGER						P.E.Rlwy Building
			Total	Rail	Motor Coach		P.E.Rlwy L.A.M.C.		
					Total	P.E.Rlwy		L.A.M.C.	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	
1936	\$ (17,743)	\$ 835,904	\$ (937,280)	\$ (938,590)	\$ 1,310	\$ (158,095)	\$159,405	\$ 83,633	
1937	(687,962)	608,601	(1,328,141)	(1,385,486)	57,345	(120,899)	178,244	31,578	
1938	(826,505)	657,413	(1,597,030)	(1,676,900)	79,870	(114,943)	194,813	113,112	
1939	(608,989)	899,394	(1,465,025)	(1,602,327)	137,302	(101,950)	239,252	(43,358)	
1940	(264,709)	1,285,494	(1,482,462)	(1,856,773)	374,311	70,378	303,933	(67,741)	
1941	480,476	1,404,445	(878,904)	(1,315,294)	436,390	99,952	336,438	(45,065)	
1942	3,447,097	2,394,124	996,034	(381,010)	1,377,044	825,242	551,802	56,939	
1943	7,460,340	4,407,854	2,967,410	810,647	2,156,763	1,388,399	768,364	85,076	
1944	3,420,514	1,733,449	1,636,917	339,108	1,297,809	919,520	378,289	50,148	
1945	1,547,830	1,161,333	347,506	(422,319)	769,825	567,039	202,786	38,991	
1946	485,615	1,073,999	(607,236)	(2,168,487)	1,561,251	857,913	703,338	18,852	
1947	(837,607)	1,851,547	(2,793,876)	(3,426,189)	632,313	73,241	559,072	104,722	
1948	878,604	2,441,426	(1,974,237)	(2,363,521)	389,284			211,215	

NOTE: For the purpose of comparing Operating Income with Net Income, whereas the former is shown to be (\$837,607) for the year of 1947, Net Income, after adjustment for non-operating revenue, interest on debt and other miscellaneous deductions, was (\$1,760,073).

( ) - Indicates RED figure.

Pacific Electric Railway Company

TABLE II  
OPERATING REVENUE AND EXPENSES  
SYSTEM

Year (1)	Freight Amount (2)	Passenger		P.E. Bldg (5)	Total (6)
		P.E. Rlwy (3)	L.A.M.C. (4)*		
<u>OPERATING REVENUE</u>					
1936	\$3,119,809	\$7,417,250	\$ 797,048	\$ 420,100	\$10,957,159
1937	3,167,289	7,992,790	884,527	488,860	11,648,939
1938	2,946,742	7,599,915	905,927	514,822	11,061,479
1939	3,202,159	7,656,354	960,632	436,948	11,295,461
1940	3,742,119	7,891,368	1,032,379	429,798	12,063,285
1941	4,744,832	8,247,566	1,123,908	430,716	13,423,114
1942	7,460,965	12,100,079	1,418,678	190,066	19,751,110
1943	12,901,733	18,666,763	1,855,840	228,429	31,796,925
1944	14,100,049	22,547,241	2,094,319	239,629	36,886,919
1945	12,738,614	23,413,318	2,022,780	260,023	36,411,955
1946	9,749,173	22,332,801	2,036,004	269,197	32,351,171
1947	12,259,809	21,213,851	2,283,246	324,825	33,798,485
1948	12,274,910	21,553,713	2,335,678	384,840	34,313,463
#	111,731,388	201,295,981	1,549,682	377,678	321,405,047

OPERATING EXPENSES

1936	\$2,121,295	\$7,706,513	\$ 620,754	\$ 304,235	\$10,132,043
1937	2,308,837	8,443,859	679,283	415,999	11,168,695
1938	2,071,552	8,252,682	677,666	350,212	10,674,446
1939	2,095,049	8,189,638	686,752	420,016	10,704,703
1940	2,206,178	8,436,501	688,626	433,320	11,075,999
1941	3,015,087	8,316,464	746,693	415,551	11,747,102
1942	4,515,347	10,332,989	818,047	112,147	14,960,483
1943	7,823,138	14,544,191	975,204	124,266	22,491,595
1944	9,709,719	18,190,381	1,266,385	153,733	28,053,833
1945	10,921,522	21,673,956	1,729,682	205,008	32,800,486
1946	9,268,200	22,418,640	1,468,446	239,481	31,926,321
1947	9,449,812	22,141,694	1,629,475	184,253	31,775,759
1948	8,970,593	21,909,164	1,842,482	144,286	31,024,043
#	8,707,432	20,169,910	1,206,810	148,487	30,025,829

\*Included in Col. 3

# Years Sept. 1942 - Aug. 1949 inclusive

Note: (3) lines formerly L.A.M.C., included in P.E. motor coach figures effective May 1949



Pacific Electric Railway Company

TABLE V

DISTRIBUTION OF EXPENDITURES IN TOTAL AND PER DOLLAR OF REVENUE

YEAR - 1947

(Includes P.E., Proportion L.A.M.C. & Harbor Belt Line)

	<u>TOTAL</u> <u>AMOUNT</u>	<u>PER DOLLAR</u> <u>OF REVENUE</u>	
<u>Operating Expenses &amp; Taxes:</u>			
Trainmen & Operators Wages	\$ 9,738,237.51	28.50¢)	64.30¢
Other Wages	12,230,425.35	35.80 )	
Material Costs	3,998,716.85		11.70
Power Costs	1,183,110.69		3.46
Depreciation	1,612,505.63		4.72
Rent of Equipment & Facilities	1,203,334.30		3.52
Loss and Damage Claims	66,158.43		.19
Personal Injury Claims	1,107,554.55		3.24
Empl. Welfare Contr., Group Life Ins., Prem.	36,363.76	.11)	
Empl. Welfare Contr., Pensions & Gratuities	18,045.16	.05)	.16
State Taxes	577,919.85	1.69 )	
City & County Taxes	901,591.37	2.64 )	
Railroad Retirement	1,174,620.49	3.44 )	9.93
Unemployment Insurance	615,153.76	1.80 )	
Other Federal Taxes	123,666.13	.36 )	
Insurance	47,477.04		.14
Amortization of Franchises	1,210.91		.01
Total Operating Expenses & Taxes	<u>\$34,636,091.78</u>		<u>101.37</u>
<u>Deductions from Gross Income:</u>			
Rent for Leased Roads	38,617.65	.11)	
Miscellaneous Rents	4,780.48	.01)	
Interest on Funded Debt	1,227,214.81	3.59)	3.78
Interest on Unfunded Debt	13,076.71	.04)	
Miscellaneous Debits	8,583.46	.03)	
Total Deductions	<u>\$ 1,292,273.11</u>		<u>3.78</u>
Total Expenditures	<u>\$35,928,364.89</u>		<u>105.15</u>
<u>Income:</u>			
Operating Revenues	\$33,798,485.06		
Non-Operating Income	369,806.85		
Total Income	<u>\$34,168,291.91</u>		<u>100.00</u>
<u>Net Income:</u>	(\$ 1,760,072.98)		(5.15)

( ) - Indicates RED figures.

Exhibit No. 48

Witness JENKINS

Date Oct. 13, 1948

Before The  
Public Utilities Commission of the State of California  
Applications Nos. 23053 and 27466, and  
Case No. 4843

A REPORT ON  
STATISTICAL DATA AND TRENDS  
APPLYING TO THE  
TRANSIT INDUSTRY OF THE UNITED STATES

Pacific Electric Railway Company  
Los Angeles, California  
October 13, 1948,

Submitted by:  
Arthur C. Jenkins  
Consulting Engineer

TRENDS

STATISTICAL DATA AND TRENDS  
TRANSIT INDUSTRY OF UNITED STATES

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## B - TRENDS AND STATISTICS

### 1947 IN THE TRANSIT INDUSTRY

In retrospect the Year 1947 was one of conflicting experiences for the transit companies. While industry-wide levels of traffic and revenues held up remarkably well on the average, postwar adjustment produced a wide range in the trends represented by individual properties. In some of the smaller cities where war-born industries converted to peace-time production, transit traffic continued to increase. For the industry on the whole, the peak in traffic was reached in 1946.

Data available on automobile registration for a number of cities and for the overall United States total seems to imply that the competition factor in the mass transportation field as represented by the passenger automobile has returned in almost full force, and this undoubtedly accounts in substantial measure for losses of traffic by some local transit companies during 1947 in areas where industrial employment was still reaching new highs. It is significant to note, however, that the traffic carried by practically every transit company in 1947 was still greatly in excess of its 1941 level--the last pre-war year of unrestricted automobile competition.

Wage and material costs continued to mount rapidly in 1947 and the diminishing margin between revenues and expenses, which started in 1945, continued through 1946 and 1947, seriously threatening the economic well-being of many companies and leaving them no alternative but to seek relief through increased fares. The trend of fare increases, which began on a minor basis in the later part of 1945, increased in volume so that by the end of 1947 one out of every two cities in the United States with population in excess of 100,000 had experienced a fare increase, and in cities of less than 100,000 the ratio was one in three.

The data contained in this portion of the report relates to industry as it affects many operators throughout the country and has been compiled to include local motor coach lines, electric street railways, elevated and subway lines, interurban electric railways and trolley coach lines. The data represents conditions existing on more than 85% of the operations included in the transit industry in the United States. It is, of course, difficult to make direct comparison between an individual company and condition existing in the transit industry as a whole because of many elements of difference that exist and because of the inability to draw parallel comparisons with respect to specific matters under consideration. However, the material assembled and set forth herein is illustrative of the general trend that is taking place in the field of mass transit operations and is certainly significant in looking forward to the possible future of any individual transportation company.

### FINANCIAL TREND

For the year 1947 as compared with 1946, Chart No. 1 shows graphically

the status of the various elements entering into the financial results of operation for the industry. It will be noted that although operating revenue suffered only a slight decrease and there was a material decrease in taxation, the increase in cost of operations was of such magnitude as to throw the operating income into a decrease as between the two years, of 66.02%.

#### TREND OF TRAFFIC

Chart No. 2 has been constructed on the same basis as Chart No. 1, and portrays the percentage of change in transit traffic by population groups for the year 1947 as compared with 1946. The striking thing indicated by this chart is the amount of decrease experienced in suburban and other transit groups. It will be noted, of course, that there was a decrease in each population classification with exception of cities having a population of less than 50,000 where an increase in traffic of 1.76% was experienced. For the United States as a whole the decrease in all classes was 3.56%. As compared with this average, the decrease in traffic on suburban and other lines was 10.47%.

#### TREND FROM RAIL TO RUBBER TIRES

Inasmuch as there appears to be a considerable degree of conflicting thought as to the advisability or justification of converting from passenger rail operations to the use of rubber-tired vehicles, Chart No. 3 has been included to show the national trend in this respect.

This chart shows a distribution of transit revenue upon the basis of different types of equipment from which it has been collected from 1926 to and including 1947. The chart is drawn on a percentage basis. The trend with respect to surface railways as compared with motor coaches is vividly portrayed by this chart. Although subways and elevated railways carry a tremendously large volume of traffic in the large cities, the percentage of the total is relatively small. Although trolley coaches are shown separately on this chart, insofar as the type of vehicle is concerned they could properly be combined with results obtained from motor coach operation. This chart demonstrates very clearly the continuous and almost constant reduction in revenue from surface railways as compared with rubber-tired vehicles.

#### EMPLOYEES EARNINGS

Chart No. 4 has been included to show the upward trend in earnings of transit employees. The curve showing earnings per employee declined at a sharp rate from 1931 to 1933 during the depression, then recovered gradually up to 1940 and from 1941 to date, the increase has been at an extremely high rate. This is an indication of one of the principal elements contributing to the difficult financial situation of the transit properties when it is considered that on Pacific Electric the cost of labor as compared with total cost of operations represents over 64% for the system as a whole and would be a considerably higher figure than that if freight operations were included.

#### TREND OF TYPES OF VEHICLE

In further demonstration of the national trend away from the more costly

rail passenger operations, Chart No. 5 has been included to show graphically the data contained in Table No. 6. Although the trend of transit passenger vehicles owned has not varied to any appreciable extent between 1926 and 1947, there has been a radical change in the proportions represented by surface railways and rubber-tired vehicles. It will be noted from Table No. 6 that in 1927 79% of passenger vehicles were rail and only 21% rubber-tires; in 1937, 10 years later, only 61% were rail and 39% were rubber-tired; and 10 years later in 1947, only 33% of vehicles were rail and 67% were rubber-tired. It is further significant to note that this large change in use of rail cars falls in the category of surface operations. Subway and elevated cars represented 10% in 1927; 15% in 1937 and 10% in 1947. Surface cars in 1927 represented 69% of the total and in 1947 only 23%

It can easily be seen from the results of these figures that the history of Pacific Electric is following the normal trend on the basis of the national average.

#### FINANCIAL RESULTS 1932 to 1947

Chart No. 6 and Table No. 2 to which it corresponds, shows the results of financial operations for the transit industry from 1932 to 1947 inclusive, over a sixteen year period and emphasizes the tremendous impact of rising costs on the economy of the transit industry. While total operating revenues were higher in 1947 than in any preceding year with the exception of the peak year of 1946, nevertheless the operating ratio of expenses to revenues, which has been increasing steadily for the past four years reached the point in 1947 where 89.07 cents of each dollar of revenue was needed for operating expenses with taxes taking in 7.54 cents, operating income out of which the return on investment must be met was left with an inadequate 3.39 cents--the smallest amount in any year covered by the table. This condition as applying to the national picture, of course, is even at its worst a material improvement over the earning condition of Pacific Electric. The chart also shows the rapid rate at which labor costs have been increasing as percentage of total operating expenses.

#### TREND AS BETWEEN DIFFERENT TYPES OF VEHICLES

Chart No. 7 in combination with Table No. 3 indicates the trend from 1922 to 1947 of total transit passengers in the United States by types of service. This data has been segregated between the various modes of transportation and it will be noted that whereas in 1927 73% of the total was carried on surface railway cars with only 13% on rubber-tired vehicles, the ratio has changed until in 1947 only 36% were carried on surface rail cars and 52% on rubber tired vehicles.

Chart No. 8 and Table No. 8 show for the period 1922 to 1948 the trend in city transit operations on properties of various types. 885 American cities formerly served by street cars now rely exclusively on motor coaches for their public transportation. From December 1944 to December 1947, the number of surface street cars decreased by 5,573 vehicles. During that same three-year period, 30,503 rubber-tired vehicles were put into service. In 1948 the number

of cities in the United States with populations in excess of 10,000 was 1,078. It is significant to note that between 1922 and 1948, the number of cities served exclusively by bus operations increased from 18 to 885, and those with a combination of rail and bus service decreased from 197 to 117. Whereas in 1922 there were 560 cities served by rail exclusively, in 1948 there were only 5.

#### GENERAL COMPARISON

Table No. 1 attached to this exhibit provides comparable data relating to the transit industry throughout the country. It is significant to note that out of a total investment in transit facilities of about \$4,000,000,000, \$3,330,000,000 represents investment in rail facilities or approximately 82% and rubber-tired vehicles represent only 18% of total investment. As to total passengers carried, rail facilities only handled about 48% and rubber-tired vehicles 52%. This contrast is striking when it is considered that only 18% of the total investment in transit facilities handle 52% of the traffic.

#### TREND OF VEHICLES BY TYPES AND MILES OF ROUTE

Table No. 5 shows for the year 1947 the number of new transit vehicles delivered during that year by different types and by different population groups. For the group of cities with population in excess of one million, out of 3095 vehicles delivered, 2692 were rubber tired vehicles and only 401 were street cars. Taking all cities, out of a total of 13,612 new vehicles, 12,984 were rubber-tired and only 626 were street cars. Rubber-tired vehicles represented approximately 95% of the total.

The bottom portion of the table shows a comparative trend of equipment by types delivered by years since 1936 to 1947.

On the second page of Table No. 5 is shown the total number of transit vehicles in 1947 segregated by population groups and types of vehicles. On the basis of this total approximately 67% were rubber-tired vehicles. To give an indication of the area coverage by the different types of transit vehicles, the bottom portion of the second page of Table No. 5 shows that 98,147 miles of rubber-tired groups were operated as compared with 15,002 miles of rails, both on a round-trip basis.

Table No. 7 shows the trend of single track miles and round trip routing of transit operations in United States from 1926 to 1947. It will be noted from this chart that surface railway miles dropped from 50% of the total in 1927 to only 12% in 1947, with no measurable change in subway and elevated mileage, whereas rubber-tired vehicles increased from 49% in 1927 to 86% in 1947.



# TRANSIT TRENDS

CHART 1

RESULTS OF 1947 TRANSIT OPERATIONS												
ITEM	1947 (MILLIONS)	1946	PERCENTAGE CHANGE : 1946 TO 1947									
			%	-60	-50	-40	-30	-20	-10	0	+10	
OPERATING REVENUE	\$ 1391	\$ 1397	- 0.45									
OPERATING EXPENSE	1239	1129	+ 9.68									
NET REVENUE	152	268	-43.19									
TAXES	105	129	-18.66									
OPERATING INCOME	47	139	-66.02									
RATIOS:												
OPERATING EXPENSE OPERATING REVENUE	89.07%	80.85%	+ 10.17									
TAXES OPERATING REVENUE	7.54%	9.23%	- 18.31									
OPERATING INCOME OPERATING REVENUE	3.39%	9.92%	-65.83									

CHART 2

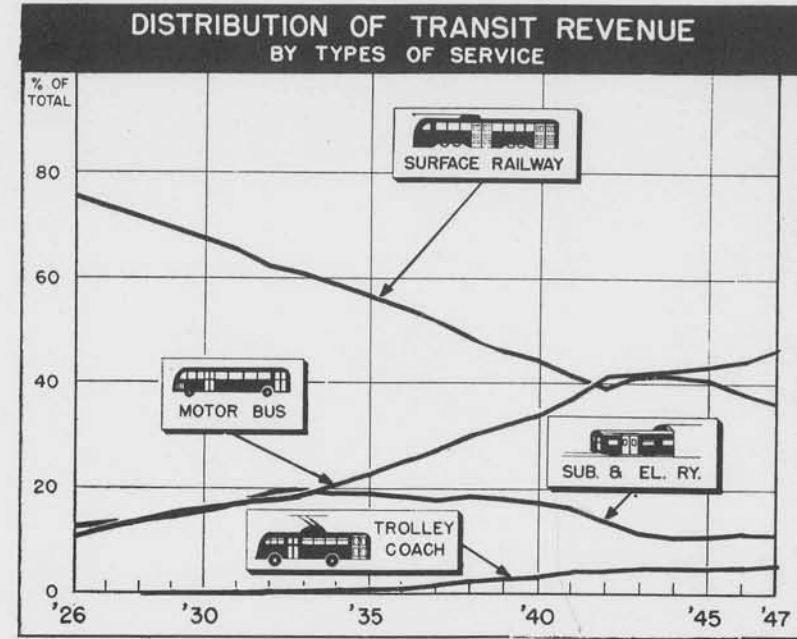
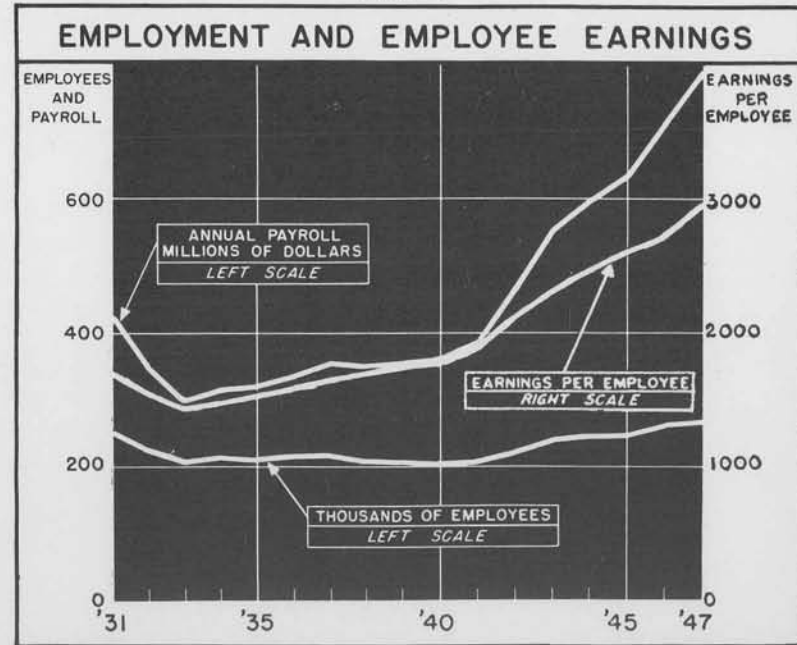


CHART 3

PERCENTAGE CHANGE IN 1947 TRANSIT TRAFFIC BY POPULATION GROUPS								
TRANSIT GROUP	%	PERCENTAGE CHANGE : 1946 TO 1947						
		-10	-8	-6	-4	-2	0	+2
SUBWAY & ELEVATED	-2.79							
SURFACE LINES: POPULATION GROUPS								
OVER 1,000,000	-1.96							
500,000-1,000,000	-3.45							
250,000-500,000	-5.59							
100,000-250,000	-4.05							
50,000-100,000	-3.04							
LESS THAN 50,000	+1.76							
SUBURBAN & OTHER	-10.47							
UNITED STATES	-3.56							

CHART 4



# TRANSIT TRENDS

CHART 5

TREND OF TRANSIT PASSENGER VEHICLES OWNED

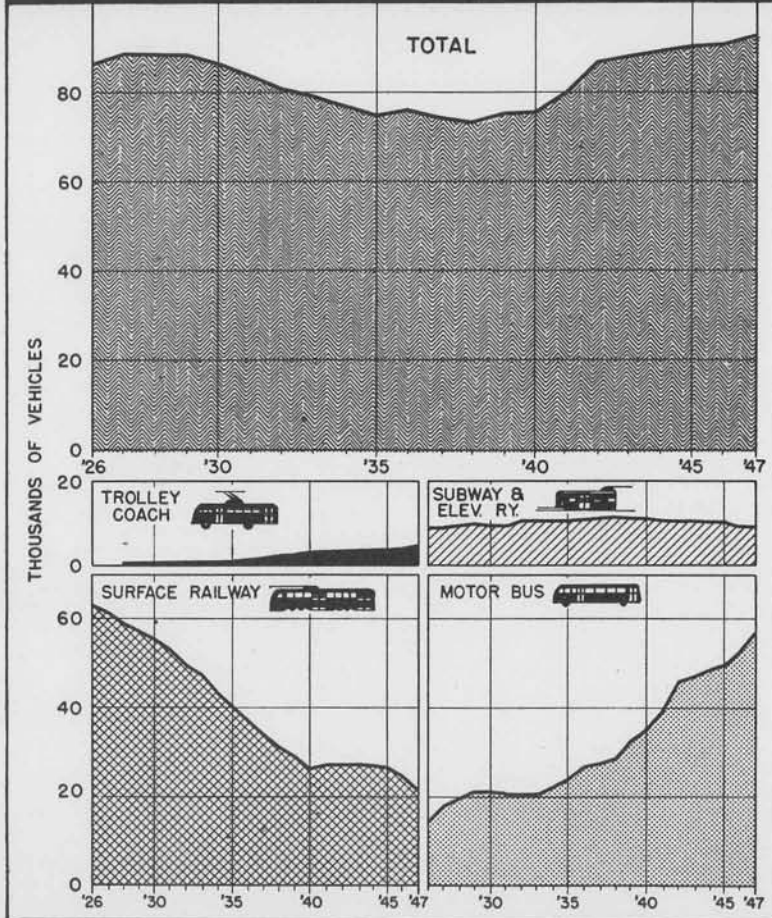


CHART 6

16 YEARS OF TRANSIT OPERATIONS

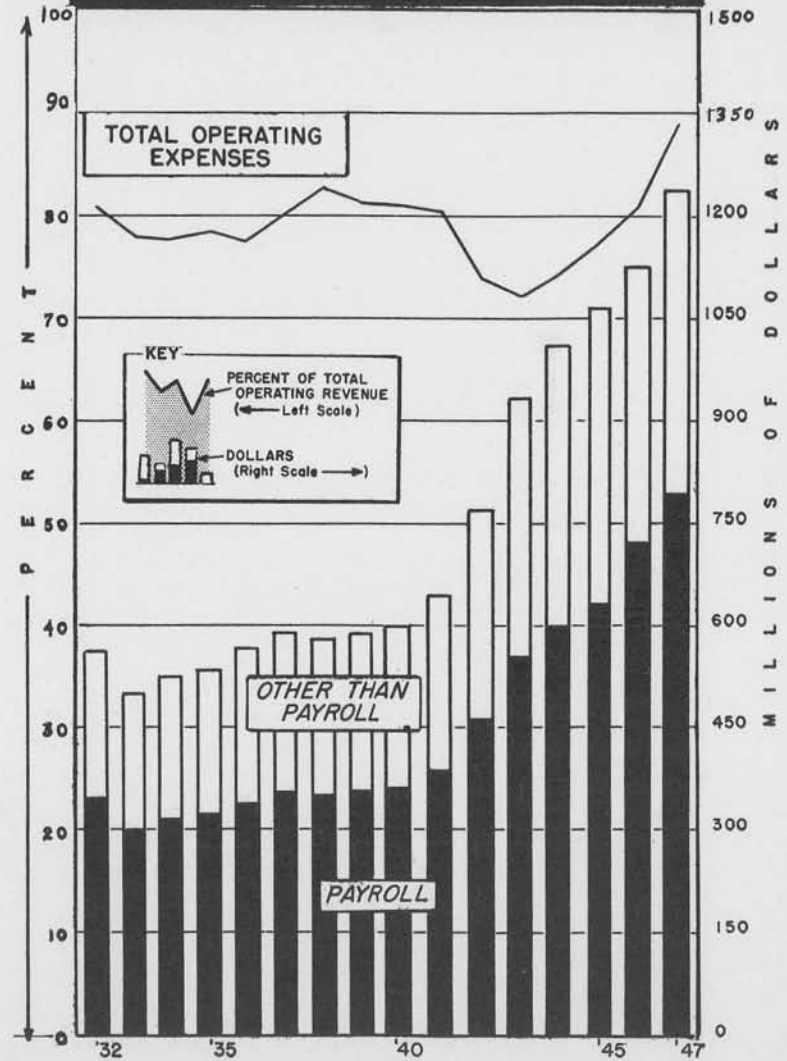


CHART 7.

TOTAL TRANSIT PASSENGERS IN THE UNITED STATES

BY TYPES OF SERVICE - 1922 to 1947

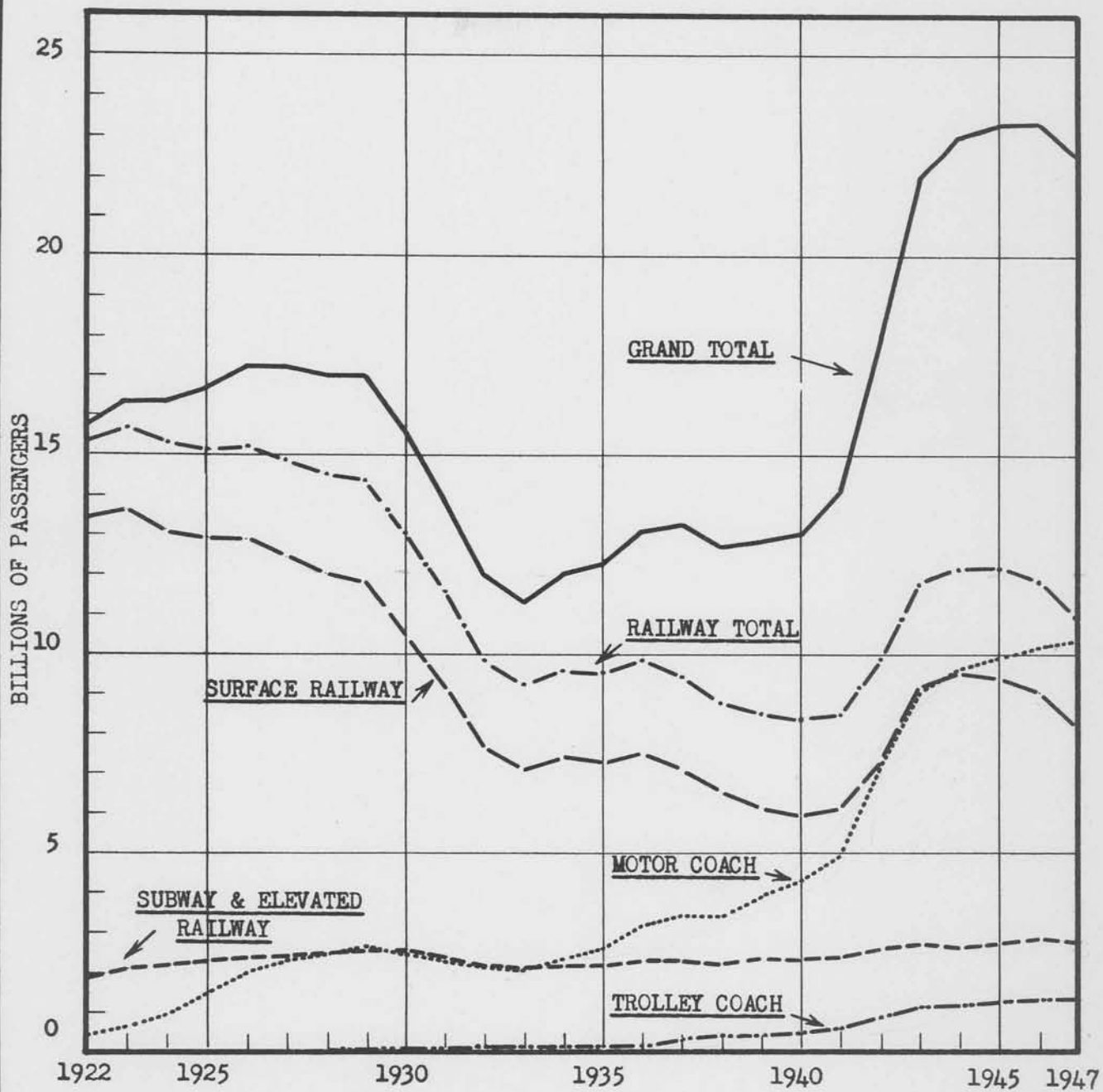


CHART 8.

TREND IN CITY TRANSIT OPERATIONS

PERIOD 1922 - 1948

(Cities With Population Over 10,000)

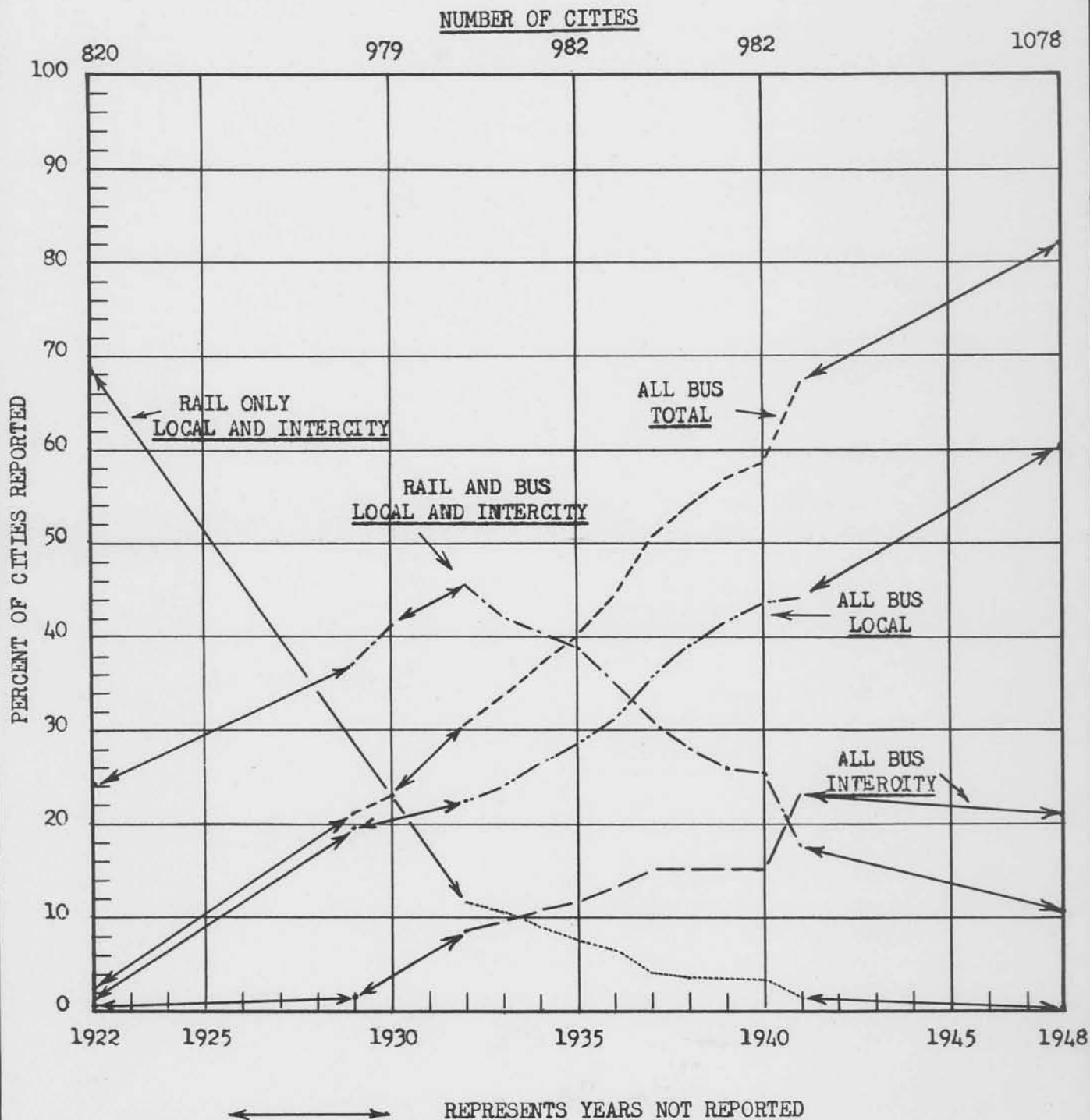


TABLE I  
STATISTICAL DATA RELATING TO THE TRANSIT INDUSTRY IN THE UNITED STATES AS  
OF DECEMBER 31, 1947

<u>1. Passenger Vehicles Owned (Dec. 31, 1947):</u>	Total	92,330
(a) Electric Railway Cars		30,781
Surface Railway Cars	21,607	
Subway and Elevated Cars	9,174	
(b) Trolley Coaches		4,632
(c) Motor Buses		56,917
<u>2. Investment (Dec. 31, 1947):</u>	Total	\$4,077,300,000
(a) Electric Railway		3,330,000,000
Surface Railway	1,279,100,000	
Subway & Elevated	2,050,900,000	
(b) Trolley Coach		95,600,000
(c) Motor Bus		651,700,000
<u>3. Operating Revenue - 1947 -</u>	Total	\$1,390,800,000
(a) Electric Railway		667,000,000
Surface Railway	508,300,000	
Subway & Elevated	158,700,000	
(b) Trolley Coach		76,800,000
(c) Motor Bus		647,000,000
<u>4. Passenger Revenue - 1947 -</u>	Total	\$1,310,700,000
(a) Electric Railway		615,700,000
Surface Railway	457,400,000	
Subway & Elevated	158,300,000	
(b) Trolley Coach		76,500,000
(c) Motor Bus		618,500,000
<u>5. Vehicle Miles Operated - 1947 -</u>	Total	3,342,400,000
(a) Electric Car Miles		1,301,600,000
Surface Ry. Car Miles	839,300,000	
Subw. & Elev. " "	462,300,000	
(b) Trolley Coach Miles		155,100,000
(c) Motor Bus Miles		1,885,700,000
<u>6. Total Passengers Carried - 1947 -</u>	Total	22,540,000,000
(a) Electric Railway		10,852,000,000
Surface Railway	8,096,000,000	
Subway & Elevated	2,756,000,000	
(b) Trolley Coach		1,356,000,000
(c) Motor Bus		10,332,000,000
<u>7. Revenue Passengers Carried - 1947 -</u>	Total	18,287,000,000
(a) Electric Railway		8,589,000,000
Surface Railway	5,980,000,000	
Subway & Elevated	2,609,000,000	
(b) Trolley Coach		1,073,000,000
(c) Motor Bus		8,625,000,000
<u>8. Number of Employees (Average 1947)</u>	Total	266,000
(a) Electric Railway		121,000
Surface Railway	81,000	
Subway & Elevated	40,000	
(b) Trolley Coach		11,000
(c) Motor Bus		134,000
<u>9. Payroll - 1947 -</u>	Total	\$790,000,000
(a) Electric Railway		377,000,000
Surface Railway	257,000,000	
Subway & Elevated	120,000,000	
(b) Trolley Coach		31,000,000
(c) Motor Bus		382,000,000

7,450  
10,332

257  
81  
205  
382

TABLE 2.  
RESULTS OF TRANSIT OPERATIONS IN THE UNITED STATES  
1932 TO 1947 INCLUSIVE

YEAR	OPERATING REVENUE	OPERATING EXPENSES (Incl. Deprec.)	NET REVENUE	TAXES
	(Thousands)	(Thousands)	(Thousands)	(Thousands)
1932 .....	\$ 696,490	\$ 562,850	\$133,640	\$ 51,021
1933 .....	642,400	502,420	139,980	47,370
1934 .....	674,900	525,490	149,410	49,183
1935 .....	681,400	534,930	146,470	50,458
1936 .....	727,900	565,180	162,720	56,920
1937 .....	733,500	588,680	144,820	63,504
1938 .....	700,800	579,690	121,110	65,723
1939 .....	720,700	586,600	134,100	67,499
1940 .....	737,000	598,030	138,970	62,688
1941 .....	800,300	644,260	156,040	66,803
1942 .....	1,040,000	769,390	270,610	128,650
1943 .....	1,294,000	932,970	361,030	186,340
1944 .....	1,362,300	1,012,070	350,230	189,250
1945 .....	1,380,400	1,067,140	313,260	164,530
1946 .....	1,397,100	1,129,430	267,670	129,020
1947 .....	1,390,800	1,238,740	152,060	104,940
1948	1,488,600	1,343,651	144,949	101,210

TABLE 2. (Continued)

YEAR	OPERATING INCOME	OPERATING RATIO	TAXES IN % OF REVENUE	OPERATING INCOME IN % OF REVENUE
	(Thousands)			
1932 .....	\$ 82,619	80.81%	7.33%	11.86%
1933 .....	92,610	78.21	7.37	14.42
1934 .....	100,227	77.86	7.29	14.85
1935 .....	96,012	78.50	7.41	14.09
1936 .....	105,800	77.65	7.82	14.53
1937 .....	81,316	80.26	8.66	11.09
1938 .....	55,387	82.72	9.38	7.90
1939 .....	66,601	81.39	9.37	9.24
1940 .....	76,282	81.14	8.51	10.35
1941 .....	89,237	80.50	8.35	11.15
1942 .....	141,960	73.98	12.37	13.65
1943 .....	174,690	72.10	14.40	13.50
1944 .....	160,980	74.29	13.89	11.82
1945 .....	148,730	77.31	11.92	10.77
1946 .....	138,650	80.85	9.23	9.92
1947 .....	47,120	89.07	7.54	3.39
1948	43,729	90.26	6.80	2.94

*Leaved off vertical ruling  
use standard heading  
change % comparisons to 1922-38-48*

*OK*

*TABLE VII  
Ch. 18*

TABLE 3.

TOTAL TRANSIT PASSENGERS IN THE UNITED STATES BY  
TYPES OF SERVICE--1922 TO 1947

CALENDAR YEAR	RAILWAY			TROLLEY COACH (Millions)	MOTOR COACH (Millions)	GRAND TOTAL (Millions)
	SURFACE (Millions)	SUBWAY & ELEVATED (Millions)	TOTAL (Millions)			
1922	13,389	1,942	15,331	.....	404	15,735
1923	13,569	2,081	15,650	.....	661	16,311
1924	13,105	2,207	15,312	.....	989	16,301
1925	12,903	2,264	15,167	.....	1,484	16,651
1926	12,875	2,350	15,225	.....	2,009	17,234
1927	12,450	2,451	14,901	.....	2,300	17,201
%	73	16	87	.....	13	100
1928	12,026	2,492	14,518	- 3	2,468	16,989
1929	11,787	2,571	14,358	5	2,622	16,985
1930	10,513	2,559	13,072	16	2,479	15,567
1931	9,175	2,408	11,583	28	2,313	13,924
1932	7,648	2,204	9,852	37	2,136	12,025
1933	7,074	2,133	9,207	45	2,075	11,327
1934	7,394	2,206	9,600	68	2,370	12,038
1935	7,276	2,236	9,512	96	2,618	12,226
1936	7,501	2,323	9,824	143	3,179	13,146
1937	7,161	2,307	9,468	289	3,489	13,246
%	54	17	71	2	27	100
1938	6,545	2,236	8,781	3 389	3,475	12,645
1939	6,171	2,368	8,539	445	3,853	12,837
1940	5,943	2,382	8,325	534	4,239	13,098
1941	6,081	2,421	8,502	652	4,931	14,085
1942	7,290	2,566	9,856	899	7,245	18,000
1943	9,150	2,656	11,806	1,175	9,019	22,000
1944	9,516	2,621	12,137	1,234	9,646	23,017
1945	9,426	2,698	12,124	1,244	9,886	23,254
1946	9,027	2,835	11,862	1,311	10,199	23,372
1947	8,096	2,756	10,852	1,356	10,332	22,540
%	36	12	48	6	46	100
1948	6,506	2,606	9,112	1,528	10,728	21,368
	31%	12	43	7	50	100

TABLE 4

REVENUE VEHICLE MILES OPERATED IN THE UNITED STATES BY EACH TYPE  
OF TRANSIT VEHICLE - 1926-1947

Calendar Year	RAILWAY			TROLLEY COACH	MOTOR COACH	GRAND TOTAL
	SURFACE (Millions)	SUBWAY AND ELEVATED (Millions)	TOTAL (Millions)			
1926	1,821.9	398.1	2,220.0		449.7	2,669.7
1927	1,753.6	410.2	2,163.8		589.2	2,753.0
%	64	15	79		21	100
1928	1,679.1	434.3	2,113.4	1.2	633.4	2,748.0
1929	1,610.3	450.3	2,060.6	2.0	699.8	2,762.4
1930	1,540.4	454.8	1,995.2	6.0	705.8	2,707.0
1931	1,417.9	440.7	1,858.6	7.9	682.5	2,549.0
1932	1,266.7	423.5	1,690.2	9.5	663.3	2,363.0
1933	1,165.7	427.7	1,593.4	10.5	655.1	2,259.0
1934	1,147.7	438.6	1,586.3	14.6	711.1	2,312.0
1935	1,096.6	447.4	1,544.0	19.0	764.0	2,327.0
1936	1,080.9	461.6	1,542.5	26.3	864.2	2,433.0
1937	1,029.2	469.1	1,498.3	49.7	957.0	2,505.0
%	41	19	60	2	38	100
1938	922.3	457.4	1,379.7	67.9	986.4	2,434.0
1939	878.3	469.4	1,347.7	74.9	1,047.4	2,470.0
1940	844.7	470.8	1,315.5	86.0	1,194.5	2,596.0
1941	792.2	472.8	1,265.0	98.4	1,313.0	2,676.4
1942	850.4	469.6	1,320.0	115.7	1,612.0	3,047.7
1943	978.0	461.7	1,439.7	129.7	1,693.0	3,262.4
1944	977.9	461.0	1,438.9	132.3	1,713.3	3,284.5
1945	939.8	458.4	1,398.2	133.3	1,722.3	3,253.8
1946	894.5	458.9	1,353.4	143.7	1,807.2	3,304.3
1947	839.3	462.3	1,301.6	155.1	1,885.7	3,342.4
%	25	14	39	5	56	100
1948	699.3	458.1	1,157.4	178.0	1,975.7	3,311.1



TABLE 5

NEW TRANSIT EQUIPMENT DELIVERED IN 1947 CLASSIFIED ACCORDING TO POPULATION GROUP AND SEATING CAPACITY OF BUSES

Population Group	Subway & Elevated 96 Seats	Street Car 45 - 48 Seats	Trolley Coach 40 - 45 Seats	Motor Bus (Integral Only)			Grand Total All Vehicles	
				29 Seats or less	40 30-39 Seats or more	Total		
Over 1,000,000.....	2	401	88	186	342	2,076	2,604	3,095
500,000-1,000,000....	..	..	157	55	184	1,225	1,464	1,621
250,000-500,000.....	..	208	576	367	439	1,482	2,288	3,072
100,000-250,000.....	..	..	82	49	715	878	1,642	1,724
50,000-100,000 .....	..	17	52	306	917	207	1,430	1,499
Less than 50,000 ....	..	..	..	566	685	83	1,334	1,334
Suburban and Other...	..	..	..	422	435	410	1,267	1,267
Total . . . . .	1947 2	626	955	1,951	3,717	6,361	12,029	13,612
	1948 206	478	1,430	523	2,144	4,342	7,009	9,123

NEW PASSENGER EQUIPMENT DELIVERED TO TRANSIT COMPANIES IN THE UNITED STATES - 1936 TO 1947

Calendar Year	Railway Cars			Trolley Coaches	Motor Buses	Grand Total
	Surface	Subway & Elevated	Total			
1936	573	0	573	538	4,572	5,683
1937	342	300	642	462	3,908	5,012
1938	145	53	198	184	2,498	2,880
1939	371	150	521	587	3,918	5,026
1940	463	15	478	310	3,984	4,772
1941	462	0	462	411	5,600	6,473
1942	284	0	284	336	7,200	7,820
1943	32	0	32	117	1,251	1,400
1944	284	0	284	55	3,807	4,146
1945	332	0	332	161	4,441	4,934
1946	421	0	421	266	6,463	7,150
1947	626	2	628	955	12,029	13,612.
1948	478	206	684	1,430	7,009	9,123 ✓

TABLE 5 (CONTINUED)

TRANSIT PASSENGER EQUIPMENT IN 1947 SHOWING TYPES OF VEHICLES AND THEIR

DISTRIBUTION BY POPULATION GROUPS

	<u>Railway Cars</u>	<u>Trolley Coach</u>	<u>Motor Bus</u>	<u>Grand Total</u>
Subway and Elevated .....	9,174	..	..	9,174
Surface Lines: (Population Group)				
Over 1,000,000 .....	8,778	322	10,572	19,672
500,000-1,000,000 .....	5,868	686	6,847	13,401
250,000-500,000 .....	3,751	2,232	8,150	14,133
100,000-250,000 .....	677	797	10,266	11,740
50,000-100,000 .....	834	387	7,917	9,138
Less than 50,000 .....	524	208	7,723	8,455
Suburban and Other.....	<u>1,175</u>	<u>..</u>	<u>5,442</u>	<u>6,617</u>
Total . . . . .	<u>30,781</u>	<u>4,632</u>	<u>56,917</u>	<u>92,330</u>
	<i>1947</i> <i>1948</i> 27,367	<i>5,708</i>	<i>58,540</i>	<i>91,615</i>

TOTAL MILES OF ELECTRIC RAILWAY TRACK, MOTOR BUS ROUTE AND TROLLEY COACH  
ROUTE OF THE TRANSIT INDUSTRY IN THE UNITED STATES, 1947 DISTRIBUTED BY  
POPULATION GROUPS

	<u>Railway</u>	<u>Trolley Coach</u>	<u>Motor Bus</u>
Subway and Elevated .....	1,252	..	..
Surface Lines: (Population Groups)			
Over 1,000,000 .....	< 2,820 >	< 126 >	< 6,340 >
500,000-1,000,000.....	< 2,100 >	< 210 >	< 3,680 >
250,000-500,000 .....	< 1,860 >	< 1,374 >	< 9,880 >
100,000-250,000 .....	< 690 >	< 617 >	< 11,700 >
50,000-100,000 .....	< 710 >	< 317 >	< 8,400 >
Less than 50,000 .....	< 200 >	< 153 >	< 5,890 >
Suburban and Other .....	< 5,370 >	<u>..</u>	< 49,460 >
Total . . . . .	<u>15,002</u>	<u>2,797</u>	<u>95,350</u>
	<i>1947</i> <i>1948</i> 12,993	<i>3,017</i>	<i>96,473</i>

2 yrs.

*F. E. Ry*  
3

TABLE 6

TRENDS OF PASSENGER EQUIPMENT IN THE UNITED STATES 1926-1947

*Standard heading  
change to change to 1928-38-48  
leave off vertical markings*

Calendar Year	RAILWAY CARS			TROLLEY COACH	MOTOR COACH	GRAND TOTAL
	SURFACE	SUBWAY AND ELEVATED	TOTAL			
1926	62,857	8,909	71,766	..	14,400	86,166
1927	61,379	8,957	70,336	..	18,000	88,336
%	69	10	79		21	100
1928	58,940	9,611	68,551	41	19,700	88,292
1929	56,980	9,983	66,963	57	21,100	88,120
1930	55,150	9,640	64,790	173	21,300	86,263
1931	53,120	9,638	62,758	225	20,700	83,683
1932	49,500	10,434	59,934	269	20,200	80,403
1933	47,700	10,424	58,124	310	20,200	78,634
1934	43,700	10,418	54,118	441	22,200	76,759
1935	40,050	10,416	50,466	578	23,800	74,844
1936	37,180	10,923	48,103	1,136	26,800	76,039
1937	34,180	11,032	45,212	1,655	27,500	74,367
%	46	15	61	2	37	100
1938	31,400	11,205	42,605	2,032	28,500	73,137
1939	29,320	11,052	40,372	2,184	32,600	75,156
1940	26,630	11,032	37,662	2,802	35,000	75,464
1941	27,092	10,578	37,670	3,029	39,300	79,999
1942	27,230	10,278	37,508	3,385	46,000	86,893
1943	27,250	10,255	37,505	3,501	47,100	88,106
1944	27,180	10,105	37,285	3,561	48,400	89,246
1945	26,680	10,075	36,755	3,716	49,670	90,141
1946	24,730	9,232	33,962	3,916	52,450	90,328
1947	21,607	9,174	30,781	4,632	56,917	92,330
%	23	10	33	5	62	100
1948	17,911	9,456	27,367	5,708	58,540	91,615
	20%	10	30	6	64	100

9370

TABLE 7

ELECTRIC RAILWAY TRACK, MOTOR BUS ROUTE AND TROLLEY COACH  
ROUTE OF THE TRANSIT INDUSTRY IN THE UNITED STATES 1926-1947

As of December 31st	TOTAL MILES OF RAILWAY TRACK			TROLLEY COACH MILES OF NEGATIVE OVERHEAD WIRE	MOTOR BUS MILES OF ROUTE ROUND TRIP	GRAND TOTAL
	SURFACE	SUBWAY AND ELEVATED	TOTAL			
1926	40,570	1,030	41,600	..	36,900	78,500
1927	39,682	1,040	40,722	..	38,900	79,622
%	50	1	51	..	49	100
1928	38,235	1,065	39,300	39	43,500	82,839
1929	36,520	1,080	37,600	59	52,800	90,459
1930	34,320	1,080	35,400	146	60,900	96,446
1931	32,120	1,080	33,200	194	60,500	93,894
1932	30,418	1,130	31,548	251	58,300	90,099
1933	28,730	1,170	29,900	281	52,700	82,881
1934	27,270	1,230	28,500	423	54,700	83,623
1935	25,470	1,230	26,700	548	58,100	85,348
1936	24,040	1,260	25,300	859	62,200	88,359
1937	22,460	1,310	23,770	1,166	67,000	91,936
%	24	1	25	1	74	100
1938	20,500	1,300	21,800	1,398	70,400	93,598
1939	19,300	1,300	20,600	1,543	74,300	96,443
1940	18,360	1,240	19,600	1,925	78,000	99,525
1941	17,100	1,250	18,350	2,098	82,100	102,548
1942	16,950	1,250	18,200	2,330	85,500	106,030
1943	16,950	1,260	18,210	2,305	87,000	107,515
1944	16,860	1,252	18,112	2,302	87,700	108,114
1945	16,480	1,252	17,732	2,370	90,400	110,502
1946	15,490	1,252	16,742	2,411	91,150	110,303
1947	13,750	1,252	15,002	2,797 <sup>00</sup>	95,350	113,149
%	12	1	13	2	84	100
1948	11,742	1,251	12,993	3,017	96,473	

TABLE 8

TREND IN CITY TRANSIT OPERATIONS

885 American cities formerly served by street cars now rely exclusively on motor buses and public transportation. Between December 1944 and December 1947 the number of street cars in service has dropped from 27,180 to 21,607, a reduction of 5,573 rail vehicles. During this same three-year period 28,934 motor buses and 1,569 trolley buses were produced and put into local service on the streets of American cities and towns. In addition, many small cities and towns in the 10,000 to 15,000 population group, and which are too small to warrant local bus service, rely exclusively on through buses for local transportation.

<u>Calendar Year</u>	<u>Number of cities with pop. over 10,000</u>	<u>All-Bus Local</u>	<u>All-Bus IC only</u>	<u>All-Bus Total</u>	<u>Ry. and bus Local and IC</u>	<u>Ry. only, Local and IC</u>
1922	820	14	4	18	197	560
1928	...	...	...	188	348	...
1929	963	189	13	202	357	...
1930	979	...	...	224	404	...
1931	...	...	...	269	...	...
1932	982	217	83	300	447	113
1933	982	235	94	329	416	102
1934	982	258	105	363	398	85
1935	982	279	114	393	377	74
1936	982	306	128	434	341	62
1937	982	349	147	496	305	39
1938	982	383	147	530	276	36
1939	982	408	147	555	256	34
1940	982	428	147	575	250	32
1941	1077	474	249	723	191	17
1948	1078	659	226	885	117	5

Exhibit No.

49

Witness

JENKINS

Date

Oct. 13, 1948

Before The  
Public Utilities Commission of The State of California  
Applications Nos. 23053 and 27466  
Case No. 4843

PASSENGER LOADING STANDARDS  
AN ANALYSIS OF THEIR EFFECT UPON  
RAIL AND MOTOR COACH LINES OF  
PACIFIC ELECTRIC RAILWAY COMPANY

Submitted by Arthur C. Jenkins,  
Consulting Engineer

Pacific Electric Railway Company  
Los Angeles, California  
October 13, 1948

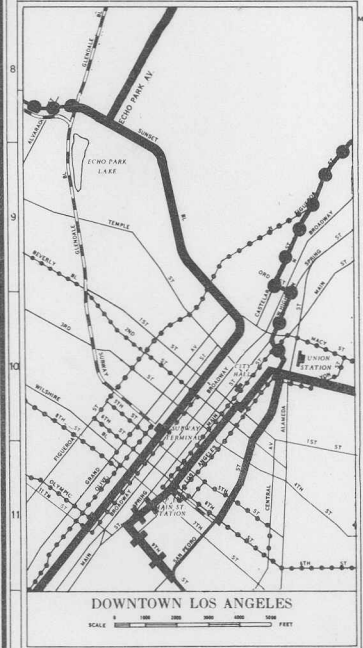
LOAD FACTOR

Pacific Electric Railway Company  
 MAP SHOWING PASSENGER RAIL LINES  
 PROPOSED FOR REPLACEMENT BY MOTOR COACH SERVICE  
 AND OTHER CHANGES



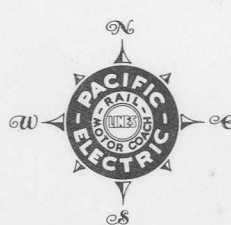
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- LEGEND**
- Rail Lines - Passenger and Freight - to be continued
  - Rail Lines - Passenger Only - to be continued
  - Rail Lines - Freight Only - to be continued
  - - - Motor Coach Lines - to be continued
  - Proposed Motor Coach Lines To Be Established in Lieu of Present Rail Passenger Service. Exception: On Venice Blvd. between Vineyard and downtown Los Angeles, proposed motor coach line would not handle local passengers.
  - Proposed Additional Motor Coach Lines
  - Proposed Motor Coach Line Discontinuance
  - Proposed Rail Passenger Service Discontinuance, without bus service substitution
  - Proposed Rail Line - Freight Only
  - ⊗ Proposed Freight Rail Line Abandonment

SCALE IN MILES



## PASSENGER LOADING STANDARDS

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AN ANALYSIS OF PASSENGER  
LOADING STANDARDS IN THE TRANSIT INDUSTRY

A - DISCUSSION

DEFINITION OF LOADING STANDARDS

Loading standard as applied to transportation of passengers in the transit industry is the relationship between the number of passengers hauled on an individual vehicle and the number of seats available. Commonly, this is referred to as Load Factor which is the direct arithmetical ratio between passengers and seats expressed as a percentage. A load factor of 100 represents a condition where there are 100 passengers for each 100 seats. Load factors in excess of 100 percent indicates more passengers than seats. Usually these standards are established on the basis of a maximum average standee load over a specified period of time based upon the total number of passengers and total number of seats on all vehicles passing the maximum load point within the prescribed period. The measuring interval is ordinarily arbitrary being sometimes 20 minutes, 30 minutes or 60 minutes, depending upon the type of service and the character of loading. It is quite commonly the practice to establish some measure of permissible excess of passengers over seats during the peak traffic periods of the day, and to require that on the average during the off-peak period there be provided at least one seat for each passenger during a time interval usually longer than that applied for peak traffic.

FUNDAMENTAL CONSIDERATIONS

Loading standards have been in the past largely the result of arbitrary consideration with little uniformity in the various classifications of transit operation. It is common knowledge that the subways in large cities, such as New York, lay particular stress in designing their equipment to provide for a maximum area for standing passengers and a minimum number of seats in order that the exceedingly heavy peak hour demands can be met with a reasonable number of vehicles in an expedited service. Standing of passengers has, since the inception of the transit industry, been recognized as an absolute necessity and in those areas where extremely heavy concentration of traffic is found, there has been little question in the minds of passengers as to the necessity of such practice or as to the possibility of their personal rights being infringed upon. During recent years, however, particularly in the west, there has been a growing tendency of passengers toward the thought that the fare they pay entitles them to a seat. This is definitely not the case and could not possibly be introduced as a standard practice. The fare paid by the passenger should be considered as the purchase price of a quantum of service designed to carry him from one point to another. The extent to which standing passengers should be carried is of course dependent upon a number of variables including the type of equipment, the classification of service, the time of

day, the frequency of operation and the financial requirements of the carrier.

In determining what elements should be included in the loading standard formula the first is naturally the extent of human endurance. This element is ordinarily converted into a consideration of what the passenger considers to be the standard of comfort to which he is entitled. Although generally passengers would prefer to travel in a seat, there are some who stand by preference. This class of passenger, however, is very much in the minority. In measuring the extent of his discomfort the average person is inclined to apply different yardsticks, depending upon the nature of the activity in which he is engaged. A shopper will spend several hours on foot traveling to and from the various stores and shopping centers without any thought whatsoever to discomfort and certain classifications of employment require standing all day. On the other hand, a passenger who is required to stand on a transportation vehicle, regardless of how short the interval, is inclined to feel ill-treated and overcharged for the service. Actually there have been instances where irate individuals have proposed the thought that there be a different fare dependent upon whether or not a seat is made available. This, of course, is entirely impractical.

Therefore, in boiling the matter down to the essential elements we must take into consideration the practical aspects of the problem. These aspects can be divided into two classifications. First, the reaction of the passenger as to his comfort and convenience, and secondly, those elements that apply to the ability of the carrier to provide a high standard of service.

#### LACK OF UNIFORM STANDARDS

To date there have been no uniform standards of loading established for application to the industry generally. In recognition of the importance of proper loading standards the American Transit Association, which is a central source of information for the industry as a whole, has attempted to compile a list of all the various standards applying to different operators throughout the country. The results of that attempt have been disappointing. There is no uniformity. In some instances rules are established by State regulatory authorities, in others by the cities in which the operations are conducted and in others by the companies themselves in recognition of the importance of providing the highest possible standard of service in the interest of their financial status. As between those regulatory authorities who have instituted specific standards there is great variances as to the method applied and the percentages used.

#### ARBITRARY DECISION HARMFUL

In many instances where regulatory authorities have established standards they have largely been developed upon an arbitrary basis taking into consideration as the primary determinate only the reaction of the public, without giving due consideration to the economical aspects of the problem. Unfortunately, the demands of the public in connection with service standards are not

always consistent with the economical features involved. To apply restrictive standards, based largely upon public desire, can result in very harmful effects upon the carriers.

#### RELATION TO ECONOMICS OF OPERATION

It can easily be seen without extensive research that from the Company's point of view and in the long run, the interest of the public itself, the establishment of loading standards is directly related to the various factors entering into the economic formula of the carrier. The two controlling elements in that formula are revenues and expenses. With a given revenue potentiality and at a fixed fare level the operating ratio is directly affected by fluctuations in the cost of providing service. The cost of providing service is dependent upon a variety of items making up the various types of operating expenses, including as one of the major costs the payroll of operating personnel. There also is another important factor, in proper provision for depreciation and amortization of investment. It is obvious that to provide service for a given number of passengers the cost of performing that service will be considerably higher both from the point of view of payroll and maintenance when providing a seat per passenger than when providing service at less than a seat per passenger. For each vehicle that can be saved by applying standee factors a saving can be made in the cost of operations, the maintenance of equipment and inasmuch as lesser number of vehicles will be required, in depreciation.

#### UNIFORM APPLICATION NOT PRACTICAL

It is further evident that no one uniform set of loading standards can be developed that will satisfactorily apply to all types of operation, even if such operations are conducted on a basis of reasonable profit, it being assumed, of course, that standing passengers are inherently required in certain types of urban heavy volume movements. It is important, however, to make this distinction between the two types of carrier; on the one hand the carrier who is operating profitably and on the other hand the carrier who is not. Considering the first classification it might be assumed that different loading standards should be applicable to purely urban lines as distinguished from suburban, interurban and intercity services. There of course must be some determination made as to the maximum reasonable distance a passenger should be required to stand on long haul intercity service. In between that maximum point and 100% load factor is the field in which intermediate standards must be established.

#### APPLICATION TO PROFITABLE OPERATION

When considering a property that is earning a reasonable profit, different consideration should be applied to the establishment of loading standards than on one that is operating at a loss. In such former instances a reasonable relationship must be established between the comfort and convenience of the passenger and the fare he is required to pay. If the revenue potentialities are such that a profit could be earned when providing a seat per passenger in all cases, then the only control would be the practical restrictions imposed by the physical capacity of street and rail facilities. It is questionable, however, as to whether in any case of urban, suburban or interurban operations

the fares could be raised to the point where a seat could be provided for every passenger on a compensatory basis throughout the entire period of the day. The fare would be prohibitive. Therefore, in establishing the standard a reasonable medium must be selected and the fare fixed to provide a reasonable degree of comfort.

#### APPLICATION TO NON-PROFITABLE OPERATION

The problem is an entirely different one when considering the establishment of loading standards for application to a transit operation whose services are already conducted at a deficit. In such an instance the fundamental consideration cannot be escaped that the carrier, if required to continue in business, is entitled to a reasonable return on his investment and should not be forced to subsidize the public. If it is determined that the services provided by such a carrier are essential and cannot be dispensed with, then the variables involved in the financial formula must be adjusted to the extent required to provide the carrier with a profit. Loading standards represent one of the important variables in that formula. If the carrier is already applying a standee factor in peak service and incurring a deficit and all other means of economy have been explored and found inadequate, then the loading standard should be decreased. The assumption, of course, throughout this entire analysis is based upon the fact that the service of the carrier in question is indispensable. Under such conditions actually the provision of any measure of seats becomes of secondary importance.

We are all familiar with the effects of the last World War upon the transit industry. The tremendously increased traffic brought about by accelerated war time industry completely over-taxed the available facilities. During that period it was not a question of appropriate loading standards, it was a question of being able to find enough vehicles of any type, regardless of their age, condition or capacity, to meet the requirements of transporting persons. Every effort was exerted to develop means of carrying the largest number of persons possible in each vehicle. In this quest for increased capacity the "Stand-sit" seat was developed wherein modified benches were installed to provide the passenger with a device against which he could lean rather than sit. This only serves to demonstrate the extreme measures that can be taken when the necessity exists. Naturally, it is to the interest of the carrier during peace times to provide the highest standard of service that can be reasonably justified in order that patronage will be satisfied and additional traffic be induced.

#### AUTOMATIC REGULATION OF LOADING STANDARDS

The fixing of loading standards on a predetermined basis does not necessarily mean that the carrier will actually enjoy the advantages that ordinarily would be expected to accrue. A tendency has been developing on the part of passengers, particularly on suburban and interurban lines, to refuse to board vehicles if no seats are available. This is a condition over which neither the carrier nor the regulatory authorities have control. It is a manifestation of the exercise of personal rights of the individual passenger. It might be said that under such conditions the vehicle should be held until

a standing load does board. Such a practice, however, is not a solution to the problem as it would antagonize the passengers with a corresponding harmful effect upon public relations and a further reduction in traffic volume. In other words, to be trite, you can lead a horse to water but you can't make him drink. This attitude on behalf of the public is one that can probably be corrected only through application of aggressive and effective public relation measures, that will educate the traveling public to the problems of the carriers and create a sympathetic attitude.

#### LOAD FACTOR APPLIES NOT ONLY TO THE INDIVIDUAL VEHICLE

In applying load standards where they have been carefully developed and can be appropriately placed into effect, consideration must be given not only to the number of persons in an individual vehicle with relation to the number of seats provided, but also to the condition at the points of load concentration along the route. Even though reasonable loading standards might be adhered to by the carrier it would still be possible to provide a highly deficient service by failing to pick up waiting passengers within a reasonable length of time. At a highly concentrated loading area each vehicle departing might carry a load within the restrictions imposed but not provide enough vehicles to adequately diminish the waiting crowd.

#### TERMINAL VERSUS STREET LOADING

Another consideration is the difference in the character of passenger's reaction between loading at terminal concentration points and at separated points enroute. The tendency for passengers to board a loaded vehicle in street pick-up is much greater than it is at a terminal. Refusal of passengers to board a vehicle when all seats are loaded is much more greatly in evidence at terminals than in street loading.

#### STANDARDS SHOULD NOT BE PERMANENT

Although under conditions existing as of a specific time the physical aspects of the problem and the economic elements involved may prescribe certain specific loading standards, those standards should not be considered as permanent and as the maximum above which the carrier will never be permitted to go. In view of the fact that the financial formula is directly related to loading standards, it is obvious that as changing conditions alter the financial picture of the carrier, revision of the standards should be considered in the same fashion that revision in the fare structure is ordinarily considered. The two definitely go together.

#### PASSENGER TURN OVER

In establishing loading standards based upon an arbitrary maximum limit of standing time, the formula should give consideration to the fact that although there may be standing passengers on a given vehicle during a period of time exceeding the limit established, this does not always mean that any one individual passenger has been required to stand in excess of the time limit.

This is particularly true in a service where there is a heavy turnover or inter exchange of passengers enroute. Where such is the case the passenger who has been standing for the longest time will have access to a seat as other passengers disembark so that the average standing time of the individual person may be considerably less than the total time during which the vehicle carries standing passengers.

#### CURRENT EFFORTS TO STANDARDIZE

In recognition of the importance of loading standards there has been recently initiated a movement toward developing uniform loading standards for application to the transit industry as a whole, throughout the country. It is highly important in proceeding with this development that careful consideration be given to all of the many elements involved and particularly to the equities of the carriers in those instances where operations are conducted at a deficit or at a less than reasonable operating ratio.

#### B - SPECIFIC APPLICATION

##### LOS ANGELES METROPOLITAN AREA

Confining the scope of analysis just to the Los Angeles metropolitan area, there are evidences of the need for applying different considerations to the various carriers serving the area when fixing loading standards. The principal mass transit operators in this area are the Pacific Electric Railway Company, Los Angeles Transit Lines and the Los Angeles Motor Coach Lines. The general character of service on a system-wide basis is different on each of these operations and taking any one operation, there are different characteristics applying to the several lines operated by each. The primary difference is that Pacific Electric Railway Company is conducting its operations at a heavy financial loss, whereas, the other two carriers are in a much more favorable earning position.

This being the case, in line with the above discussion, it should not be considered a foregone conclusion that loading standards applied to one carrier should be the same as those applied to another carrier, even though from a practical point of view, all physical conditions involved are equal. Each of these carriers fills a particular need for passenger transportation in the area served and each performs a class of service that is designed to meet that particular need. The essential nature of each of these services has been demonstrated during recent years by the confusion that has existed as a result of work stoppages. No one of the operations could be dispensed with completely, in connection with labor difficulties.

It would of course, be an ideal condition if each passenger on each route of each carrier could be provided with uniformity in all elements of the transportation he required, including fares, equipment and service, but such is not possible.

Due to conditions that are to a large extent of historical development,

Pacific Electric has been harder hit financially in its fight for survival than other transit operations in this area and many of those in other areas that are primarily engaged in urban transportation.

Although there have been adverse elements at work with respect to the urban operators, there are certain inherent conditions that make urban mass transportation more highly essential than suburban or interurban service. For travel between longer distances, the private automobile has afforded more effective competition than in the field of short haul of the typical urban operator. It may be true that certain individual lines of Pacific Electric are similar in character to other lines of the local carrier, but it must be kept in mind that the semi-urban type of line on Pacific Electric is in the minority as compared with the system total.

There is a band of overlap between the types of service provided by Pacific Electric and Los Angeles Transit Lines wherein the line characteristics are somewhat similar but on both sides of that band each carrier projects into a different field of service and correspondingly into different fields of earning capacity. Taking the two extremes that would include for example, one of the longer lines of Pacific Electric as compared with one of the shorter lines of Los Angeles Transit Lines, we find conditions that are at great variance. On some of the Pacific Electric Lines, there are local operating restrictions which almost entirely preclude the financial advantages of heavy turn-over of passengers. On the other hand, the local lines have unlimited freedom in this respect and the turn-over or interchange of passengers is much greater.

Another aspect of load factor that is given very little, if any, consideration is the average daily number of total passengers carried as related to the total number of seats provided on a mileage basis. Development of such a figure would no doubt be highly interesting and most revealing as to the real problem confronting Pacific Electric. Where heavy volume and large turn-over exists on relatively short lines, it is possible to provide the individual passenger with transportation service at a lower per trip fare than can be provided on longer interurban type lines where the turn-over is very small and the length of haul great. Correspondingly the fares per unit on the longer lines must be higher than on the shorter ones. This does not mean, however, that load standards should be more lenient on the short lines than on the long ones. Actually, the reverse might very well be true and can be logically demonstrated.

In proceeding with this type of analysis, a considerable measure of justification can be developed for applying higher load standards on one of two lines that may operate in parallel through contiguous territory, even though there may be little, if any, difference in the physical characteristics of the service provided, or the distances the passengers are transported.

#### ANALYSIS OF PACIFIC ELECTRIC'S PROBLEM

A careful analysis has been made of several typical rail and motor coach



lines of Pacific Electric in an effort to develop the effects of prescribed load factors and the results that would be obtained by applying more lenient standards. The Company is now confronted with an extremely serious financial deficit wherein during 1947 it incurred a net operating loss, before interest on bonds, of more than \$1,700,000, including freight and passenger service. Passenger operations were conducted at a loss of approximately \$2,800,000 and rail service was performed at a loss of \$3,400,000.

It is obvious that such a condition cannot be permitted to continue and that remedial measures must be taken at the earliest possible time. Under conditions of loss such as these, it is highly inconsistent that the Company should be required to maintain loading standards that will create an increase in these deficits.

In addition to these losses, the Company is confronted with an increase in payroll that will become effective within a very short time, that will amount to approximately  $1\frac{1}{2}$  million dollars annually. There are only a very small number of sources from which that added cost can be obtained and from which relief can be had with respect to the deficit already incurred. Either the revenue has to be increased proportionately or expenses must be reduced. Revenues can be increased materially only through an increase in fares, and there is the grave possibility that the present fare structure may be near the point of diminishing returns. This, then leaves only the possibility of affecting reductions in the costs of operation.

The effect of load factors has a direct bearing upon the extent of operating expenses. Application of more drastic loading standards increases the actual cost of operations through increased payroll, maintenance and service expenses, increases the number of vehicles that must be purchased to perform the service at prices higher than ever before, and will increase materially the provision that should be made for depreciation. Weighing all of the elements involved in this problem, it would appear to be one that logically should be approached from the point of view of relief to the carrier rather than additional financial restrictions.

The Company is now engaged in attempting to lift itself out of the depths of the financial loss into which it has dropped. It is attempting to cover all phases of operation in an effort to do whatever is necessary to bring revenues into proper relationship with expenses, so as to provide it with a reasonable profit. Until this survey has been completed and it is definitely known what the future of the lines of this carrier will be, equitable loading standards cannot be formulated.

Further, in view of the fact that application of improved loading standards means a real and immediate increase in costs, whereas, increased revenues from substitution, from fare increases or from any other source, require a considerable extent of time, application of more drastic standards hits the Company in a most vulnerable spot.

Taking all of these things into consideration, it would appear to be highly equitable and in no way unreasonable to afford the Company the measure

of relief that can be realized immediately through application of more lenient loading standards. After the system-wide survey has been completed and a final program for the future has been placed into effect, then would be the appropriate time to review the matter of loading standards and specify load factors for application to the revised system.

LOADING STANDARDS PRESCRIBED BY DECISION NO. 41152

In Decision No. 41152 the Public Utilities Commission ordered that the loading standards prescribed by recommendation No. 6 in Exhibit 32 be placed into effect within 60 days from the date of the Order. That recommendation in turn referred to the loading standards as specified in Chapter IV of the Exhibit, which covers 74 pages of the report in which each line of the system is analyzed in considerable detail. Although the report does not contain a concise summary of the various load standards or conditions as they apply to individual lines, the Company has carefully analyzed all data contained therein together with other considerations and determined that the loading standards desired by the Commission were primarily summarized on page 14 of Exhibit 32, and specifically as follows:

Off-peak Periods

Provide seats for all passengers passing maximum load points

Peak Periods

Interurban and longer suburban lines - Provide seat per passenger.  
City lines - Stantees allowed according to following standards  
 for various types of Pacific Electric equipment:

<u>Class</u>	<u>Seating Capacity</u>	<u>Loading Standard</u>
600-700-class rail cars	65	90
100-class rail cars	40	58
5000 (PCC) rail cars	59	90
Various - Motor Coaches	44-45	60

Check Period

30 or 60 minute periods as specified in Chapter IV of Exhibit 32.

Classification of Lines

Interurban Rail Lines

- Los Angeles-Pasadena via Oak Knoll
- Los Angeles-Pasadena via Short Line
- Los Angeles-Baldwin Park
- Los Angeles-Arcadia-Monrovia-Azusa-Glendora
- Sierra Madre Line
- Los Angeles-Long Beach

Los Angeles-San Pedro  
Los Angeles-Santa Ana  
Los Angeles-Newport Beach  
Los Angeles-Glendale-Burbank, from San Fernando Road to end  
of line.  
✓Venice Short Line.

Interurban Motor Coach Lines

Pasadena-Alhambra-Southern Pacific Station  
✓Los Angeles-Alhambra-Temple City-Arcadia  
Los Angeles-Balboa  
Los Angeles-Sunland  
Los Angeles-Santa Ana, including Whittier Boulevard Local.  
Long Beach-Pasadena  
Long Beach-Riverside  
Pasadena-Pomona  
Los Angeles-El Monte-Pomona-San Bernardino-Riverside,  
including Valley Boulevard Local and Garvey Avenue Local.  
Los Angeles-North Hollywood-Van Nuys  
Los Angeles-Santa Monica via Beverly Hills  
Los Angeles-Redondo Beach  
Los Angeles-Beverly-Sunset Boulevard-University

City Rail Lines

Watts-Sierra Vista  
Los Angeles-Van Nuys Rail Line  
Santa Monica Boulevard Line  
Los Angeles-Glendale-Burbank, from Subway Terminal to  
San Fernando Road.  
Hollywood Boulevard Lines  
Venice Boulevard-San Vicente Line  
Echo Park Avenue Line  
Long Beach-San Pedro Line  
Los Angeles-Santa Monica via Air Line

City Motor Coach Lines

Garfield Avenue-Highland Park  
Arlington-Riverside-San Bernardino-Redlands  
Long Beach-Huntington Park  
Hollywood-Beverly Hills-University  
Western-Franklin  
Emery Park  
North Hollywood  
Van Nuys-Canoga Park  
Van Nuys-San Fernando  
Van Nuys-Birmingham Hospital  
Glendale-Montrose-Verdugo City-La Canada  
Hollywood-Ventura Boulevard  
North Hollywood-Studio City-Sherman Oaks

LOADING STANDARDS DESIRED BY COMPANY UNDER PETITION TO MODIFY  
AND AMEND DECISION NO. 41152.

(For application to regular service.)

In recognition of the lack of information applying to the vital elements of loading standard determinations, a careful and extended analysis has been made by Pacific Electric for the purpose of determining within the highest degree of accuracy possible, the real nature of the equities involved in so far as they apply to the operations of this company. Loading standards are in many cases based upon arbitrary considerations of the physical aspects involved and desires of the public. When the financial integrity of the carrier is at stake, these considerations must be supplemented by a more concrete development of facts involved and a relationship must be established between loading standards and the company's financial status. This analysis has been conducted upon that premise and it is felt that the discussion heretofore rendered is substantiated conclusively by the results obtained.

The loading standards which are set forth herein as representing what is considered to be proper and equitable from the company's point of view have not been inflated in the hope or expectation that something less than asked for might be granted. The standards are considered to be the proper and nothing less will adequately meet the exigencies of the financial crisis confronting this company.

The content of the analysis as included in this report is considered as conclusive evidence that the standards applied for are not unreasonable under the circumstances and should be placed into effect immediately and permitted to remain at least until such time as the final re-arrangement of the company's properties and facilities have been placed into effect.

The specific loading standards that are recommended for application to the lines of Pacific Electric Railway Company are as follows:

Off Peak Periods - All Lines

At Maximum Load Points:

Provide on average, seat per passenger.

Peak Periods - All Lines

At Maximum Load Points:

Rail Cars - 150 percent load factor.

Motor Coaches - 150 percent load factor, applied to vehicle capacity minus 5.

Peak Period Time Limits

2 hours morning, 7:00 a.m. - 9:00 a.m.

2 hours evening, 4:00 p.m. - 6:00 p.m.

Modification on Saturdays to meet shift of peak and on individual lines as may be authorized to meet unusual conditions.

Maximum Standing Time

30 minutes after leaving major loading area.

Traffic Check Periods

30 minutes on frequent service.  
60 minutes on infrequent service.

Duration and Deviations

To be subject to adjustment upon application to the Public Utilities Commission.

## C. DETAILED ANALYSIS

### METHOD OF PROCEDURE

In order to obtain the necessary data upon which to base conclusions relative to proper loading standards, detailed traffic checks were made on various rail and motor coach lines and careful schedule and cost analyses computed. The traffic check data was set up on charts which are appended to this report indicating the characteristics of travel and loading at various points along each line. The primary purpose of the detailed analyses has been to determine two things. First, the length of time that passengers would be required to stand if the load factor were increased and the number of vehicles by which the line assignment could be reduced correspondingly. To this analyses estimates were made of the savings that would be possible in operating expenses by reason of more lenient loading standards. The following check provides a general summation of the results obtained and subsequent checks are devoted to the detailed analyses as applied to each individual line studied. Only representative lines were selected for analysis as a basis for establishing the theories involved. It was not considered necessary to carry out detailed studies on each line of the system as the work would be largely repetitious and would probably not alter the general findings.

### GENERAL SUMMARY

While the Pacific Electric's objective is to provide the maximum service practicable, there are economic limitations and restrictions depending upon the peak characteristics and volume of traffic demand which must be given careful consideration. Affecting the situation to a major extent is the problem of providing for peak service. Under present operating conditions in excess of 20 per cent of the total daily inbound passenger load during the peak hour and 40 per cent of this maximum hourly load during a 20-minute interval of the peak hour. Approximately 8 per cent of the total daily inbound load is developed in 20 minutes. Similar characteristics prevail for the outbound passenger load.

Simultaneous service demands of this character require the uneconomic use of a large number of vehicles which can only be utilized for a single round trip each during the entire day. It is well recognized that the cost of providing peak service is much greater than that of providing base or normal service where the equipment and man-hours can be economically scheduled. It would thus seem reasonable to expect that this high cost of providing excessive peak demand service should justify some modification of the established loading standards for accepted normal or base service, at least during the extreme peak intervals.

The modified standards should be established and checked, on the basis of the normal scheduled operations so as to avoid conditions of shifting pattern resulting from unusual traffic congestion or accidents, thereby creating loading situations which otherwise would be in conformity with the prescribed standards.

In general it costs in excess of \$26.00 per day on an out-of-pocket basis (including depreciation) to operate a motor coach in single round trip service. On a full cost basis the operation would cost at least \$37.00 per unit. In every instance studied where the equipment is operated only one single round trip per day, these units were operated at a loss as it is not possible to carry a compensatory load at present average fares, even on an out-of-pocket basis. As an example, the Los Angeles-Alhambra-Temple City Motor Coach Line operation requires 12 coaches which can only be utilized for one round trip per day.

The estimated out-of-pocket cost per unit operated in this service is \$26.86 per day, which would require, on the basis of a seat-per-passenger at the maximum load point, a fare of 30 cents instead of present average fare of 18.55 cents. On a full cost basis it would require a fare of 43 cents to be fully compensatory.

For motor coach operation it is recommended that a load factor of 150% of seating capacity be adopted after deducting five seats, during an average half hour interval, which would permit a partial reduction in the number of peak units required and some increase in individual line earnings.

For passenger rail operations it is recommended that a loading standard equivalent to 150% be permitted for a standing time of 30 minutes from the limit of the major loading areas.

In the demand for public transportation the "time element" is the passenger's first consideration and rather than wait for a following vehicle, even if in sight, experience indicates that--if possible to find room, the passenger will crowd into a fully seated and standing load rather than wait.

In general any reduction in equipment assigned to any line resulting from the increase in number of passengers permitted to be carried over a half-hour interval would be made during peak periods and would not affect the base schedules.

Estimated annual reduction in out-of-pocket operating expenses because of reduction in equipment operated based on results of detailed studies of four major coach lines is \$390,000, computed as follows:

	<u>Motor Coaches Required</u>	
	<u>Present</u>	<u>Proposed</u>
Alhambra Line .....	33	26
Valley Boulevard .....	29	25
L. A. -Whittier .....	37	29
L. A. -Santa Monica.....	36	27
	<u>135</u>	<u>107</u>
Difference .....	28 = 20.7%	

The above indicates a 21% reduction in units to be operated. However, applying only a 15% reduction to all system services which would probably be affected by the proposed increase in loading standards, which would compensate

for different seating capacities of coaches, the reduction in equipment would be 50 units. On the basis of an average saving of \$26.00 per coach for 300 days, the total saving would amount to \$390,000 annually.

It is estimated that an application of the above rail car standards to system operations would permit an immediate daily reduction of at least 33 passenger rail units. On the basis of a minimum out-of-pocket saving of \$21.00 per unit for 300 days per year the saving would amount to \$207,900 annually, or a total for both rail and motor coach operations of \$597,000.

• (Continued on Next Page)



L.A.-ALHAMBRA-TEMPLE CITY MOTOR COACH LINE

*PUC  
Seat/Passenger*

Load check outbound peak 4:00 P.M. - 6:00 P.M., Thursday, September 2, 1948

- (a) - 29 coaches, 1255 seats, provided to carry maximum load (at Sierra Vista) of 1210 passengers.
- (b) - Within an additional distance of 1.4 miles, or in an average elapsed time interval of 6 minutes, the total number of passengers on the 29 units had dropped to 900.
- (c) - During the entire peak, slight overloads occurred only over three average half-hour intervals as follows (on a basis of seat per passenger):

Location	Time	Pasgrs.	Seats	Units	Pasgr. Over-load	Over-load Per Unit
(1) Lincoln Park-SP						
Crossing . . .	.5:00-5:29 PM	407	390	9	17	2-
(2) Sierra Vista . . .	.4:30-4:59 PM	297	296	7	1	-
(3) Sierra Vista . . .	.5:00-5:29 PM	381	346	8	35	4+

Because of the extreme peak requirements at the present time, there are 12 coach units which make but one round trip per day in this service, and because of the time operated cannot be utilized for additional trips on this line or any other service.

Out-of-pocket cost (including depreciation) to operate coach in single round trip service is approximately \$27.00 per unit per day.

In order to earn only the fare out-of-pocket cost each unit would have to carry a total of 140 passengers per round trip - based on present average one-way fare of 18.55 cents, or 70 passengers per single trip - an equivalent load factor of 155% for a 45 passenger coach.

On the basis of a seat per passenger at maximum load point, an average fare of \$26.86/90 - \$.30 (30 cents) would have to be obtained, an increase of 62% to break even on an out-of-pocket basis. On a full cost basis an equivalent fare of approximately 43 cents would be required.

On a basis of a permissible loading of 60 passengers per unit (45 capacity) during an average half-hour interval, a reduction of 7 units could be made at an equivalent saving of \$188.00 per day during the peak period or \$56,400 per annum could be realized on this operation.

COST TO OPERATE COACH - ONE ROUND TRIP PER DAY

Route miles . . . . .	17.45
Round trip route miles . . . . .	34.90
Average unit cost - motor coach . . . . .	\$17,500
Annual depreciation - 10-year life . . . . .	1,750
Number of days peak coach operates (estimate) . . . . .	300
Average depreciation per day . . . . .	\$5.83
Average equivalent crew pay hours-single peak round trip . . . . .	9½
Daily rate 9½ hours @ \$1.47 (new rate effective Oct.16,1948)	\$13.97

*70% of total*

*Passenger Analysis last no. available*

*p.17*

*7x27.00*

*188.00 x 300*

*new rate*

L.A.-ALHAMBRA-TEMPLE CITY

	Unit Cost	
	Cents <u>Per Mile</u>	<u>Per Day</u>
Equipment Maintenance . . . . .	2.674	\$ 0.93
Operator's Wages . . . . .		13.97
Tires . . . . .	1.16	0.40
Fuel and Lubrication . . . . .	5.73	2.00
Servicing . . . . .	3.34	1.17
Depreciation . . . . .		5.83
Taxes . . . . .	7.30	2.56
		<hr/>
(Estimated Costs Based on July 1948 operations)		\$26.86

*Probably lower* ↑

L.A.-VALLEY BOULEVARD LOCAL MOTOR COACH LINE

Load check outbound peak 4:00 P.M. - 6:00 P.M., Wednesday August 4, 1948.

L.A.-El monte Local Coaches - Limited to Garfield Avenue

- (a) 15 coaches, 650 seats provided to carry maximum load (at Garfield Avenue) of 692 passengers. For the entire period passengers stood between Lincoln Park and Garfield Avenue, with a total average running time from Lincoln Park to Garfield Avenue of 15 minutes and a distance of 5.35 miles.
- (b) The passenger load dropped very rapidly after leaving Garfield Avenue, and within 5 minutes average running time, the total load was greatly below coach seating capacity.
- (c) Overloads on basis of seat per passenger occurred over 6 average half-hour intervals.

<u>Location</u>	<u>Time</u>	<u>Pass- engers</u>	<u>Seats</u>	<u>Units</u>	<u>Passgr. Overload over load</u>	<u>Per Unit</u>
(1) Lincoln Park....	4:00 - 4:29 P.M.	135	126	3	9	3
" "	4:30 - 4:59 P.M.	200	173	4	27	7
" "	5:00 - 5:29 P.M.	215	205	5	10	2
" "	5:30 - 5:59 P.M.	122	85	2	37	19
(2) Eastern & Valley	4:30 - 4:59 P.M.	185	173	4	12	3
" "	5:30 - 5:59 P.M.	105	85	2	20	10

- (d) One additional coach would be required to provide a seat per passenger arriving at maximum load point.

L.A.-Garfield Local Service

- (a) 14 coaches, 589 seats provided to carry maximum load of 664 passengers on arrival at Lincoln Park, an overload of 75 passengers. The equivalent of two additional coaches would be required to provide a seat per passenger arriving at the maximum load point. Attention is directed however, that the load begins to discharge soon after leaving Lincoln Park and is reduced to a seated load by the time of arrival at Eastern Avenue or within a distance of 1.75 miles and an average running time of 5 minutes.
- (b) Overloads on basis of seat per passenger occurred over 6 average half-hour intervals.
- (c) One additional coach would be required to provide a seat per passenger arriving at maximum load point.

<u>Location</u>	<u>Time</u>	<u>Pass- engers</u>	<u>Seats</u>	<u>Units</u>	<u>Passgr. Overload over load</u>	<u>Per Unit</u>
(1) Lincoln Park....	5:00-5:29 P.M.	205	176	4	29	7 $\frac{1}{2}$
(2) Eastern & Valley	5:00-5:29 P.M.	210	176	4	34	8 $\frac{1}{2}$
(3) Fremont & Valley	5:00-5:29 P.M.	205	176	4	29	7 $\frac{1}{2}$
(4) Garfield & Valley	4:00-4:29 P.M.	180	175	4	5	1 $\frac{1}{2}$
" "	4:30-4:59 P.M.	215	211	5	4	1-
" "	5:00-5:29 P.M.	205	176	4	29	7 $\frac{1}{2}$

Because of the extreme peak requirements at the present time, there are 7 coach units which make but one round trip per day in the above services, and because of the time operated cannot be utilized for additional trips on this line or any other service, To meet full seat-per-passenger requirements at maximum load point would require two additional coaches which would make but one round trip per day.

Out-of-pocket cost (including depreciation) to operate coach in single round trip service is approximately \$25.00 per unit per day. In order to earn only the bare out-of-pocket cost, each unit would have to carry a total of 160 passengers per round trip based on present average estimated fare of 16 cents, or 80 passengers per single trip, an equivalent load factor of 178% for a 45-passenger coach. Or on the basis of a seat-per-passenger at maximum load point, an average fare of \$25.12/90 = \$ .28 (28 cents) would have to be obtained, an increase of 75% to break even on an out-of-pocket basis. On a full cost basis an equivalent fare of approximately 40 cents would be required.

On a basis of a permissible loading of 60 passengers per unit (45-capacity) during any average half-hour interval, a total reduction of 4 units in the combined services could be made at an equivalent saving of \$100.00 per day during the peak period or \$30,000 per annum could be realized on this particular operation.

COST TO OPERATE COACH - ONE ROUND TRIP PER DAY

Route miles.....	11.30)	
Round trip route miles .....	22.60)	Average
Average unit cost - motor coach .....	\$17,500	
Annual depreciation - 10 year life .....	1,750	
No. days peak coach operate - (est.) .....	300	
Average depreciation per day .....	\$5.83	
Average equivalent crew pay hours -single peak R.T....	9½	
Daily rate 9½ hours @ \$1.47 .....	\$13.97	
		<u>Unit Cost</u>
		Cents
		<u>Per Mile</u> <u>Per Day</u>
Equipment Maintenance .....	6.53	\$1.48
Operator's Wages .....		13.97
Tires .....	1.16	.26
Fuel & Lubrication .....	5.18	1.17
Servicing .....	3.34	.75
Depreciation .....		5.83
Taxes .....	7.34	<u>1.66</u>
(Estimated Costs Based on July, 1948 operations)		<u>\$25.12</u>

L.A.-BEVERLY HILLS-SANTA MONICA MOTOR COACH LINE

Load check outbound, peak movement between 4:00 P.M. - 6:00 P.M., Friday, August 6, 1948.

- (a) 36 coaches, 1495 seats, provided to carry maximum load (at Fairfax Avenue) of 1,522 passengers.
- (b) At Beverly Hills, a distance of 2.7 miles from Fairfax Avenue, an average time interval of 12 minutes, the load had dropped to 1,216 passengers.
- (c) During the entire peak, overloads occurred only over three average half-hour intervals as follows (on a basis of seat per passenger):

<u>Location</u>	<u>Time</u>	<u>Pass- engers</u>	<u>Seats</u>	<u>Units</u>	<u>Pass- enger Over- loads</u>	<u>Over - load Per Unit</u>
(1) Western & Olympic	5:30-5:59 PM	300	295	7	5	-
(2) Fairfax & Olympic	4:30-4:59 PM	508	461	11	47	4 <sup>1</sup> / <sub>4</sub>
(3) " "	5:30-5:59 PM	322	295	7	27	4

At the present time because of the extreme peak requirements there are 17 units operated on this line which make but one round trip per day. Estimated out-of-pocket cost (including depreciation) to operate a coach in single round trip service, is in excess of \$27.00 per unit per day. In order to earn only the bare out-of-pocket cost, each unit would have to carry a total of 166 passengers per round trip, based on present average fare of 16.18 cents, or 83 passengers per single trip, an equivalent load factor of 184% for a 45-passenger coach.

On the basis of a seat per passenger at the maximum load point, an average fare of \$27/90 - \$ .30 (30 cents) would have to be obtained, an increase of 85% to break even on an out-of-pocket basis. On a full cost basis an equivalent fare of approximately 43 cents would be required.

On the basis of a permissible loading of 60 passengers per unit (45-capacity) during any average half-hour interval, a reduction of 9 units could be made at an equivalent saving of \$247.00 per day during the peak period or \$74,100 per annum could be realized on this particular operation.

COST TO OPERATE COACH - ONE ROUND TRIP PER DAY

Route miles .....	17.85
Round trip route miles .....	35.70
Average unit cost - motor coach .....	\$ 17,500
Annual depreciation - 10 year life .....	1,750
No. days peak coach operate (est.) .....	300
Average depreciation per day .....	\$5.83
Average equivalent crew hour pay - single peak R.T. ....	9 <sup>1</sup> / <sub>2</sub>
Daily rate 9 <sup>1</sup> / <sub>2</sub> hours @ \$1.47 .....	\$13.97

	Unit Cost	
	Cents <u>per mile</u>	<u>per Day</u>
Equipment maintenance .....	5.98	\$2.13
Operator's Wages .....		13.97
Tires .....	1.17	.42
Fuel and Lubrication .....	4.09	1.46
Servicing .....	3.34	1.19
Depreciation .....		5.83
Taxes .....	6.82	<u>2.43</u>
(Estimated Cost Based on July, 1948 Operations)		<u>\$27.43</u>

L.A.-WHITTIER BOULEVARD MOTOR COACH LINE

Load check outbound peak movement 4:00 PM-6:00 PM, Thursday, Aug. 5, 1948.

- (a) - 37 coaches, 1606 seats, provided to carry maximum load (at Eastern Ave.) of 1,567 passengers - total average running time L.A. Terminal to Eastern Ave., 19 minutes.
- (b) - Within a distance of 1 mile (5 minutes running time) the load dropped to 1,352 passengers with 1,352 seats available in 31 vehicles.
- (c) - Slight overloads on a basis of seat per passenger occurred only over 3 average half-hour intervals:

Location	Time	Pasgrs.	Seats	Units	Pasgr. Over-load	Overload Per Unit
(1) Soto & Whittier	5:00-5:29 PM	504	479	11	25	2+
(2) Eastern & Whittier	4:30-4:59 PM	481	475	11	6	0.5-
(3) Eastern & Whittier	5:00-5:29 PM	484	479	11	5	0.5+

Because of the extreme peak requirements at the present time, there are 4 coaches which make but one round trip per day in this service, and because of the time operated cannot be utilized for additional trips on this line or any other service. Out-of-pocket cost (including depreciation) to operate one coach per single round trip service, is approximately \$26.00 per unit per day.

In order to earn only the bare out-of-pocket cost, each unit would have to carry a total of 162 passengers per round trip, based on present estimated average fare of 16¢, or 81 passengers per single trip, an equivalent load factor of 180% for a 45-passenger coach. On the basis of a seat per passenger at the maximum load point, an average fare of  $(24.14/90) = \$.29$  (29 cents) would have to be obtained, an increase of 81%, to break even on an out-of-pocket basis. On a full cost basis an equivalent fare of approximately 41¢ would be required.

On a basis of a permissible loading of 60 passengers per unit (45 capacity) during any average half-hour interval, a reduction of 8 units could be made at an equivalent saving of \$208.00 per day during the peak period, or \$62,400 per annum could be realized on this particular operation.

COST TO OPERATE COACH - ONE ROUND TRIP PER DAY

Route miles . . . . .	13.7
Round trip route miles . . . . .	27.4
Average unit cost - motor coach . . . . .	\$17,500
Annual depreciation - 10-year life . . . . .	1,750
Number of days peak coach operates (estimate) . . . . .	300
Average depreciation per day . . . . .	\$ 5.83
Average equivalent crew pay hours - single peak round trip . . . . .	9½
Daily rate 9½ hours @ \$1.47 . . . . .	13.97

	Unit Cost	
	Cents Per Mile	Per Day
Equipment Maintenance . . . . .	5.90	\$ 1.62
Operators Wages . . . . .		13.97
Tires . . . . .	1.17	0.32
Fuel and Lubrication . . . . .	5.17	1.42
Servicing . . . . .	3.34	0.92
Depreciation . . . . .		5.83
Taxes . . . . .	7.50	2.06
		<u>\$26.14</u>

(Estimated costs based on July 1948 Operations)

L.A.-MONROVIA-SIERRA MADRE LINE - RAIL

Load check outbound peak movement 4:00 PM-6:00 PM, Thursday, Aug. 5, 1948.

- (a) - 23 cars, 1,380 seats, provided to carry the combined Monrovia and Sierra Madre maximum load (leaving Valley Junction) of 1,274 passengers.
- (b) - Passengers were provided with seats at all times during the peak service.
- (c) - On the basic premise of a permissible standing time of 30 minutes from the end of the major loading area, at Alameda Street & Aliso Street, the average actual total elapsed time to San Marino is 29 minutes. It would be an accepted principle that sufficient cars would be furnished to provide a seat per passenger beyond the 30-minute running time point, the time being calculated from the end of the major loading area, even though this would in such event provide a loading standard in excess of that required to the 30-minute running time point.
- (d) - Under the above conditions with a permissible maximum of 90 passengers per car, based on 150% load factor, 14 units would be required to handle the combined load to San Marino, however, because of the time required and on the basis of a seat per passenger, 14 cars would be required to handle the load on the Monrovia Line leaving San Marino. Five cars would be required to handle the load on the Sierra Madre Line after leaving San Marino. Total cars required would be 19, as compared with 23 as presently operated.

COST TO OPERATE CAR - ONE ROUND TRIP PER DAY

Route miles - Los Angeles to Monrovia . . . . .	17.89
Round trip route miles . . . . .	35.78
Route miles - Los Angeles to Sierra Madre . . . . .	17.0
Round trip route miles . . . . .	34.0
Number of days peak cars operated . . . . .	300
Average equivalent crew pay hours - single peak round trip . . . . .	9½
Daily rate 9½ hours @ \$1.37 . . . . .	\$13.02

	<u>Unit Cost-Monrovia</u>		<u>Unit Cost-Sierra</u>	
	<u>Cents</u>	<u>Per</u>	<u>Cents</u>	<u>Per</u>
	<u>Per Mile</u>	<u>Day</u>	<u>Per Mile</u>	<u>Day</u>
Equipment Maintenance . . . . .	6.0	\$2.15	6.0	\$ 2.04
Trainmen's Wages . . . . .		13.02		13.02
Inspection, Lubricating and Cleaning . . . . .	7.4	2.65	7.4	2.52
Power . . . . .	7.0	2.50	7.0	2.38
Taxes . . . . .	2.3	.82	2.3	.78
TOTAL . . . . .		\$21.14		\$20.74

Average cost per single peak car operated . . . . . \$21.00 per day

Maintenance of proposed loading standards would permit release of 4 cars in the present combined Monrovia-Sierra Madre operations. Out-of-pocket cost to operate cars in single round-trip service is \$21.00 per day. Estimate full cost would be \$41.00. In order to earn only bare out-of-pocket expenses, each unit, based on average fare of \$.2219, would have to carry a total of 95 passengers per round trip, or 185 passengers per round trip to meet full costs. On an out-of-pocket basis, and seat-per-passenger at maximum load point, an average fare of \$21.00/60 = \$.35 (35 cents) would have to be obtained to break even. On a full cost basis a fare of \$41.00/60 = \$.68 (68 cents) would have to be obtained. A reduction in the operation of 4 units would produce an estimated out-of-pocket saving of \$25,200 per annum.

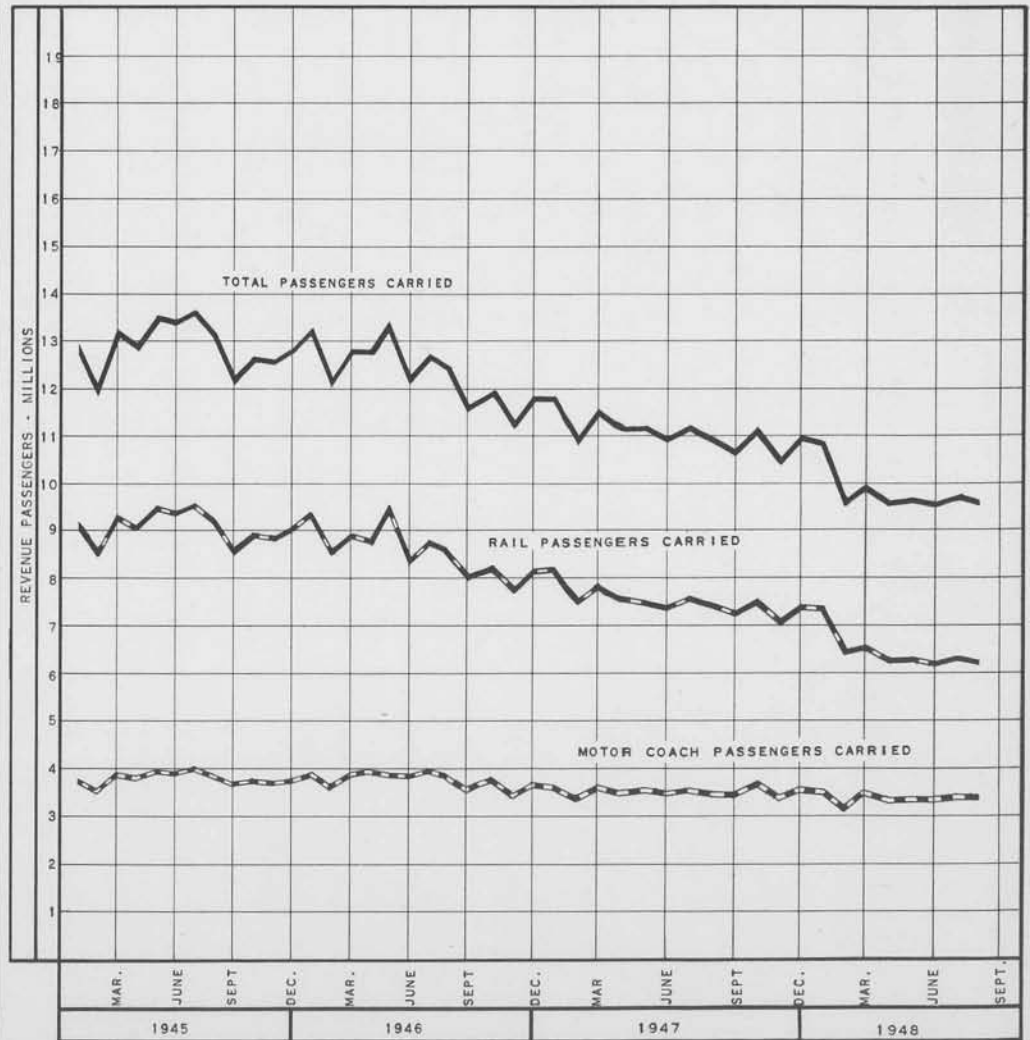
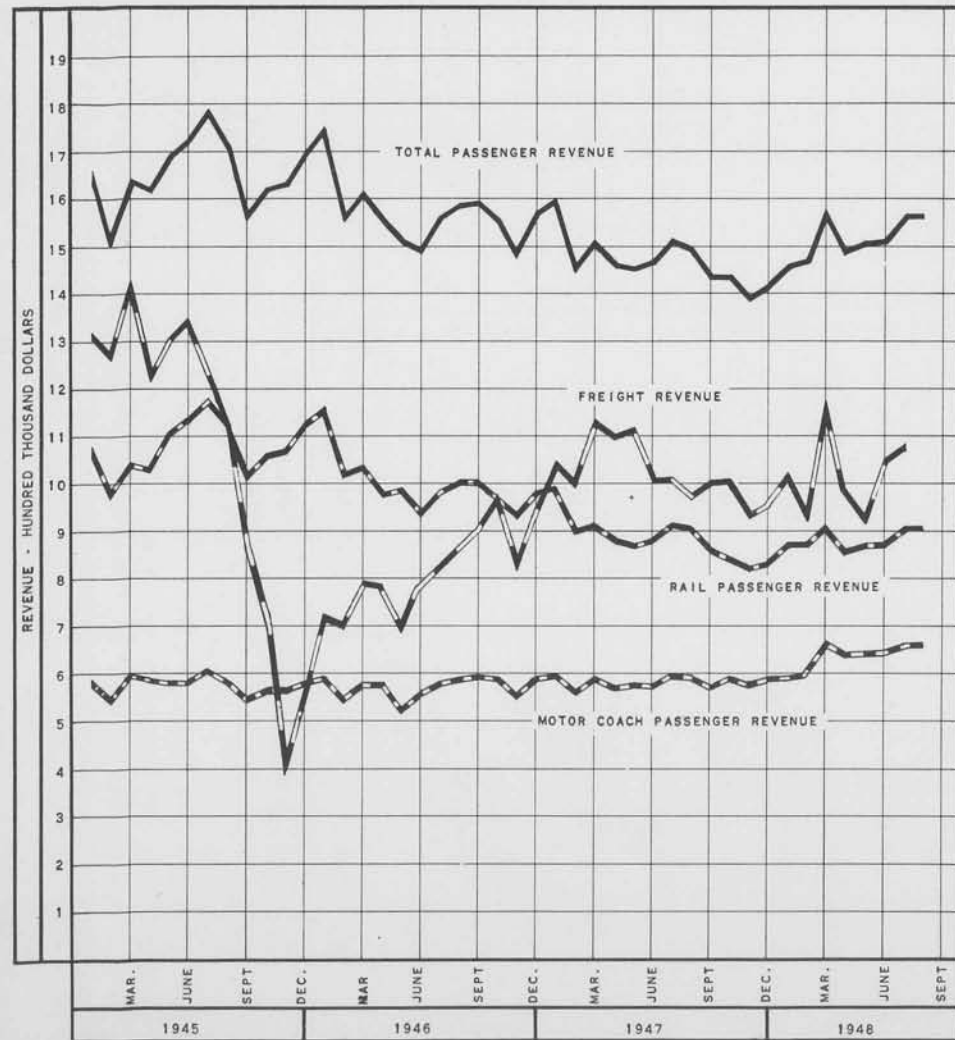


PACIFIC ELECTRIC RAILWAY COMPANY

# MONTHLY REVENUE AND PASSENGERS

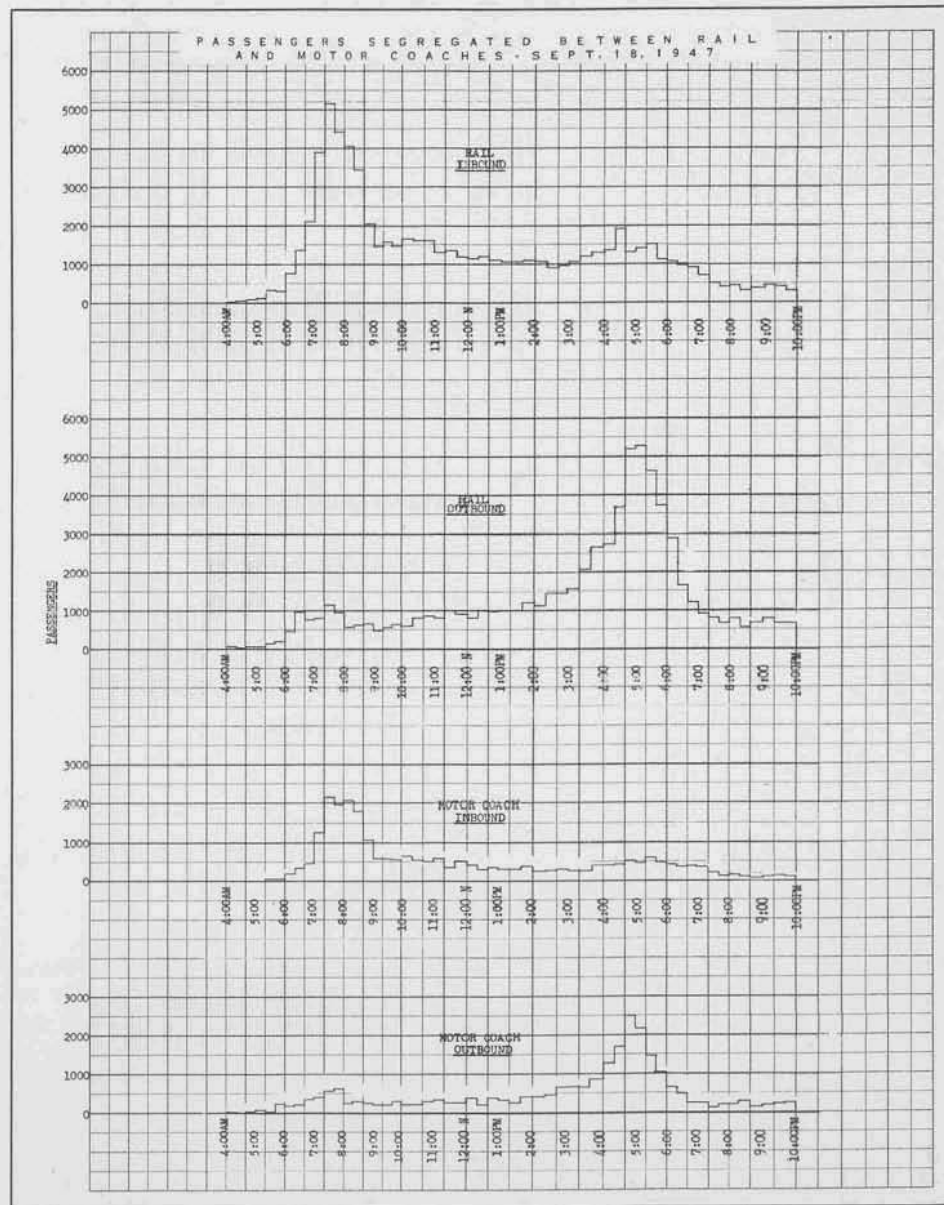
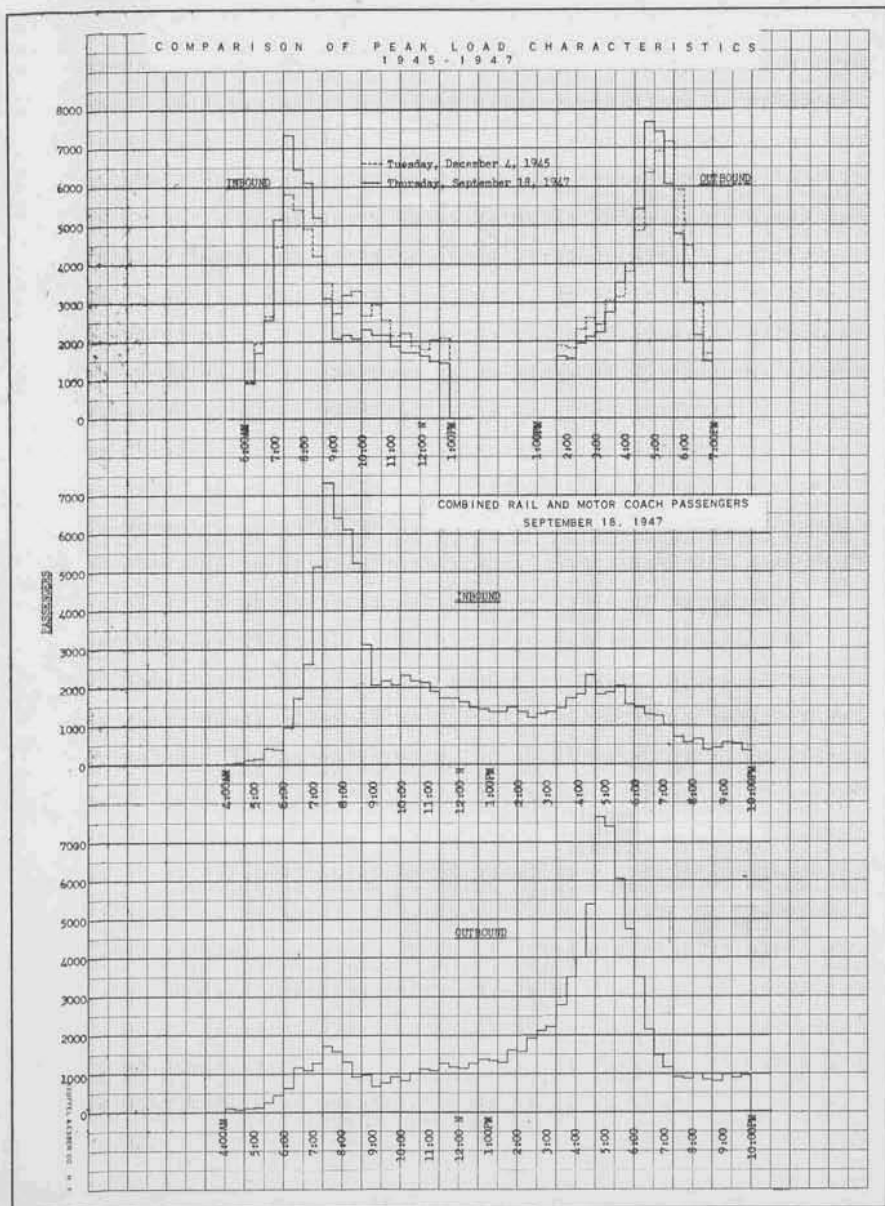
PASSENGER AND FREIGHT REVENUE

REVENUE PASSENGERS



CHARACTERISTICS OF SYSTEM PASSENGER TRAVEL  
ENTERING LOS ANGELES DOWNTOWN AREA

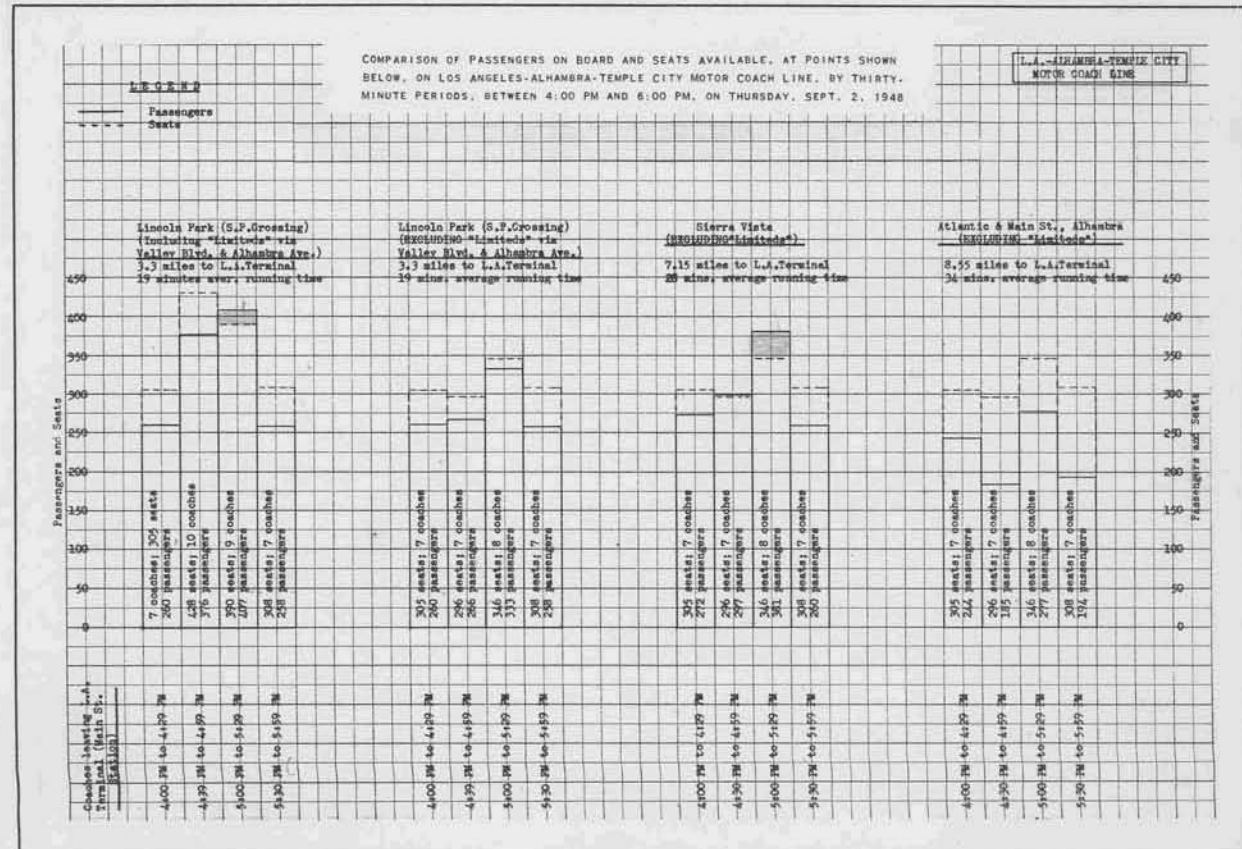
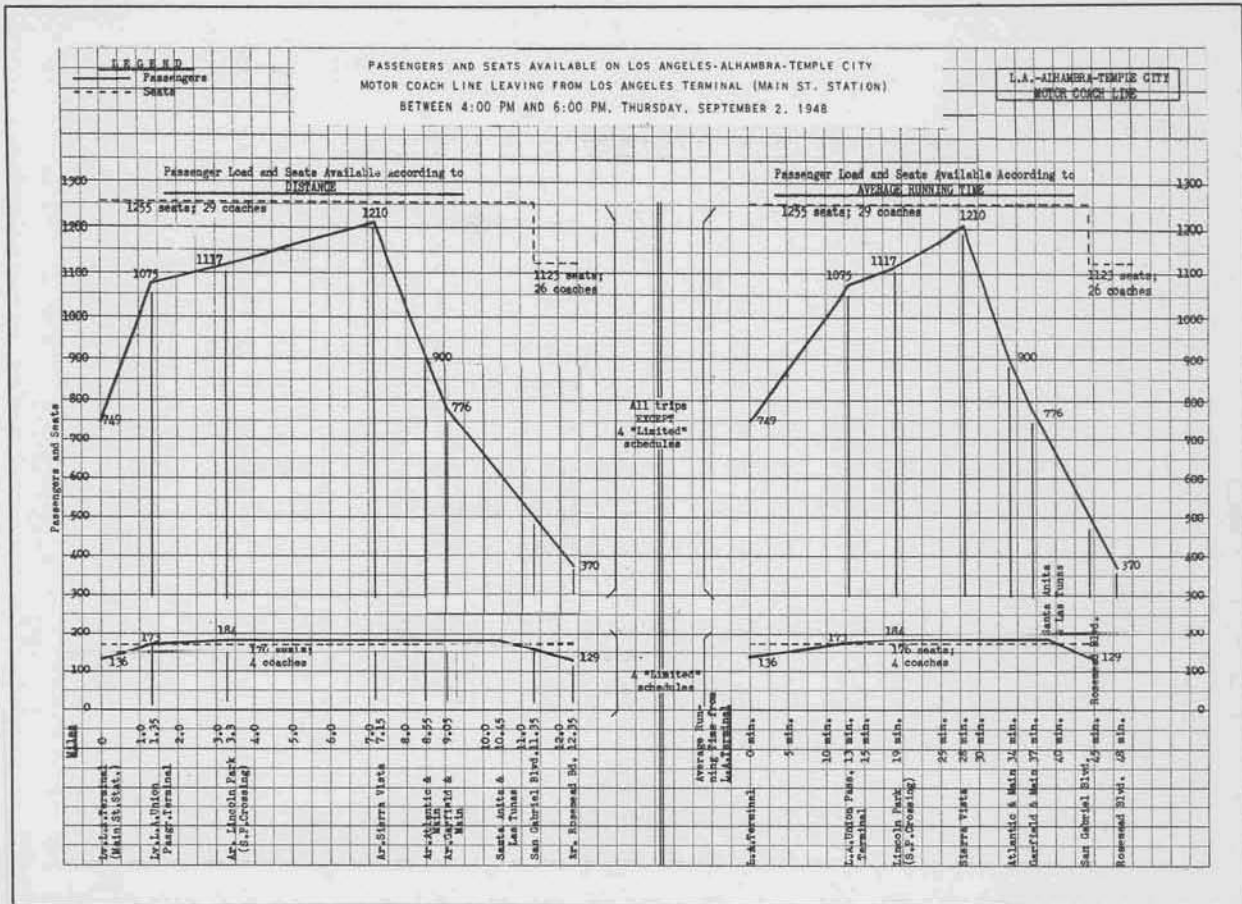
CHART I



PASSENGER LOADING CHARACTERISTICS

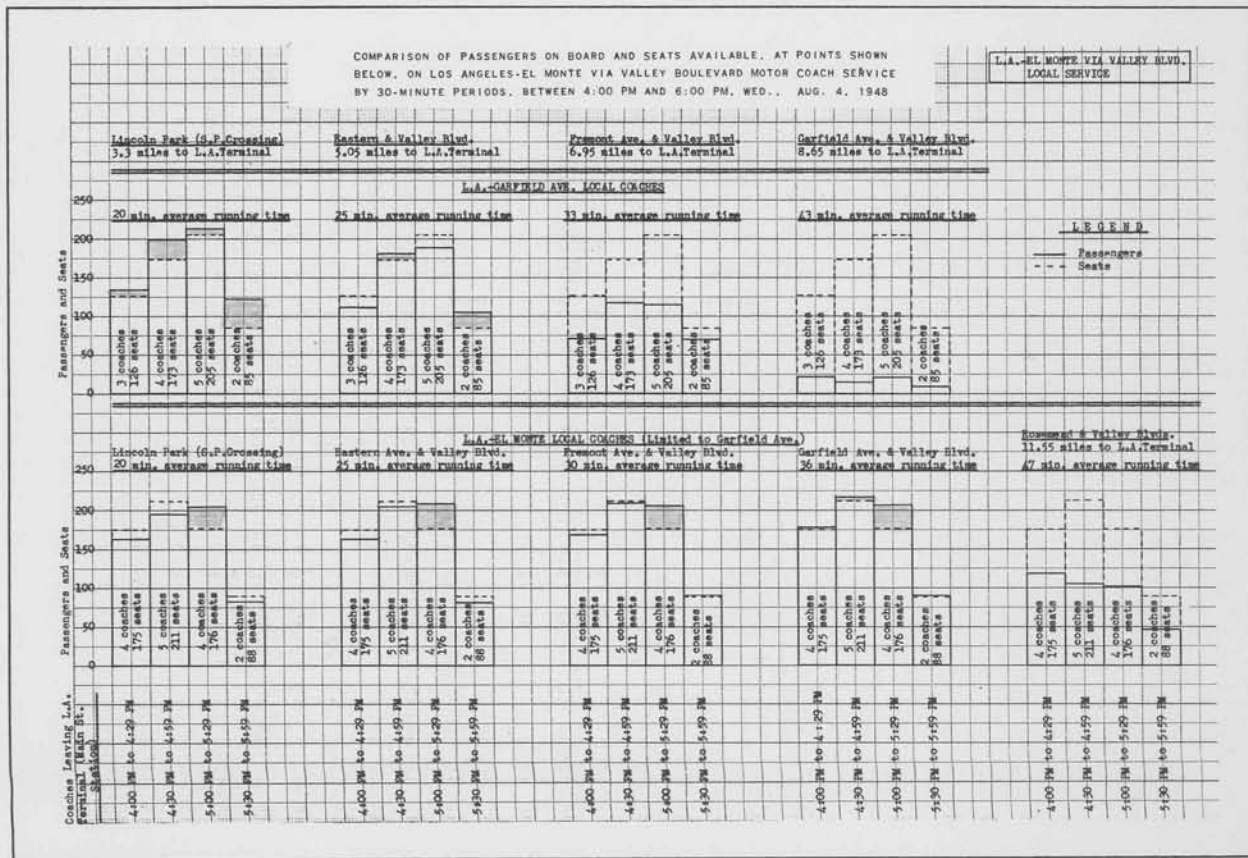
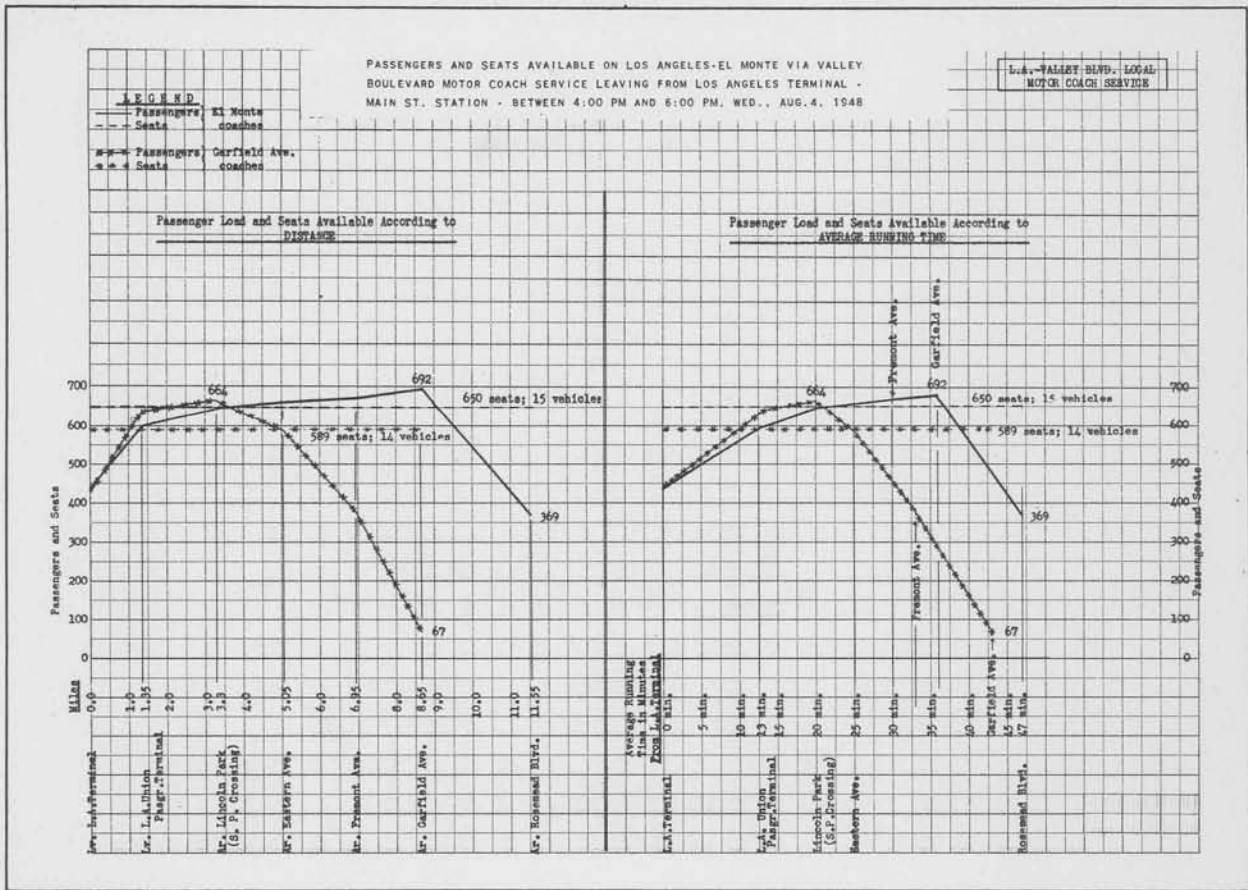
CHART II

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18  
24



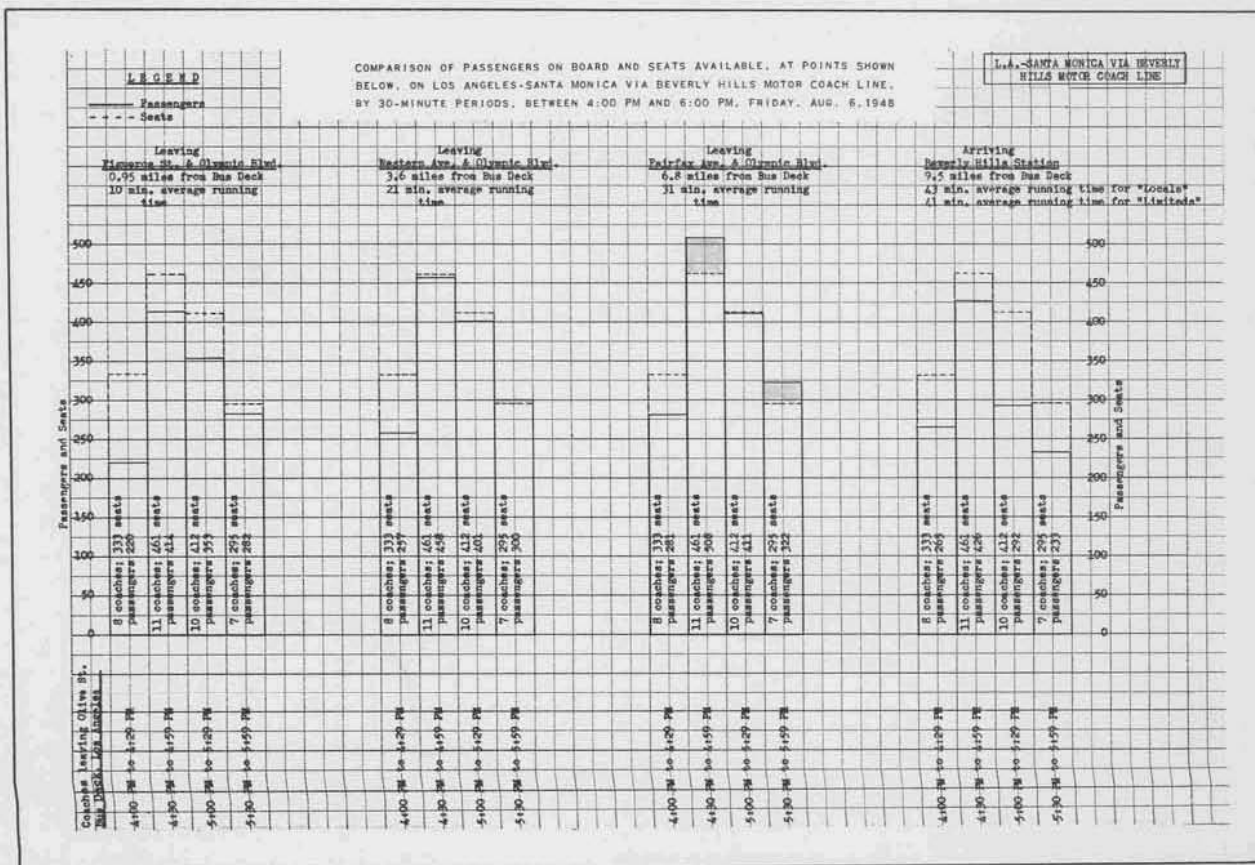
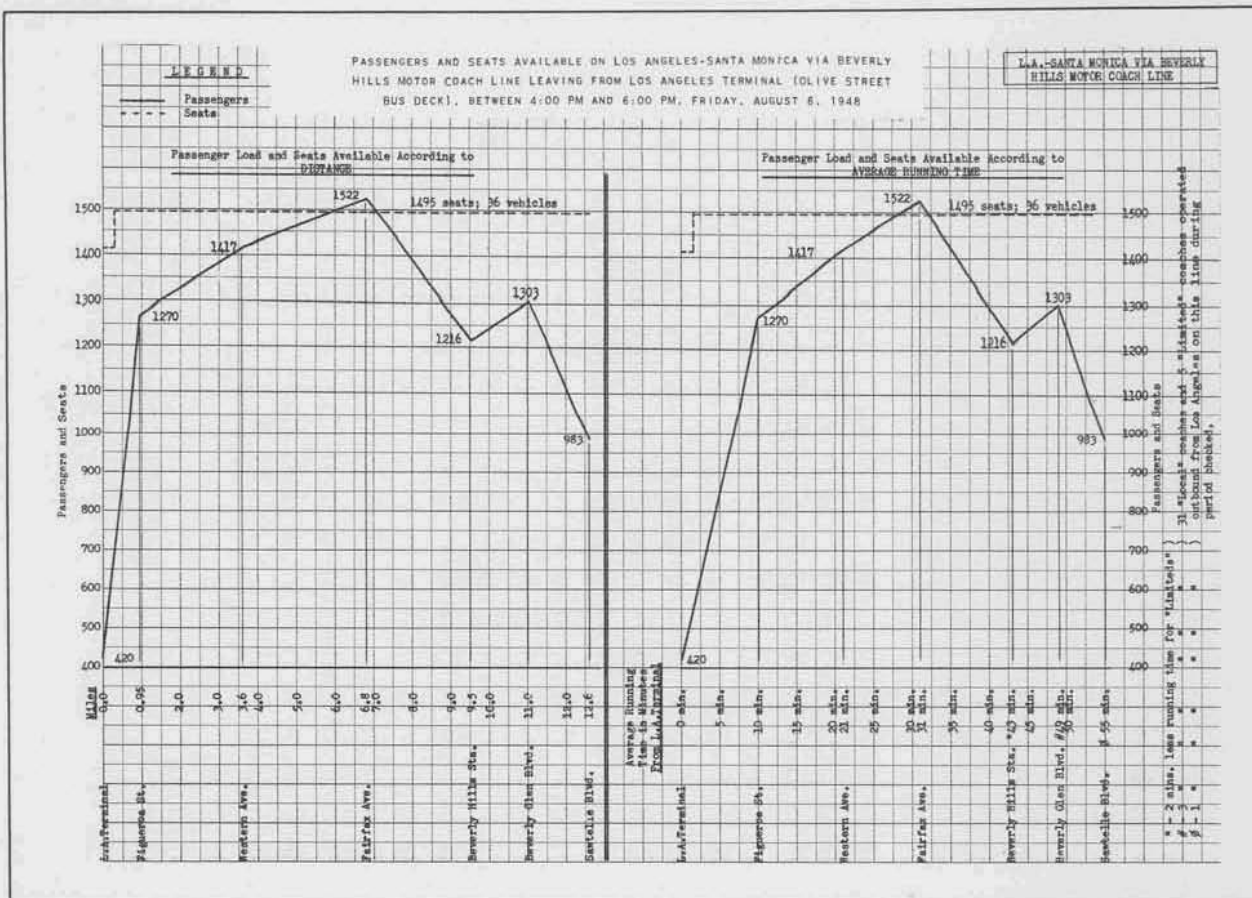
PASSENGER LOADING CHARACTERISTICS

CHART III



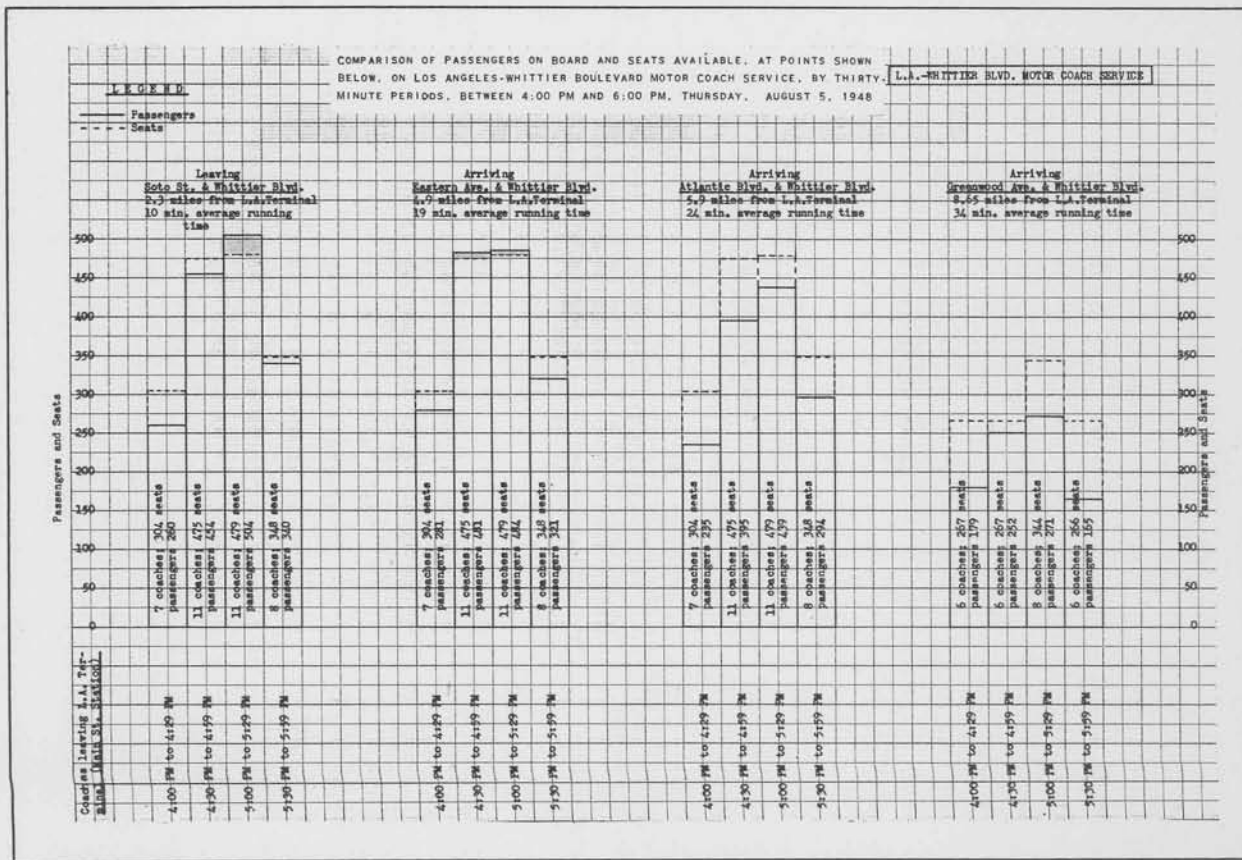
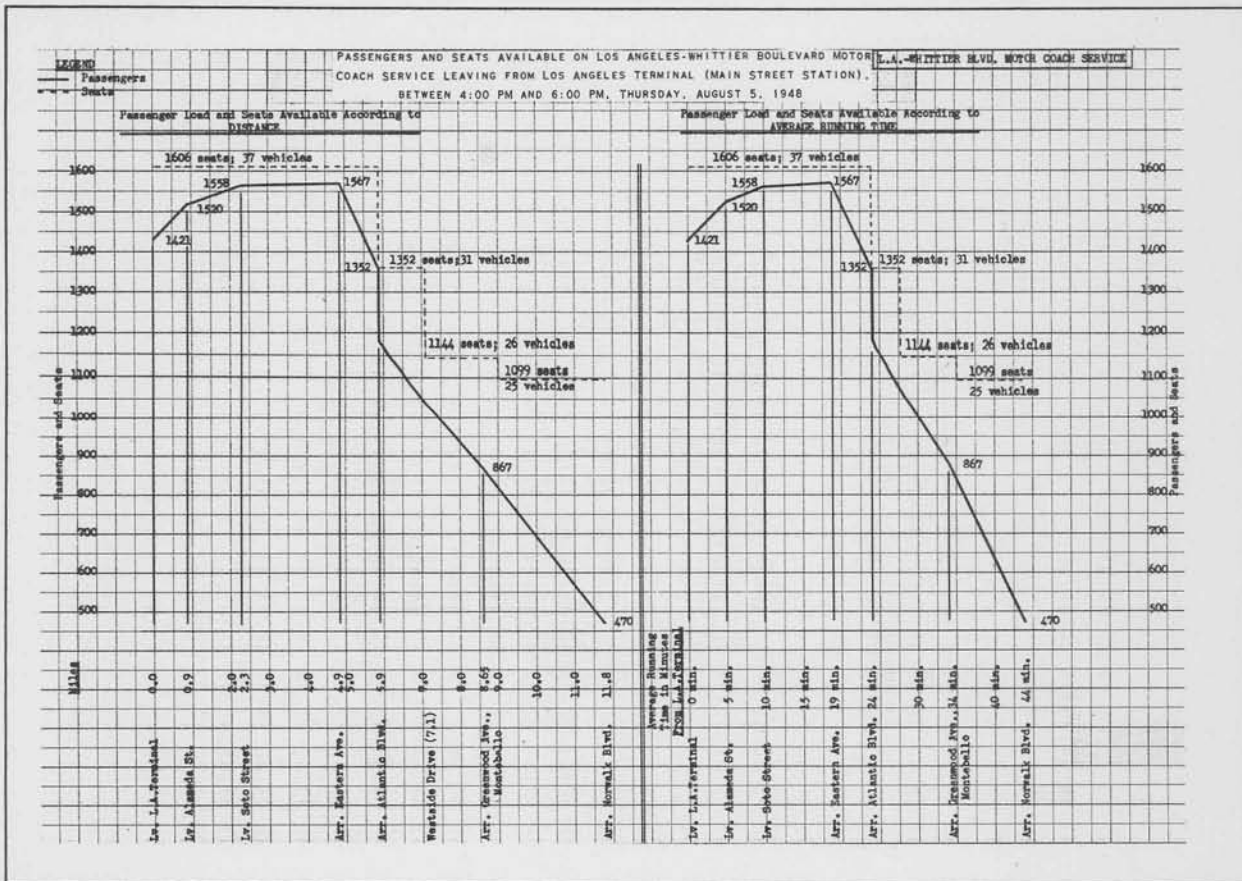
PASSENGER LOADING CHARACTERISTICS

CHART IV



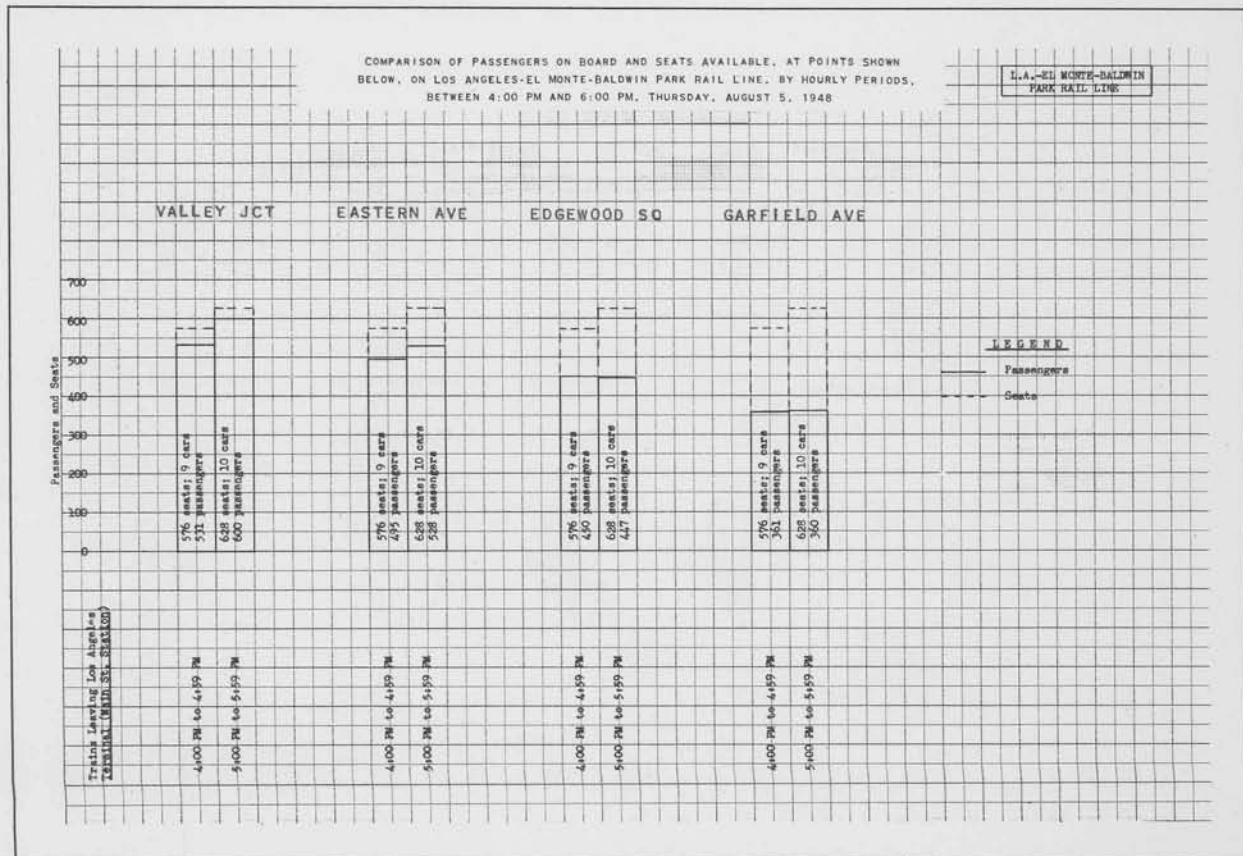
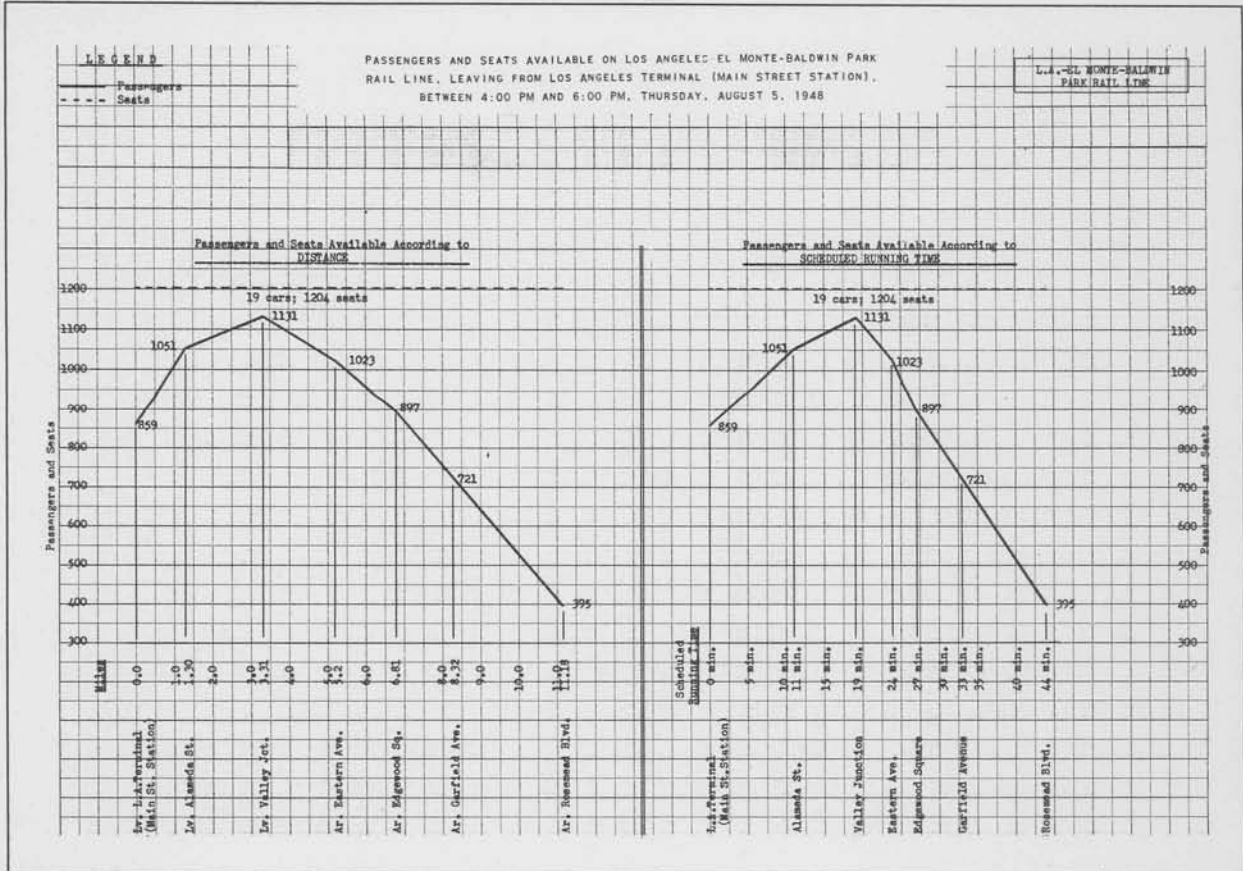
PASSENGER LOADING CHARACTERISTICS

CHART V



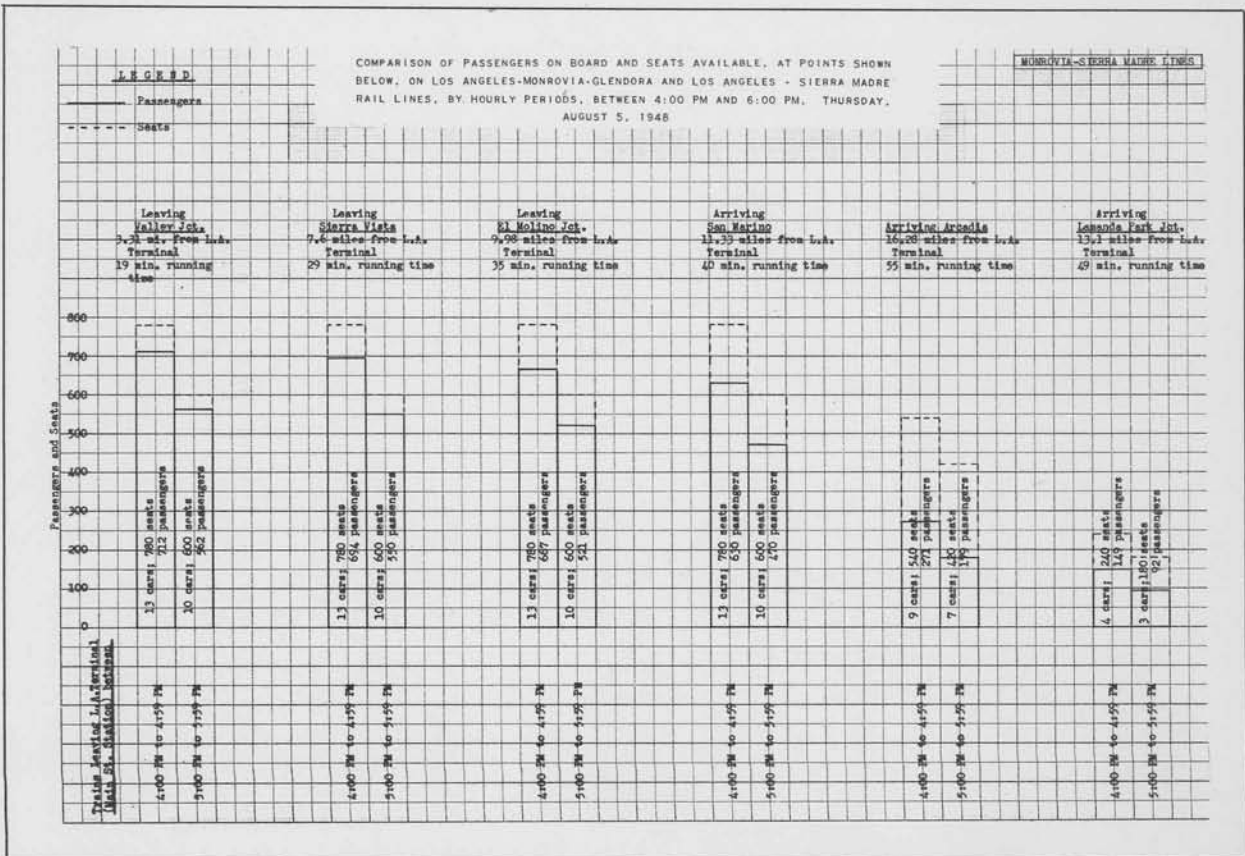
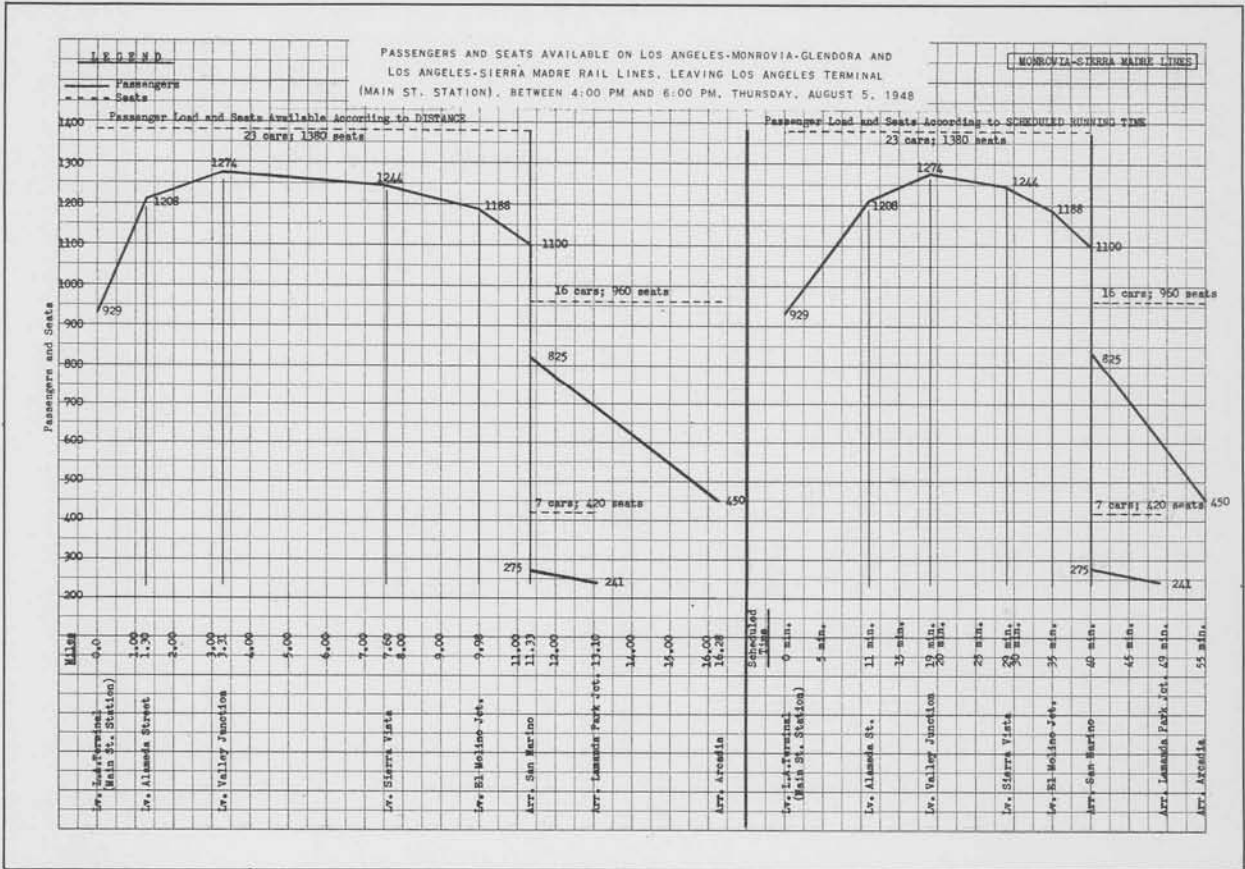
PASSENGER LOADING CHARACTERISTICS

CHART VI



PASSENGER LOADING CHARACTERISTICS

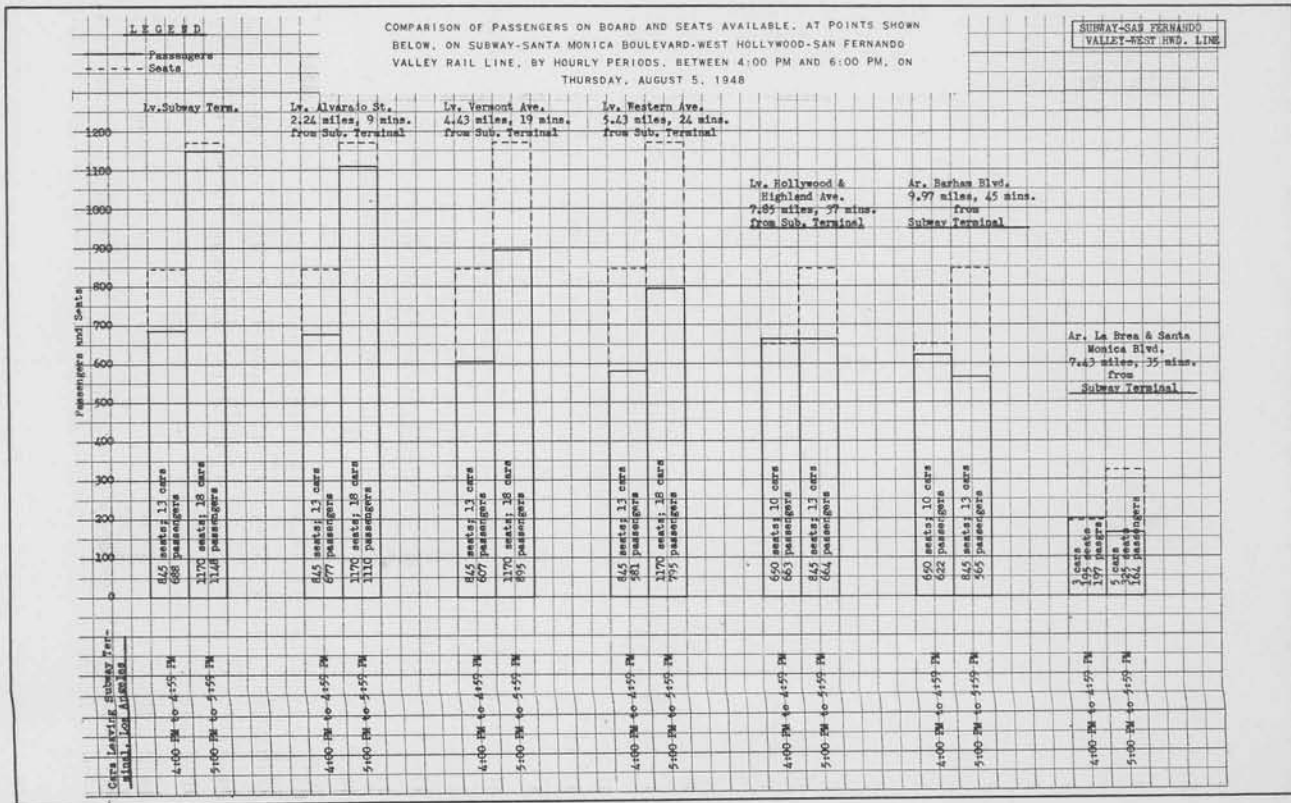
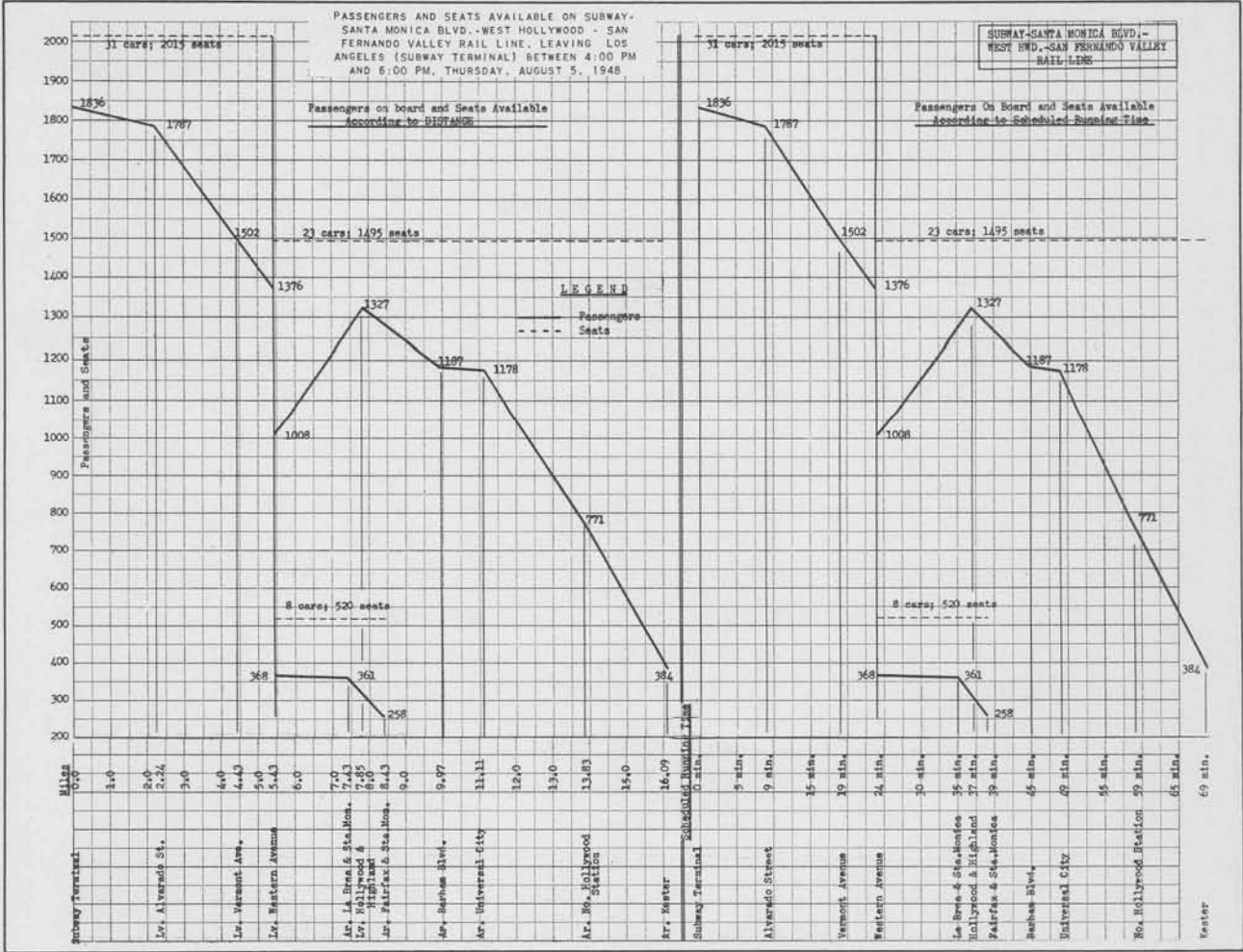
CHART VII





PASSENGER LOADING CHARACTERISTICS

CHART VIII



Pacific Electric Railway Company

REVENUE PASSENGERS

1945

	<u>Rail Pasgrs.</u>	<u>Motor Coach Pasgrs.</u>	<u>Total Pasgrs.</u>
Jan.	9,186,020	3,763,799	12,949,819
Feb.	8,413,713	3,467,453	11,881,166
March	9,374,399	3,923,950	13,298,349
April	8,991,375	3,837,293	12,828,668
May	9,544,163	4,007,474	13,551,637
June	9,394,598	3,930,005	13,324,603
July	9,586,293	4,050,945	13,637,238
Aug.	9,247,119	3,909,816	13,156,935
Sept.	8,482,917	3,602,297	12,085,214
Oct.	8,932,870	3,763,290	12,696,160
Nov.	8,892,156	3,715,856	12,608,012
Dec.	<u>9,057,912</u>	<u>3,777,990</u>	<u>12,835,902</u>
	109,103,535	45,750,168	154,853,703

1946

	<u>Rail Pasgrs.</u>	<u>Motor Coach Pasgrs.</u>	<u>Total Pasgrs.</u>
Jan.	9,405,245	3,899,795	13,305,040
Feb.	8,458,602	3,603,738	12,062,340
March	8,961,029	3,905,901	12,866,930
April	8,848,000	3,968,292	12,816,292
May	9,575,529	3,871,013	13,446,542
June	8,272,048	3,827,563	12,099,611
July	8,790,171	3,972,781	12,762,952
Aug.	8,660,045	3,851,768	12,511,813
Sept.	7,946,780	3,521,028	11,467,808
Oct.	8,254,091	3,744,702	11,998,793
Nov.	7,709,886	3,415,912	11,125,798
Dec.	<u>8,200,289</u>	<u>3,659,720</u>	<u>11,860,009</u>
	103,081,715	45,242,213	148,323,928

1947

	<u>Rail Pasgrs.</u>	<u>Motor Coach Pasgrs.</u>	<u>Total Pasgrs.</u>
Jan.	8,229,461	3,612,709	11,842,170
Feb.	7,445,690	3,350,839	10,796,529
March	7,913,973	3,615,328	11,529,301
April	7,590,352	3,488,280	11,078,632
May	7,564,292	3,534,331	11,098,623
June	7,396,006	3,473,333	10,869,339
July	7,620,461	3,586,902	11,207,363
Aug.	7,463,986	3,478,666	10,942,652
Sept.	7,172,362	3,408,916	10,581,278
Oct.	7,532,218	3,650,829	11,183,047
Nov.	7,014,127	3,380,201	10,394,328
Dec.	<u>7,426,457</u>	<u>3,558,985</u>	<u>10,985,442</u>
	90,369,385	42,139,319	132,508,704

1948

	<u>Rail Pasgrs.</u>	<u>Motor Coach Pasgrs.</u>	<u>Total Pasgrs.</u>
Jan.	7,387,749	3,506,813	10,894,562
Feb.	6,349,041	3,145,632	9,494,673
March	6,496,181	3,482,693	9,978,874
April	6,197,040	3,317,248	9,514,288
May	6,259,342	3,341,881	9,601,223
June	6,160,056	3,330,695	9,490,751
July	6,274,128	3,367,577	9,641,705

*To of Dec-Dec  
Compound the  
Year with  
Average  
Year*

*8.0  
12.1  
13.4  
14.1  
13.5  
12.7  
14.0*

\*- Does not include former L.A.M.C. lines  
operated by P.E. Ry.

No. Colours

Pacific Electric Railway Company

PASSENGER REVENUE

	1945		
	Rail	Motor Coach	Total
Jan.	\$1,080,792	\$587,610	\$1,668,402
Feb.	964,564	534,868	1,499,432
March	1,044,070	598,962	1,643,032
April	1,025,583	590,054	1,615,637
May	1,108,017	582,210	1,690,227
June	1,135,830	583,546	1,719,376
July	1,179,370	609,416	1,788,786
Aug.	1,124,450	587,839	1,712,289
Sept.	1,011,996	540,561	1,552,557
Oct.	1,061,133	559,917	1,621,050
Nov.	1,071,747	558,785	1,630,532
Dec.	1,125,444	577,516	1,702,960
	\$12,932,996	\$6,911,284	\$19,844,280

	1946		
	Rail	Motor Coach	Total
Jan.	\$1,164,164	\$585,910	\$1,750,074
Feb.	1,012,235	535,787	1,548,022
March	1,038,972	577,354	1,616,326
April	973,406	574,795	1,548,201
May	990,126	515,338	1,505,464
June	932,171	552,753	1,484,924
July	986,986	575,848	1,562,834
Aug.	1,005,032	585,339	1,590,371
Sept.	1,003,403	589,728	1,593,131
Oct.	971,786	586,144	1,557,930
Nov.	925,438	548,515	1,473,953
Dec.	983,608	586,992	1,570,600
	\$11,987,327	\$6,814,503	\$18,801,830

	1947		
	Rail	Motor Coach	Total
Jan.	\$ 995,322	\$600,157	\$1,595,479
Feb.	892,245	556,372	1,448,617
March	914,783	597,113	1,511,896
April	879,739	575,706	1,455,445
May	866,022	580,189	1,446,211
June	877,072	578,329	1,455,401
July	918,308	597,708	1,516,016
Aug.	910,391	592,640	1,503,031
Sept.	854,461	574,830	1,429,291
Oct.	835,186	595,053	1,430,239
Nov.	816,644	569,383	1,386,027
Dec.	824,725	585,516	1,410,241
	\$10,584,898	\$7,002,996	\$17,587,894

	1948		
	Rail	Motor Coach	Total
Jan.	\$ 874,121	\$587,534	\$1,461,655
Feb.	876,312	595,782	1,472,094
March	909,780	669,157	1,578,937
April	852,019	630,958	1,482,977
May	865,923	637,236	1,503,159
June	865,083	640,843	1,505,926
July	909,617	655,099	1,564,716
Aug.	907,549	656,265	1,563,814
	\$7,060,404	\$5,072,874	\$12,133,278
SEPT.	849,389	664,058	1,513,447
OCT.	837,069	642,524	1,479,593
NOV.	783,875	613,099	1,396,974
DEC.	854,800	648,581	1,503,381
	10,385,537	7,642,136	18,027,673

	1949			
	Rail	Motor Coach	Total	% of Inc - Dec Compared with Same Month of Previous Year
JAN	812,139	605,882	1,418,021	3.0
FEB	758,630	572,348	1,330,978	9.4
MARCH	808,981	653,949	1,462,930	7.3
APRIL	779,871	629,827	1,409,698	21.9
MAY	762,860	604,123	1,366,983	8.9
JUNE	794,021	609,041	1,403,062	6.8
JULY	808,147	600,161	1,408,308	10.0
AUG.	778,136	609,256	1,387,392	11.3
SEPT.	735,772	591,574	1,327,346	11.9

\* Commencing May 1949, Motor Coach Revenue includes (3) units formerly R.E.R.C.

*Columbus*

Pacific Electric Railway Company

FREIGHT REVENUE

	<u>1945</u> (1)	<u>1946</u> (2)	<u>1947</u> (3)	<u>1948</u> (4)	<i>% of Dec - Dec Compared with Previous Year</i> (5)	<u>1949</u> (6)	<i>% of Dec - Dec Compared with Previous Year</i> (7)
January	\$1,314,105	\$723,113	\$1,046,947	\$1,025,367	(7.1)	876,833	(14.5)
February	1,259,951	695,119	995,394	919,880	(7.6)	861,820	(6.3)
March	1,428,694	795,624	1,137,184	1,183,082	4.0	1,058,974	(10.5)
April	1,213,984	786,736	1,093,002	987,938	(9.6)	922,358	(6.6)
May	1,306,022	684,042	1,117,131	914,513	(18.1)	832,982	(8.9)
June	1,350,429	774,896	998,138	1,051,799	5.4	915,017	(13.0)
July	1,238,781	817,009	1,012,775	1,079,824	6.6	1,067,102	(1.2)
August	1,135,089	857,235	965,431	1,124,490 <del>996,784</del>	16.5	1,108,285	(1.4)
September	859,489	898,844	1,006,135	997,650	(.8)	-	
October	714,151	978,236	1,009,231	1,061,591	5.2	-	
November	388,242	816,289	926,834	1,047,016	13.0	-	
December	529,677	922,031	951,607	981,760	3.2	-	
<b>Total</b>	<b>\$12,738,614</b>	<b>\$9,749,174</b>	<b>\$12,259,809</b>	<b>\$8,159,187</b>		<b>7,643,371</b>	<b>(7.8)</b>

8 Mos 8,288,893  
Year 12,374,910

Ex-119

*Above covers all revenues allocated to "Freight" including NCR*

5

OPERATING STATISTICS

	<u>#52</u>	<u>#75</u>	<u>#79</u>	<u>#63</u>	<u>#58</u>
	Alhambra Temple City Arcadia	Los Angeles Beverly Hills Santa Monica	Los Angeles- Redondo	Valley Blvd. Local	LA-Norwalk Whittier Santa Ana
Route Miles (one way)	17.45	17.85	25.70 (avg)	13.95	39.8 (avg)
Route Miles (round trip)	34.90	35.70	51.40	27.90	79.6
Coach Miles Per Day (week day) - BASE	3,111(86.6%)	3,746(68.9%)	2,801(67%)	-	3,920(80.3%)
Coach Miles Per Day by coaches making only 1 or 2 trips out PEAK . . . . .	<u>481(13.4%)</u>	<u>1,689(31.1%)</u>	<u>1,381(33%)</u>	-	<u>962(19.7%)</u>
TOTAL . . . . .	<u>3,592</u>	<u>5,435</u>	<u>4,182</u>	-	<u>4,882</u>
Number Coaches Required:					
Base . . . . .	13	17	8	6	17
Peak . . . . .	32	48	40	26	40
Number Round Trips (Week Days) . . . . .	104	126	93	88	128
Number Coaches Making -					
*1 round trip per day	20	18	18	17	15
2 round trips per day	4	9	12	8	14
3 round trips per day	4	4	7	3	5
4 round trips per day	1	8	6	2	9
5 round trips per day	4	4	-	4	2
6 round trips per day	3	3	1	3	4
7 round trips per day	2	-	-	-	-
8 round trips per day	1	1	-	-	-
* - "Single Trip" coaches which made no addi- tional trips on other lines	12	17	13	7	4

PACIFIC ELECTRIC RAILWAY COMPANY

MILEAGE RECORD OF CLASS 950 AND 1000 CARS

RECAPITULATION - JANUARY THROUGH JUNE, 1948

<u>Month:</u>	<u>Class</u>	<u>Class</u>	<u>Line</u>	<u>% to Line Mileage</u>		<u>Total</u>	<u>% to Total Rail Miles</u>	
	<u>950</u>	<u>1000</u>	<u>Mileage</u>	<u>950</u>	<u>1000</u>	<u>Rail</u>	<u>950</u>	<u>1000</u>
						<u>Mileage</u>		
January	55,737	37,180	823,062	6.77	4.52	1,336,614	4.17	2.78
February	46,457	27,328	606,205	7.66	4.51	1,209,267	3.84	2.25
March	49,683	24,094	737,479	6.74	3.27	1,267,952	3.92	1.90
April	46,499	18,211	705,333	6.59	2.58	1,211,297	3.84	1.50
May	45,427	17,113	606,436	7.49	2.82	1,219,195	3.73	1.40
June	<u>47,327</u>	<u>16,179</u>	<u>531,642</u>	<u>8.90</u>	<u>3.04</u>	<u>1,192,526</u>	<u>3.97</u>	<u>1.36</u>
TOTAL	<u>291,130</u>	<u>140,105</u>	<u>4,010,157</u>	<u>7.26</u>	<u>3.49</u>	<u>7,436,851</u>	<u>3.91</u>	<u>1.88</u>

PACIFIC ELECTRIC RAILWAY COMPANY

MILEAGE RECORD OF CLASS 950 AND 1000 CARS - BY LINES

JANUARY TO JUNE, INCLUSIVE, 1948

Line:	Class	Class	Line	% to Line Mileage		Total	% to Total Rail Miles	
	950	1000	Mileage	950	1000	Rail Mileage	950	1000
Pasadena-Oak Knoll	65	34,956	300,367	.02	11.64	<sup>7,435,517</sup> 7,436,851	.0009	.47
Pasadena Short Line	97	36,338	<sup>474</sup> 259,594	.04	14.00	-	.001	.49
Monrovia-Glendora	-	13,316	<sup>463,822</sup> 402,076	-	<sup>2.87</sup> 3.31	-	-	.18
Sierra Madre	-	79	<sup>87,447</sup> 16,161	-	<sup>.09</sup> .49	-	-	.001
Long Beach	-	841	719,638	-	.12	-	-	.01
San Pedro	-	1,087	<sup>195</sup> 561,950	-	.19	-	-	.01
Long Beach-San Pedro	-	30,524	128,155	-	23.82	-	-	.41
L.A. & L.B. Steamship Service	-	50	<sup>2,321</sup> <del>1,106</del>	-	<del>4.52</del>	-	-	.0007
Santa Monica Air Line	5,836	-	5,836	100.00	-	-	.078	-
Watts-Sierra Vista	-	54	<sup>684,456</sup> 353,953	-	.01	-	-	.0007
Glendale-Burbank	9,514	-	636,048	1.50	-	-	.13	-
Venice Short Line	275,618	22,860	<sup>264</sup> 625,273	44.08	3.66	-	3.71	.31
TOTAL	291,130	140,105	<sup>4,494,603</sup> 4,010,157	6.48	<sup>3.12</sup> 3.49	<sup>7,435,517</sup> 7,436,851	<sup>3.91</sup> 3.91	1.88

August 13, 1948

OK

Pacific Electric Railway Company

MOTOR COACH INVENTORY AS OF AUGUST 31, 1948

<u>Class</u>	<u>Model</u>	<u>*Type</u>	<u>No. Units</u>	<u>Year of Mfg.</u>	<u>Mfgr.</u>	<u>Unit Seats</u>	<u>Total Seats</u>	
	220	PG2505	S	1	1941	GMC	14	14
	240	23R	T	2	1937	Twin	25	50
	310	31R	T	4	1937	Twin	31	124
	315	30R	T	3	1940	Twin	31	93
	1650	40R	S	13	1937	Twin	41	533
	1686	PG3701	S	9	1940	GMC	41	369
	1910	35RL Spec.	S	15	1940	Twin	37	555
	2000	788-6	S	24	1940	White	41	984
	2025	798-6	T	25	1942	White	45	1,125
	2050	798-6	T	45	1941	White	45	2,025
	2100	41-G	S	25	1940	Twin	41	1,025
(A)	2125	44-D-45	T	5	1946	Twin	44	220
(A)	2220	798	T	41	1946	White	44	1,804
(A)	2261	798	T	29	1947	White	44	1,276
	2300	798	T	20	1942	White	45	900
	2320	798	T	5	1942	White	44	220
	2325	798	T	55	1944	White	44	2,420
	2380	798	T	15	1945	White	44	660
	2395	798	T	5	1944	White	44	220
	2400	798	T	7	1944	White	44	308
(A)	2500	TD4504(Dies)	S	35	1941	GMC	42	1,470
(A)	3000	798	T	25	1948	White	44	1,100
				408		(Avg)	42.88	17,495

\*Type - S - Suburban

T - Transit

(A) - Automatic Transmission (135)

Total Number Units - - 408

Total Number Seats - - 17,495

Average Seats Per Unit 42.88

\* \* \* \* \*

<u>Manufacturer</u>	<u>No. Units</u>	<u>%</u>
White	296	72.55
Twin	67	16.42
GMC	45	11.03
Totals	408	100.00%

Summary of Age of Equipment

<u>Year</u>	<u>No. of Units</u>	<u>%</u>
1937	19	4.66
1940	76	18.63
1941	81	19.85
1942	50	12.25
1944	67	16.42
1945	15	3.68
1946	46	11.27
1947	29	7.11
1948	25	6.13
	408	100.00



Pacific Electric Railway Company

CHECK ON INBOUND PASSENGERS INTO DOWNTOWN AREA

Thursday, September 18, 1947, between 4:01  
A.M. and 10:00 P.M. (Weather Clear)

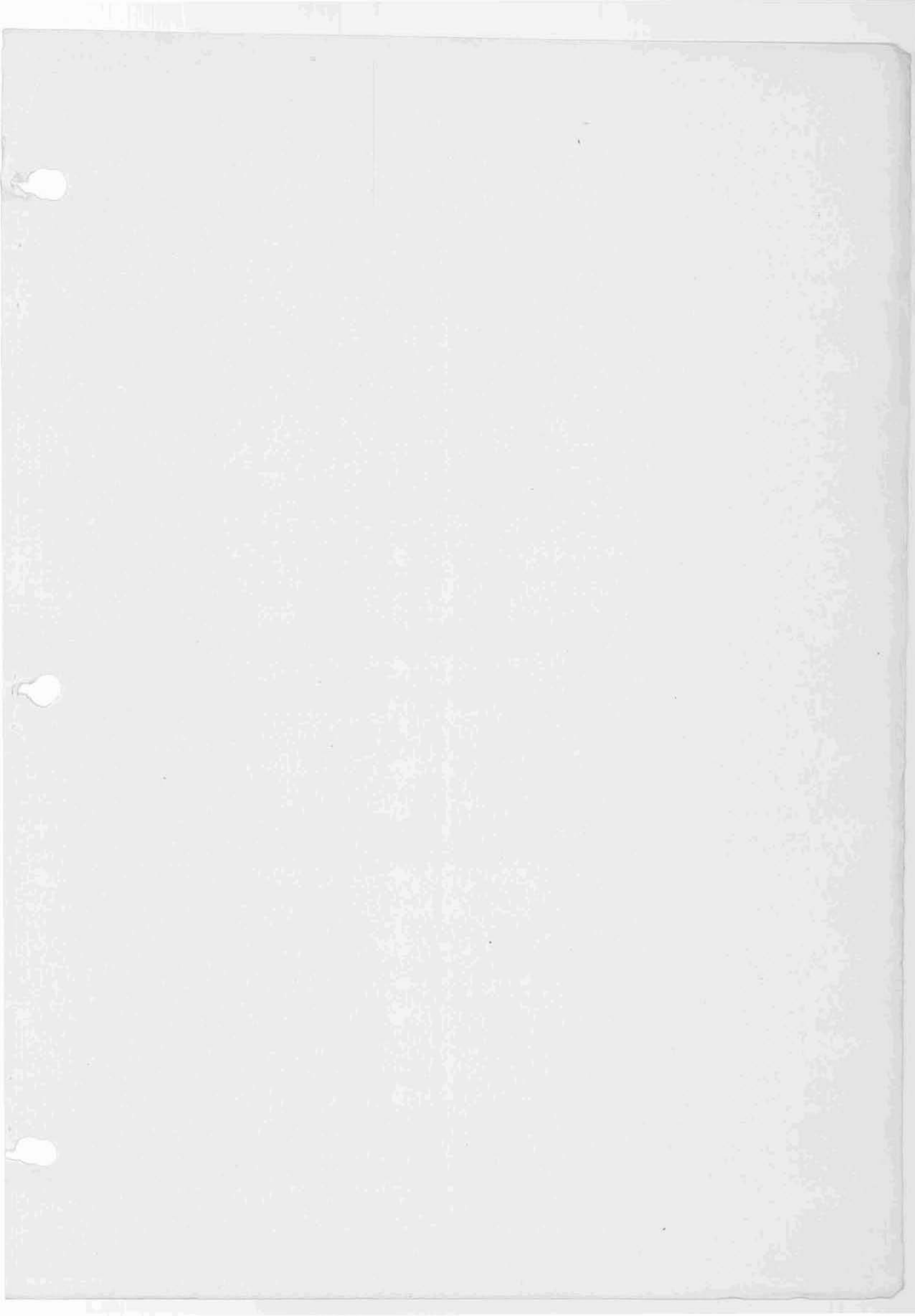
	INBOUND						
	1	2	3	4	5	6	7
		System Peak Period 7:21 AM to 8:20AM	Line Peak Hour	System Peak 20 Min.	Ratio to System Peak	Ratio Peak Hr. to Total Line	Total System
<u>Rail Lines:</u>	<u>Total</u>						
L.A.-Pasa. via O.K. ....	2,259	521	521	219	42.03	23.06	23.06
L.A.-Pasa. Short Line...	2,346	581	591	247	42.51	25.19	24.77
L.A.-El M.-Bald. Pk. ....	2,225	677	681	306	45.20	30.61	30.43
L.A.-Glen. & Sierra Mdr.	2,257	824	824	375	45.51	36.51	36.51
L.A.-Long Beach .....	5,082	837	847	381	45.52	16.67	16.47
L.A.-San Pedro .....	4,732	898	1,159	411	45.77	24.49	18.98
L.A.-Santa Ana .....	2,070	553	625	248	44.85	30.19	26.71
Watts-Sierra Vista(NB)..	6,808	711	1,157	378	53.16	16.99	10.44
Watts-Sierra Vista(SB)..	4,437	682	816	374	54.84	18.39	15.37
Subway-West Hwd. ....	2,478	302	377	125	41.39	15.21	12.19
Subway-San Fern. Valley.	3,294	800	800	327	40.88	24.29	24.29
L.A.-Glen.-Burbank ....	7,637	1,803	1,803	642	35.61	23.61	23.61
Venice Short Line .....	3,685	1,029	1,029	497	48.30	27.92	27.92
Subway-Hollywood Blvd..	4,978	777	777	300	38.61	15.61	15.61
Hwd.-San Vicente(NB)...	3,436	897	897	349	38.91	26.11	26.11
Hwd.-San Vicente(SB)...	8,473	1,035	1,237	388	37.49	14.60	12.22
Echo Park .....	3,452	724	724	280	38.67	20.97	20.97
<u>TOTAL RAIL LINES ...</u>	<u>69,649</u>	<u>13,651</u>	<u>14,865</u>	<u>5,847</u>	<u>42.83</u>	<u>21.34</u>	<u>19.60</u>
<u>Motor Coach Lines:</u>							
L.A.-Alh.-Temple City-							
Arcadia .....	2,825	849	849	377	44.40	30.05	30.05
L.A.-Balboa .....	702	225	248	95	42.22	35.33	32.05
L.A.-Sunland .....	2,199	617	617	272	44.08	28.06	28.06
L.A.-Whittier-Santa Ana	4,070	869	869	302	34.75	21.35	21.35
L.A.-El M.-San Bdn.-							
Riverside .....	7,120	1,626	1,663	591	36.35	23.36	22.84
L.A.-Santa Monica and							
Beverly-Sunset .....	5,012	874	1,072	441	50.46	21.39	17.44
L.A.-Redondo Beach ....	2,842	880	976	340	38.64	34.34	30.96
L.A.-Van Nuys via							
Riverside Drive .....	642	249	249	150	60.24	38.79	38.79
<u>TOTAL M/C LINES .....</u>	<u>25,412</u>	<u>6,189</u>	<u>6,543</u>	<u>2,568</u>	<u>41.49</u>	<u>25.75</u>	<u>24.35</u>
<u>GRAND TOTAL . . . . .</u>	<u>95,061</u>	<u>19,840</u>	<u>21,408</u>	<u>8,415</u>	<u>42.41</u>	<u>22.52</u>	<u>20.87</u>

Pacific Electric Railway Company

CHECK ON OUTBOUND PASSENGERS FROM DOWNTOWN AREA

Thursday, September 18, 1947, between 4:01  
A.M. and 10:00 P.M. (Weather Clear)

Rail Lines:	OUTBOUND						
	8	9	10	11	12	13	14
	Total	System Peak Period 4:41 PM to 5:40 PM	Line Peak Hour	System Peak 20 Min.	Ratio to System Peak	Ratio Peak Hr. to Total Line	System
L. A. -Pasa. via O.K....	2,356	615	615	286	46.50	26.10	26.10
L. A. -Pasa. Short Line..	2,507	542	604	237	43.73	24.09	21.62
L. A. -El M. -Bald. Pk....	2,144	715	806	391	54.69	37.59	33.35
L. A. -Glen. & Sierra Mdr.	2,119	708	817	350	49.44	38.56	33.41
L. A. -Long Beach .....	5,339	1,093	1,093	419	38.33	20.47	20.47
L. A. -San Pedro .....	4,055	809	837	341	42.15	20.64	19.95
L. A. -Santa Ana .....	1,823	476	518	254	53.36	28.41	26.11
Watts-Sierra Vista(NB)	4,150	664	858	340	51.20	20.67	16.00
Watts-Sierra Vista(SB)	7,412	1,017	1,081	422	41.49	14.58	13.72
Subway-West Hwd.....	2,147	450	450	281	62.44	20.96	20.96
Subway-San Fern. Valley	3,208	863	863	347	40.21	26.90	26.90
L. A. -Glen. -Burbank....	6,806	1,776	1,854	730	41.10	27.24	26.09
Venice Short Line ....	3,711	1,128	1,128	470	41.67	30.40	30.40
Subway-Hollywood Blvd.	3,860	951	951	346	36.38	24.64	24.64
Hwd. -San Vicente(NB)..	9,640	1,531	1,733	642	41.93	17.98	15.88
Hwd. -San Vicente(SB)..	3,295	953	953	398	41.76	28.92	28.92
Echo Park .....	3,175	756	756	285	37.70	23.81	23.81
<b>TOTAL RAIL LINES...</b>	<b>67,747</b>	<b>15,047</b>	<b>15,917</b>	<b>6,539</b>	<b>43.46</b>	<b>23.49</b>	<b>22.21</b>
<b>Motor Coach Lines:</b>							
L. A. -Alh. -Temple City-							
Arcadia .....	2,648	730	775	307	42.05	29.27	27.57
L. A. -Balboa .....	780	245	307	146	59.59	39.36	31.41
L. A. -Sunland .....	2,262	544	630	204	37.50	27.85	24.05
L. A. -Whittier-Santa Ana	3,627	862	865	350	40.60	23.85	23.77
L. A. -El M. -San Bdn. -							
Riverside .....	7,246	1,681	1,796	680	40.45	24.79	23.20
L. A. -Santa Monica and							
Beverly-Sunset .....	4,605	833	833	314	37.70	18.09	18.09
L. A. -Redondo Beach ...	2,913	911	927	361	39.63	31.83	31.27
L. A. -Van Nuys via							
Riverside Drive ....	596	237	237	150	63.29	39.76	39.76
<b>TOTAL M/C LINES .....</b>	<b>24,677</b>	<b>6,043</b>	<b>6,370</b>	<b>2,512</b>	<b>41.57</b>	<b>25.81</b>	<b>24.49</b>
<b>GRAND TOTAL . . . . .</b>	<b>92,424</b>	<b>21,090</b>	<b>22,287</b>	<b>9,051</b>	<b>42.92</b>	<b>24.11</b>	<b>22.82</b>



CLOSING STATEMENT OF MR. C. W. CORNELL, GENERAL ATTORNEY,  
PACIFIC ELECTRIC RAILWAY COMPANY  
BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA  
APPLICATIONS NOS. 23053 and 27466  
CASE NO. 4843

REQUEST FOR EXTENSION OF TIME AND MODIFICATION OF ORDER  
OCTOBER 21, 1948

If the Commission please, I would ask your indulgence for just a few moments to permit me to make a brief statement summarizing the nature of the matters involved in the proceedings before us at this time.

Although in my opening statement, the Commission was requested to consolidate for hearing and future consideration the records in the three proceedings here heard, the real and only issues presently before the Commission for consideration at this time consist of the application of Pacific Electric Railway Company for an extension of time for compliance with that portion of the Commission's Order in Application No. 23053 relating to a passenger equipment replacement program and the Company's application for extension of time and modification of certain elements contained in its Order under Decision No. 41152 in Application No. 27466. In view of the nature of the evidence and testimony, the real issue at this time may be to some extent clouded. I wish to re-emphasize that the only issues upon which the Commission must make its decision in connection with this

C.W. CORNELL

present proceeding are, (1) the extension of time within which the Company should comply with certain portions of the Commission's Orders and, (2) the matter of modification with respect to three specific items of the Commission's decisions.

We are not at this time asking for permission to substitute motor coaches for rail service, to abandon any service, either rail or motor coach, or to increase passenger fares. We are only asking for a reasonably short extension of time within which to complete system-wide studies that are presently under way, looking toward development of a program that will definitely and conclusively point the way toward the course of action the Company should follow for the future.

The record developed during the past two weeks provides conclusive evidence that the passenger operations conducted by Pacific Electric Railway Company have incurred heavy financial deficits over a period of many years, with exception of only four during World War II and that the post war trend is rapidly falling into a more adverse loss than experienced prior to the war. The record further shows in incontroverted conclusiveness that the passenger operations of this Company performed by its rail lines contributed to the system loss during the year of 1947 to the extent of approximately 3-1/2 million dollars before payments for interest on bonded indebtedness, and that of the aggregate loss of 3-1/2 million dollars at the operating income level, approximately 2-1/2 million dollars of the loss was incurred through operation of interurban rail lines. It has been

shown that the extent of the losses will be greatly increased as a result of increased wages recently granted to Company employees.

We respectfully submit that continuation of such a financial condition is not and cannot be either to the best interest of the Company or to the general public of the area served, and that the only type of adequate and enduring passenger transportation service is that which can be performed upon such a basis as to produce a sufficient amount of revenue to offset full costs of operation and return to the operator a reasonable profit with which to amortize its investment.

The record is replete with evidence to supplement the generally accepted principal of industry as a whole, that private capital cannot be expected to subsidize the public through performing a necessary service at a financial loss. The record also indicates the trend of such financial losses over a period of many years, and that there is no reasonable expectation of a reversal of this adverse financial trend. The losses of this carrier have been established without question and the need for remedial action automatically follows if the financial integrity of this basic industry is to be preserved. It has been shown that the only means by which the Company's financial status can be oriented into a reasonably favorable position with respect to its passenger operations is to increase revenues, decrease costs, or effect a combination of the two, that will eliminate the deficits that have persistently plagued the

Company during these past many years.

It is further evident from the record that to effect this readjustment by increasing fares is an absolute impossibility, and that the only remaining means of bringing revenue and expenses into proper relationship on a sufficiently large scale is to take advantage of the economies that will decrease costs of operation. We do not know, however, at this time the nature of the procedure that will prove advisable. We have shown standard practice throughout the country wherein excessive costs of rail operations have been replaced by less expensive use of rubber tired vehicles. We are not at this time convinced that even a complete program of substitution on all rail lines of the Company will place it financially in a reasonable earning status. On the other hand, we are not convinced that all of the rail lines must go. We can only arrive at a final conclusion in this regard after having carefully analyzed all phases of the Company's operations so as to develop conclusions that will be determinative in advancing a system-wide modernization program.

We recognize, and it has been so testified upon this record, that certain of the rail passenger equipment of this Company is of such age and character that it should be retired from service and it has been the Company's indicated intention of devising a program that will make such an accomplishment possible. We do not know, however, at this time the nature of the procedure that will prove to be most advantageous in this respect. We do know, from close familiarity with the general

trend throughout the country, and particularly in the State of California, that the one remaining straw that the industry has been able to grasp in attempting to keep its head above water is to relinquish passenger rail operations in favor of vehicles traveling on rubber tires.

It is inevitable that to some measure, and perhaps a substantial measure, rail lines of this carrier will be replaced by motor coach service, and to some extent it is quite likely that services will have to be in some instances drastically curtailed or possibly abandoned entirely. This is nothing new that has been propounded and placed before this Commission by Pacific Electric Railway Company. Actually, this Company trails the industry as a whole in taking advantage of the economies possible through such measures. The pattern has been definitely established right here in our own State of California. We need only look to our several large centers of population in the San Francisco Bay Area and San Diego, with specific focus upon the history of interurban passenger transportation in this great Los Angeles Metropolitan Area, to see the natural trend toward elimination of interurban electrified rail lines.

Further, we need not look beyond the boundaries of the Los Angeles Metropolitan Area, in which the phenomenon has been most highly accentuated, to see the underlying causes of this transformation. The competitive inroads of private automobile are obvious to all. This is also true of the meeting of public desire for greater comfort and less inconvenience, as recognized



by merchandising establishments of this area. Decentralization has become a commonly understood characterization in large scale community development and no where in the country has its effects been more conclusively demonstrated than in the area served by the lines of Pacific Electric Railway Company. Large merchandising establishments that formerly were confined exclusively to the central business area have followed the pattern of decentralization by locating branch stores, or in some cases moving their facilities completely from the downtown section into outlying communities at locations more near the center of public demand.

Among these institutions are included May Company, Bullocks, Magnins, Coulters, Sears Roebuck and Co., Montgomery Ward & Co., and numerous other stores of smaller gross business. Much of the territory within the scope of a 60 mile radius from Los Angeles that formerly was dependent upon interurban transportation into Los Angeles to meet their daily essential requirements are now within only a few miles of self-sufficient shopping and recreational centers easily accessible by their private automobile and as a result the electric lines of Pacific Electric have been abandoned in large measure.

Virtually, the only remaining patronage is that which falls within the category of essential travel. At one time the electrified rail lines of this system provided a network of passenger service from the Pacific Coast at Santa Monica on the west to San Bernardino on the east, and from distant points in

San Fernando Valley on the North to Riverside, Orange, Santa Ana and Balboa on the south. Even with that wide expanse of rails, the Company had ambitious plans for even greater extensions into other territories not then served. That picture has been drastically changed by the competitive aspect of the private automobile and the desires of the general public. Instead of continued expansion, a full scale contraction took place and at a steady rate during the past 25 years the passenger rail lines of this system have been disappearing. The need for further curtailment is again obviously present.

Actually, aside from the fact that the motor coach may not be as commodiously appointed as the older rail cars, the degree of flexibility is greater under the method of rubber tired vehicles operating over the public highways. Whereas the former rail lines in many cases traverse territory that was inaccessible by other means, population has followed the pattern established by the automobile and community development has shifted from the rail lines to the automobile highways. Motor coaches operating over those highways consequently have made it possible to follow more nearly the route of travel desired by the majority of the population of the territory served. It is difficult in view of the past history and present conditions to understand the tenacity with which so large a percentage of the population insists upon retention of nonprofitable rail passenger lines. Such an attitude is entirely contrary to the ordinary conception of business by which the opponents of rail elimination

are forced to conduct their own personal lives or the activities of the businesses with which they may be engaged. Such thought is contrary to the great philosophy of a private enterprise upon which the basis of our democratic way of life in this country is established. All the applicant in this proceeding is asking for is the inherent right to conduct its business upon a profitable basis.

As testified to by Mr. Smith, the President of this Company, and supported by detailed evidence of other witnesses, Pacific Electric Railway Company is presently engaged in developing a comprehensive analysis of its entire operations to determine the ways and means, if any exist, by which it can realize the financial rewards to which it is entitled. The record thus far developed should provide conclusive evidence that this system-wide survey is well along towards a stage of completion. An outline has been presented to indicate the various phases of the studies that are under investigation, numerous of the supporting data have already been prepared and compiled, highly qualified consulting engineering services have been retained by the Company to direct on an independent basis the procedure with respect to these studies, and the Company through its President and other witnesses have definitely committed themselves to a program of accomplishment tied into specific dates and time intervals.

At the possible expense of repetition, please let me again remind the Commission and participants in this proceeding that the only issues presently under consideration and requiring

determination by the Commission are whether or not this Company, in view of the program it has set out upon, is entitled to an extension of time in which to comply with certain features of the Commission's prior orders which relate so closely to the Company's ultimate program, that compliance with them at this time, in view of the changed conditions since those orders were issued might seriously interfere with the Company's revitalization program.

Among the very few things the Company has asked for in this current proceeding, is a reconsideration of the loading standards applied to its interurban and so-called suburban lines, which we vigorously contend are not out of line with standard practice on other lines of other carriers in this area and other parts of California. The financial relief that is possible through adoption of more lenient loading standards, although small, will be a needed step toward reduction of the deficit with which the Company is confronted. We are not asking for unreasonable loading standards that will require an undue percentage of standing passengers, but only for consideration on a par with other carriers. We concede in this record and bring to the Commission's attention the desirability of again reviewing the entire loading standard problem after the service and facility adjustment program has been brought to a comprehensive conclusion.

I wish to impress upon the Commission the present policy of Pacific Electric Railway Company, as expressed by its

President in his opening statement, to the effect that the Company intends to pursue all possible means at its disposal for bringing about a proper financial relationship between costs and revenue in passenger transportation service wherein that service will be self-sufficient and self-supporting, not only from the point of view of breaking even, but from the point of view of meeting all costs, both fixed and otherwise and returning a fair margin of profit. We feel that we are not unreasonable in adopting this policy and in no manner are we inconsistent with the rights and privileges granted to the public and to private capital in other lines of endeavor. I wish to further emphasize that in developing this program, the Company will do everything within its power to effect the necessary changes in such fashion as to cause the minimum of inconvenience and discomfort to its passengers and to preserve to the fullest extent the essential elements upon which the success, prosperity and future development of the communities it serves are dependent.

In closing I would like to briefly restate the commitments made by Company witnesses including its President, as to the time schedule within which certain things are to be accomplished. First, we intend to draw the comprehensive system-wide survey to a close within a period of 90 days. Second, we intend to place into effect one man car operation on the Glendale Line as regards to operation of PCC Cars, barring unforeseen obstacles, within a period of approximately 60 days, provided required regulatory approvals can be obtained. Third, we intend to

effect a material change in the personnel organization of the Company within a period of 15 days. Fourth, we intend to complete negotiations on division of the Los Angeles Motor Coach Lines between Pacific Electric Railway Company and Los Angeles Transit Lines within a period of 30 days. We have made these commitments in good faith and intend to carry them out. As to other eventualities that may develop within the near future as to adjustments in our rate structure or other things that may be forced upon us through immediate and real increases in cost, we are not in a position to make any promises. We do want the Commission to know, however, that we may be forced within the near future to submit an application requesting financial relief, at least to meet the immediate costs of increased labor rates, through an adjustment in our scale of passenger fares.

All of these things we are asking for, however, at this time and probably those within the very near future will be in the nature of temporary adjustments, all of which should be subject to final review and further coordination at such time as our ultimate modernization program has been carried into effect.

By reason of the fact that Pacific Electric Railway Company is now operating at a deficit, we vigorously urge that it must be given different consideration than may develop to be equitable at such time as the property has been recast into a profitable operation. The record in this case conclusively establishes the distinction between the two categories and the need for different

consideration under each.

With this closing statement, it is the sincere desire of Pacific Electric Railway Company that the Commission grant the extensions of time and modifications of its orders which have been requested in order that the rehabilitation program may be expedited to the fullest extent, and an ultimate solution developed that will be of an enduring nature rather than to proceed piece meal with temporary palliatives that will only tend to prolong the agony involved in the slow death that will inevitably follow.

Daily scheduled operations in rail service include approximately 2,100 passenger trains, 80 freight trains, 50 express cars, and 15 mail cars. About 3,700 scheduled motor coach trips are operated on weekdays from various terminals.

V

COLLATERAL PROCEEDINGS BEFORE THE  
PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA AND  
CITY OF LOS ANGELES

PREWAR FARE APPLICATION NO. 21656

Pacific Electric Railway Company, jointly with Motor Transit Company and Los Angeles Motor Coach Company, on December 17, 1937, filed Application No. 21656 with the California Railroad Commission requesting authority to increase passenger fares on all rail and motor coach lines.

A public hearing was held on the matter on January 7, 1938, followed by further hearings in February and March of that year, and by its Decision No. 30783, dated April 11, 1938, the Commission granted interim increases in fares pending completion of a study to be made by its engineering staff. Those surveys were comprehensive in their scope, covering all phases of the Company's operations, and the completed findings were set forth in a report of ten volumes, the last of which, Exhibit No. 73, was submitted in evidence on March 31, 1939, followed by a supplement, Exhibit 87, submitted on June 28, 1939. As an outgrowth of that proceeding, a comprehensive modernization program was commenced by the Company, designed to replace certain of the non-profitable passenger rail lines with motor coach service, to a considerable extent in accordance with recommendations contained in the above mentioned report. Final determination was also made with respect to the issue of fares.

EQUIPMENT APPLICATION NO. 23053

By its Decision No. 33088, dated May 14, 1940, under this Application, the Public Utilities Commission ordered Pacific Electric Railway Company to



retire from service all of its wooden bodied rail passenger cars. Due to the commencement of war activities shortly thereafter, and the heavy demand for passenger carrying equipment of all types, the provision of the order was postponed by the Commission by a number of supplemental orders, the tenth such order having been dated May 4, 1948, postponing date of compliance to November 15, 1948.

In view of the pending systemwide modernization surveys that were commenced early in 1948, the Company asked for further extension of time until August 15, 1949, to comply with the provisions of Item "A" of the order, relative to replacement of motor coaches, and Item "C" pertaining to abandonment of wooden bodied rail cars. By its Decision No. 42321, dated December 14, 1948, the Commission postponed the limit of compliance on motor coaches until November 15, 1950, and on wooden bodied cars, until March 1, 1949.

POSTWAR FARE APPLICATION NO. 27466

Under this application the Company requested authority from the Public Utilities Commission to increase its passenger fares on a systemwide basis. By its Decision No. 39302, dated July 31, 1946, fare increases substantially as requested were authorized by the Commission. Certain adjustments in the fare structure were made by Decision No. 39357, dated August 27, 1946. By a second supplemental application, the Company filed on June 23, 1947, with the Public Utilities Commission requesting further increases in fares to offset the effect of increased wages, taxes, and material cost.

SURVEY ANALYSIS, CASE NO. 4843

On July 31, 1946, the Commission instituted an investigation on its own motion inquiring into the rates, services, operations, and facilities of Pacific Electric Railway Company and Los Angeles Transit Lines, as well as the joint operations of those companies under the name of Los Angeles Motor Coach

Lines. Hearings were held on the joint proceedings during October and November of 1947.

RECOMMENDATIONS OF PUBLIC UTILITIES COMMISSION ENGINEERS

Under Case No. 4843, the Commission's engineering staff conducted an extensive analysis of service and operations of Pacific Electric and also of its fare structure and financial status. Several exhibits were submitted by Commission personnel. The recommendations contained in Exhibit No. 32 if carried out would have required an expenditure by the Company for track rehabilitation, new rail cars and other items of approximately \$10,000,000, plus \$1,400,000 to provide track circuits at approximately 400 grade crossings.

DECISION NO. 41152 ON RECOMMENDATIONS

By this decision, dated January 19, 1948, the Public Utilities Commission granted certain increases in fares and ordered the Company to comply with certain of the recommendations made by Commission's engineers, and established certain time limits for compliance.

APPLICATION FOR MODIFICATION AND EXTENDED TIME

In anticipation of the serious effect upon its future that might be brought about by the recommendations contained in the Commission's order, and in view of the postwar increase in operating losses, the Company took steps to embark upon a major systemwide modernization and rehabilitation study early in the year of 1948. As the results of those studies became preliminarily available, it appeared evident that steps should be taken immediately to request indulgence of the Commission for a period of time sufficient to permit completion of the studies. The preliminary survey indicated conclusively that for the Company to meet the heavy losses from passenger rail service, certain replacement by motor coach operation was necessary.

Thereupon the Company filed in July of 1948 a Petition to Modify and Amend Decision No. 41152 and an application for extension of time on Appli-

cation No. 23053, Decision No. 33088. In those applications the Company pointed out to the Commission its serious financial status, the probable necessity of shifting from passenger rail service to motor coach service and the desirability of postponing action on the recommendations of the Commission's engineers as they pertained to rail facilities, until after the major modernization studies were completed.

Public hearings were held in connection with the Company's request, on October 13 and 21, 1948. At the first day of hearings, evidence was submitted by the Company in the form of verbal testimony and exhibits as follows:

- (1) Mr. O. A. Smith, President - Statement of policy, condition, and desires of Pacific Electric Railway Company.
- (2) Mr. Jno. J. Suman, Auditor - Exhibit No. 45, containing current financial statements of the Company.
- (3) Mr. George F. Squires, Assistant to the President - Statement and Exhibit No. 44, relating to the degree of compliance with the 43 recommendations as of that date.
- (4) Mr. Arthur C. Jenkins, Consulting Engineer - Exhibits Nos. 46, 47, 48, and 49, relating to the content and recommendations of his preliminary report submitted to the Company on July 15, 1948, the effect of loading standards upon net earnings and the trend and condition of the transit industry throughout the United States.

DECISION NO. 42321 EXTENDING TIME

By this decision, dated December 14, 1948, after public hearing as referred to above, the Commission authorized the Company to continue in operation the 13 motor coaches involved under Application No. 23053 and Decision No. 33088, until November 15, 1950, provided their use be restricted to peak hour service and emergency requirements and granted extension of time on compliance with certain of the features of its order in Decision No. 41152 and Decision No. 33088.

APPLICATION NO. 30095 ON MODERNIZATION PROGRAM

(a) General

Upon completion of modernization studies as they related to nonprofitable rail passenger operations, the Company filed application on February 25, 1949, requesting authority of the Public Utilities Commission to establish motor coach service in lieu of rail service on several lines of the system. On the same date Application No. 30097 was filed jointly by Los Angeles Transit Lines and Pacific Electric Railway Company, seeking authority to divide between them the several lines of Los Angeles Motor Coach Lines, their joint agency.

(b) Hearings

Public hearings were held on May 11, 1949, August 1 to 10, 1949, and during September, October and December of 1949, the hearings being completed on December 15, 1949. As of the date of this report a decision has not yet been rendered.

(c) Position of Interested Parties

As a result of joint conferences between principal interested parties the Company made certain amendments to its original application so as to eliminate those issues that were particularly controversial. In view of those changes the City of Los Angeles indicated that its principal objections to the program had been met.

Mr. T. A. Hopkins, Supervising Engineer of the California Public Utilities Commission as witness for the Commission, submitted Exhibit No. 103 in which it was stated:

"Based on the results of this study, it appears that the following general conclusions can be made.

1. Continued present operations of the lines covered in this report would produce \$1,637,900 less than the amount necessary to meet

operating expenses, amortize track rehabilitation costs and provide interest return of 4% on one-half of the additional investment required for passenger operation. It would require an expenditure, over and above normal maintenance, of approximately \$2,500,000 chargeable to passenger operations. The necessary expenditures for both passenger and freight operations would amount to \$4,500,000.

2. The substitution of one-man P.C.C. or 600 class cars for the present method of operation, together with certain abandonments of service, would effect an annual saving of approximately \$1,300,000 with an expenditure, over and above normal maintenance, of \$4,300,000 chargeable to passenger operations. The necessary expenditures for both passenger and freight operations would amount to \$5,800,000.
3. The substitution of motor coach operation combined with certain one-man P.C.C. or 600 class car operations for the present methods would effect an annual saving of \$1,800,000 with an expenditure, over and above normal maintenance, of approximately \$3,700,000 chargeable to passenger operations. The necessary expenditures for both passenger and freight operations would amount to \$3,800,000. This plan would result in an operating income, before income taxes of \$388,600 under normal operation or \$187,400 after provision for amortization and interest."

Estimated expenditures under the three plans of (a) continuing present rail operations, (b) converting to modern PCC or 600 class rail cars, and (c) converting to motor coach operation as proposed by the Company, were established by the Commission's witness as follows:

"The amounts included as expenditures required include such items as cost of new cars and motor coaches, cost of remodeling 600-class cars, cost of other new facilities such as shops, garages, tracks and terminals, rehabilitation of track and overhead and the costs of track removal incident to conversion to motor coach operation."

"The total estimated expenditures, including the freight portion are:

Present Operations . . . . .	\$4,539,800
P.C.C. or 600 class car Operation . . . . .	5,796,500
Motor Coach Operation . . . . .	3,828,900."

With respect to the San Fernando Valley passenger rail line between Los Angeles and Van Nuys, which the Company proposes to terminate at North Hollywood, Exhibit No. 103 is quoted:

"It is the opinion of the staff that the West Hollywood via Santa Monica Boulevard Line could easily take care of the present traffic along Santa Monica Boulevard and Sunset Boulevard, with only a small amount of added mileage, and that all passenger rail service to and from communities in the San Fernando Valley probably could be terminated in Hollywood. Under such a plan, savings much greater than those shown in the staff's present estimates could be realized."

This would go farther than the Company's proposal and eliminate through rail service to North Hollywood.

As to individual lines, Exhibit No. 103 submitted by the Commission's staff estimated the Net Annual Results of Operation including amortization, interest, and depreciation, but not bond interest, to be as follows:

## VII

### ANALYSIS OF THE PROBLEM

#### MODERNIZATION PROGRAM

Modernization as characterised herein does not mean necessarily the replacement of existing facilities and equipment in like kind of more modern and deluxe design. It means the conversion of facilities, operations, and service, to incorporate the most modern and highly accepted standards of practice as adopted by the transit industry generally, in its efforts to keep pace with the trend of times and economic conditions.

Replacement of outmoded passenger rail cars that have long since become obsolete and prohibitively costly to operate, with new motor coaches of latest design incorporating all of the refinements and developments of recent years in this rapidly growing industry, represents modernization. This is a modernization program designed to bring about on this property, financial revitalization. Rehabilitation is not a correct description of the process.

The primary motivating factors behind the entire modernization program are the financial deficiencies experienced by the Company in passenger transportation, the extremely large reconstruction expenditures that would be required for continued rail operation, and the absence of any hope that rail passenger service on this system can ever be made profitable in the future. If losing rail lines had been converted to motor coach service earlier, the present magnitude of deficit would have been avoided. The natural trends of economic and scientific development that have been largely responsible for the present unfavorable condition are almost entirely beyond control of management.

Studies that are the foundation of this report, have been based upon the theory of dual obligation and premised upon the assumption that

the two cannot be separated. One of these obligations is that of the Company to recognize the convenience and necessity of the traveling public, to utilize the most modern developments in facilities and procedure, and to maintain the highest standard of service commensurate with its earning ability and the restrictions imposed upon it as a private industry. The other is the obligation of the public to pay in return for the service received, an amount sufficient to cover the costs of service and a reasonable margin of profit.

#### CAUSE OF FINANCIAL DISTRESS

Based upon experiences of the industry within California itself, as well as all other large population centers of the Country, there is only one obvious conclusion as to the underlying causes of Pacific Electric's predicament. Effects of the private automobile, decentralization of business centers, slowing down of rail service by street construction and traffic interference have all had an adverse effect on traffic of rail lines. This has been a natural trend of events that has brought about the necessity for transit operators to eliminate costly rail transportation and adopt a more economic conveyance that can be supported by the depleted earnings. This has not been by choice, but inevitable in the wake of the inroads of private automobiles upon traffic, and ever ascending costs upon the economic balance.

The condition of financial distress with which Pacific Electric finds itself confronted is not new and is not unique to this Company. Neither is it due to the effects of mismanagement, nor can it be corrected by good management without seeking means of escape from the conditions that are primarily contributory. The mere expression of a desire on behalf of its patrons for transportation by rail without consideration of the financial elements can not be accepted as controlling in deciding the fate of rail service when the results would obviously mean financial losses that would



require a calculated program of deferred maintenance and liquidation of capital that ultimately would react as a burden upon the public through higher fares and poorer service.

This operator is a common carrier dependent for its existence upon the revenues it derives from transportation services rendered to the public. That portion of the public making use of freight services is equally entitled to just and non-discriminatory rates as that portion using passenger service and it is no more reasonable to expect freight operations to support losing passenger lines than it is to contend that, if conditions were reversed, passenger fares should be established at a sufficiently high level to offset losses from freight operation. The problem extends to the whole public served and the principle of just, reasonable and nondiscriminatory rates, rules, practices and procedures must be extended with equal consideration to all.

If the conversion program is not permitted and continued rail service is required, even with continued use of present facilities, it would be mandatory that drastic curtailment in service be exercised which would probably leave many of the smaller communities at remote locations without service, in order that the more populous areas might enjoy unjustified rail service.

#### SOURCES OF RELIEF

The next question is to determine the source from which the financial betterment is to be acquired. Either costs of operations must be decreased, revenues must be increased, or a combination of the two must be effected. The magnitude of deficit is such that under continued operation without major change in facilities there is no possible means of reducing costs of operations to a sufficient degree. Careful analysis of the other side of the formula impels the conclusion that the required financial im-

provement cannot be completely realized through increases of passenger fares. These points having been established, then the search must extend more deeply into the functional aspects of the operation.

If the passengers presently carried by the lines of this system consider the service to be necessary to their existence, and patronage is sufficient to warrant, nothing should be done to unreasonably deprive them of service. This means that the same passenger capacity presently provided should be preserved in accordance with prescribed loading standards and changed only as the trend of use inclines upward or downward.

Therefore, having established the need for financial improvement, the inability to obtain it from increased fares or reduction of operating costs, and the fact that the service is essential and should not be eliminated, there remains only one source from which the desired result can be forthcoming and that is to take advantage of the economies that can be effected by changing the physical characteristics of the operations to meet modern standards and practices. This reduces the entire problem to one element, that of replacement of obsolete rail passenger facilities that have become increasingly more costly to operate and less capable of providing the highest standard of service, with modern rubber-tired vehicles routed over the paved streets and highways, providing a flexible operation with more extensive coverage of the populated area,

#### ABILITY OF MOTOR COACHES TO PERFORM

The passenger motor coach is today one of the most important modes of mass passenger transportation in the country and has, over a period of many years, proven its ability to the fullest satisfaction of the industry and in many cases individual motor coach lines carry traffic volume equal to that transported by the heaviest rail lines in similar type service. The trend away from rail to motor coach service and the acceptability of the

(15) In vehicle miles operated, 77% was by rail in 1928 as against 23% by motor coach; in 1948 only 35% was by rail and 65% by rubber-tired vehicles, 60% of which was by motor coach. Surface rail lines, excluding subways and elevated lines, decreased from 61% in 1928 to only 21% in 1948.

(16) For the year of 1948, only 206 new subway and elevated cars were delivered and 478 surface streetcars as compared with 8,439 rubber-tired vehicles of which 7,009 were motor coaches. These figures were for the transit industry only and do not include long-haul carriers.

(17) For the year of 1948 there was only a total of 12,993 electric railway track miles, of which 1,251 represented subway and elevated lines, as compared with 99,490 route miles for rubber-tired vehicles, of which 96,473 miles was motor coach operation.

(18) Statistics show that 885 American cities formerly served by streetcars now rely exclusively on motor coaches for passenger transportation.

#### TRAFFIC CONGESTION NOT CONTROLLING

Although opponents to motor coach operation contend that replacement of rail cars by motor coaches will create intolerable traffic congestion, reference to statistics and facts renders that contention invalid. Available information indicates the following:

(1) Consideration of the congestion problem has not prevented the phenomenal growth of motor coach operation in replacement of rail cars in many other cities and communities throughout the country as referred to above, and also in the area presently served by Pacific Electric.

(2) The findings of numerous traffic checks made in many cities uniformly point out the tremendously greater number of trucks and private vehicles on city streets than mass transit vehicles, typical

examples of which are as follows:

- (a) Cordon count of traffic in San Francisco in October of 1947 indicated that during the day between 7:00 AM and 7:00 PM, of approximately 450,000 vehicles entering and leaving the downtown area, 97.4% consisted of private automobiles, taxis, and trucks, whereas only 2.4% were mass transit vehicles.
- (b) Traffic study made in 1947 under direction of the City Planning Commission of the City of Oakland showed that 91% of passenger vehicles entering the downtown area were automobiles as compared with 9% transit vehicles.
- (c) Recent check of traffic by the City of Los Angeles indicates that of the total vehicle entering the downtown area 87% are automobiles and 13% are transit vehicles.

(3) In a pamphlet, dated January 1, 1948, issued by the Los Angeles Chamber of Commerce, it is stated: "Los Angeles county has 1,333,718 Automobiles registered as compared with 1,093,290 in 1940. Fine highways, attractive scenery, and sunshiny days invite the population to use their cars alike for pleasure and business. More than one car to every 3 persons is found here." The same pamphlet shows further that for 1947 in Los Angeles County there were 117,283 trucks, or a total of trucks and automobiles in the County of 1,451,001. The entire fleet of motor coaches operated by Pacific Electric is only 507 vehicles and only about 150 more will be added under the proposed program with a corresponding reduction of about 150 rail cars.

In view of the tremendous number of private automobiles and commercial trucks using the city streets of Los Angeles, the amount of added congestion that would be created by the relatively insignificant additional number of motor coaches under the proposed plan of substitution would be

immeasurable. It is inconsistent with good judgement that effort should be exerted to restrict the number of mass transit vehicles on the streets, whereas private automobiles, with their inefficient utilization of street surfaces, are permitted to increase without limit, particularly when it is realized that one motor coach will carry as many persons as 40 automobiles.

Were it not for the fact that the motor coach is larger than the private automobile and of a distinctive color, which makes it stand out in traffic, it would not be noticeable on the streets and certainly, with its experienced driver, would cause much less traffic interference and congestion than the relatively inexperienced drivers of private automobiles.

#### EFFECT OF AUTOMOBILE

If any semblance of reliable public transportation is to be preserved, there must be developed a new approach to the problem and a more complete understanding of the difficulties confronting the industry. Under present conditions, and in the past, the public has considered mass transportation as one problem and private transportation as another, entirely unrelated. As mass transportation has been forced into the discard by the acute competitive effect of private automobiles, its costs have increased, and its profits have disappeared. The automobile, to the contrary, has forged ahead taking away the erstwhile profitable traffic and leaving mass transportation to cope with the costly peak hour travel which becomes progressively more serious.

During the past few decades, along with human progress has come a definite trend toward shorter working hours and the desire on behalf of a majority of the people to commence their working day at virtually the same time, and to conclude it within a very narrow time band. This has thrown upon the transit operators one of the burdens that has been responsible for forcing the industry to its financial knees. Along with this trend has come

the increased use of automobiles for casual trips, business and recreation, during off-peak hours, thereby diverting the most profitable class of traffic from mass transit lines. As a result a large percentage of passenger-carrying equipment makes only one round trip per day in productive service, but the man who operates that vehicle must be paid for a full day's work. The investment in the equipment stands idle and non-productive during a large part of each day, when it could be in productive use if traffic were available.

Upon the basis of the average occupancy of automobiles using the streets and highways of California, which is the surprisingly low figure of about  $1\frac{1}{2}$  passengers per car, one motor coach will carry the same number of persons seated that 30 automobiles will carry, and with a reasonable standing load, will equal 40 automobiles. This is an important consideration when weighing the merits of objection to use of the highways and streets by motor coaches. No objection is ever raised to the increased number of automobiles and trucks on the street. As they increase in volume more roadways are constructed to accommodate them, apparently without any upper limit. In 1949 there were 1,543,647 automobiles registered in Los Angeles County, an increase over 1948 of nearly 116,000.

The phenomenal increase in use of private automobiles in Southern California should serve as an obvious criterion of the need for a change in the type of mass transportation. Residential development and commercial decentralization in this area follows a pattern that can be found in no other part of the country on the same scale of magnitude. Such development is spread over vast areas most of which has been located along principal automotive highways and not along passenger rail lines. This condition is readily apparent when driving through the area and strikingly evident when viewed from the air.

Such widespread use of the automobile points conclusively to one

thing, it is a more desirable form of transportation than that otherwise available by reason of its adaptability to the requirements of widely dispersed residential locations. If mass transit is to compete successfully it must offer a more nearly parallel service as to convenience and directness of route. This means departure from the trunk line pattern of rail systems and establishment of greater area coverage. This can only be done by use of the motor coach operating over the same highways as the automobiles. Development is no longer taking place along rail lines, it now follows the highway system.

#### RAIL RAPID TRANSIT

Another faction of the proponents for preservation of existing passenger rail lines is motivated in its endeavors by the desire to create a Metropolitan Rail Rapid Transit System to be operated by a duly constituted Transportation District. It is this group that brings to bear the greater amount of opposition to the proposed replacement of existing non-profitable passenger rail lines by profitable motor coach operations. They insist that development of a publicly owned Rail Rapid Transit System is largely dependent upon preservation of existing tracks and rights of way of Pacific Electric Railway Company.

It is true that the rail lines of the Company were originally laid out in such fashion as to provide the most beneficial and effective coverage of the area from a transportation point of view under conditions then existing. This fact alone, however, cannot be construed as an obligation upon the Company to preserve these rail lines indefinitely at heavy financial loss to itself for the benefit of the public, to the extent that they may ultimately be considered desirable for incorporation into a publicly owned Rail Rapid Transit Program, if such should ever develop.

It has been, to a large extent, due to the preliminary negotiations

toward development of a Metropolitan Rail Rapid Transit District that Pacific Electric has deferred action in connection with a modernization program. The Company management has been most receptive throughout the development of this plan to the ultimate advantages it might bring and has actively participated to the extent of contributing substantially of both funds and manpower in an effort to promote and expedite this project which it considered to be in the interest of the general public, despite the inevitable adverse effect it might have upon Pacific Electric.

Action in connection with the formation of the Rail Rapid Transit District commenced more than five years ago. Much time and effort was exerted by many influential persons, businesses, public agencies and civic groups to the development of a framework that could be placed before the people for their support. Draft of an enabling act was prepared and submitted for consideration of the State Legislature in 1948. It was the hope at that time that the matter could be brought to a sufficiently quick conclusion to permit incorporation of certain of the rapid transit lines in the system of automotive freeways contemplated for immediate construction by the State of California. The Legislature did not act favorably upon the proposal. Subsequently the matter has been reconsidered, reviewed and modified by its proponents, but at this time there is nothing concrete in the way of a program that goes beyond that stage of speculation.

There is no assurance whatever that, even if the enabling act should be passed, the District formed and a plan prepared, that it will be favorably acted upon by the people. To the contrary, there is evidence of much opposition to the plan on the part of certain of the cities that would be included within the District. Unanimity of thought and desire is difficult of accomplishment in any enterprise that involves so many communities with such diversity of interests. Even if the way were paved completely so



that immediate action could be started toward ultimate construction of a Rail Rapid Transit System, it would require a period of from ten to twelve years before it could be finally put into operation. Within that length of time it is easily conceivable that Pacific Electric Railway Company, if forced to continue its passenger rail service for incorporation in the Rail Rapid Transit Program, could have become extinct by the date of completion.

It should be clearly understood that this plan of operation as proposed for application to Pacific Electric Railway Company is designed to meet the necessities of that company in its capacity as a free enterprise under private ownership. Its problem must be coped with in full recognition of the limitations imposed upon such industry including the mandate that costs of providing service must be maintained at a lower level than the revenue received from sale of service. On no other basis can private enterprise survive.

The realm of possibilities under public ownership and operation with unlimited funds for construction and operating subsidy have not been explored. However, the proposed plan of Pacific Electric will in no way interfere with the transportation survey presently being put underway by the County of Los Angeles and neither will it interfere with the development of a Rail Rapid Transit plan if such should materialize in the future.

ARTHUR C. JENKINS

March 30, 1950.

vehicle can be demonstrated by the following citations:

(1) In San Francisco, where transit traffic density is second highest in the country, the municipally owned transit operation is rapidly replacing rail lines with rubber-tired vehicles.

(2) The municipally owned transit system in Seattle has replaced all of its streetcar lines with rubber-tired vehicles.

(3) In New York City, where traffic density reaches the highest level in the country including both vehicles and passengers, motor coaches have replaced a substantial percentage of surface rail operations and elevated lines.

(4) In the East San Francisco Bay Area in the Cities of Oakland, Berkeley and Alameda, motor coaches have replaced all streetcar lines and have replaced many of the interurban electric rail lines.

(5) Interurban Electric Railway Company, a former subsidiary of Southern Pacific Company, operated an interurban electric rail service between San Francisco and points in the East Bay Area over seven principle feeder routes serving the thickly populated territory of Alameda County. All of those lines have now disappeared due to inability of the system to meet cost of operation and motor coaches have largely taken over the field.

(6) Interurban electric passenger service of Northwestern Pacific Railroad, formerly operated in Marin County to the north of San Francisco Bay, disappeared a number of years ago due to insufficient earnings and motor coach service has taken over.

(7) The Sacramento Northern Railway Company, which formerly operated electric passenger rail service between San Francisco and Sacramento, discontinued such operations a number of years ago due to financial losses incurred and much of the territory is now served by

motor coaches while some has been left without any substitute service.

(8) Numerous lines of Pacific Electric Railway Company, formerly radiating from Los Angeles to outlying communities and cities, have heretofore been abandoned, with motor coach substitution in some cases and in others, with no replacement service.

(9) Numerous former passenger rail lines of Los Angeles Transit Lines within the city of Los Angeles have been replaced by motor coach operation as a means of maintaining a proper earning status.

(10) The San Diego Electric Railway, which provides passenger service in that City and adjoining communities was recently granted permission to substitute motor coach service for electric rail lines. In that instance the lines were equipped with modern, up-to-date, streamlined, P.C.C. type cars.

(11) Motor coaches have replaced streetcar operation completely in the cities of San Jose, Stockton, Sacramento, Fresno, Bakersfield, Pasadena, Long Beach and others in the State of California.

(12) In many other cities throughout the United States this same trend has been followed, in most instances to a greater extent than on Pacific Electric.

(13) Tables X, XI and Chart III show the trend from rail to motor coach operation in passenger transit throughout the country and indicate the proportion of use of the two types of vehicles over the period of years from 1922 to and including 1948.

(14) Table No. X shows that in 1928, 86% of total transit passengers were carried by rail and only 14% by motor coach. For 1948, twenty years later, only 43% were carried by rail and 57% by rubber-tired vehicles. For surface rail lines, other than subways and elevated lines, the percentage dropped from 71 in 1928 to 31 in 1948.



*Arthur C. Jenkins*

In the Matter of the Application of

PACIFIC ELECTRIC RAILWAY COMPANY  
LOS ANGELES, CALIFORNIA

Before

THE BOARD OF PUBLIC UTILITIES AND TRANSPORTATION  
OF THE CITY OF LOS ANGELES

For Authority to Make Certain Changes  
In Passenger Rail and Motor Coach  
Service, Operations and Facilities  
Pursuant to Franchise Ordinance  
No. 90344.

Los Angeles, California  
January 5, 1950

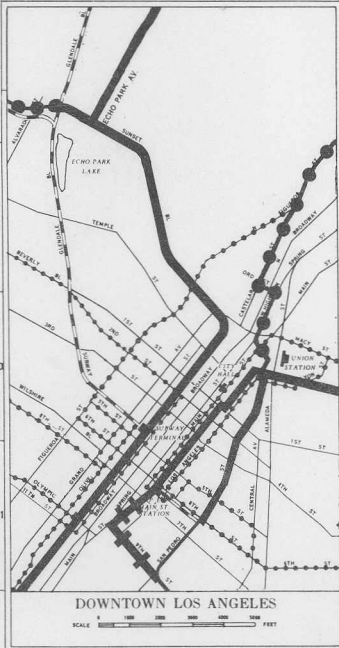
Presented by:  
Arthur C. Jenkins  
Consulting Engineer

Pacific Electric Railway Company  
 MAP SHOWING PASSENGER RAIL LINES  
 PROPOSED FOR REPLACEMENT BY MOTOR COACH SERVICE  
 AND OTHER CHANGES



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- LEGEND**
- Rail Lines - Passenger and Freight - to be continued
  - - - Rail Lines - Passenger Only - to be continued
  - - - Rail Lines - Freight Only - to be continued
  - Motor Coach Lines - to be continued
  - Proposed Motor Coach Lines To Be Established in Lieu of Present Rail Passenger Service. Exception: On Venice Blvd. between Vineyard and downtown Los Angeles, proposed motor coach line would not handle local passengers.
  - Proposed Additional Motor Coach Lines
  - Proposed Motor Coach Line Discontinuance
  - Proposed Rail Passenger Service Discontinuance, without bus service substitution
  - Proposed Rail Line - Freight Only
  - ⊗ Proposed Freight Rail Line Abandonment

SCALE IN MILES

ARTHUR C. JENKINS

M. AM. SOC. C. E., M. AM. INST. E. E., M. SOC. A. E.

CONSULTING ENGINEER

870 MARKET STREET

SAN FRANCISCO 2, CALIFORNIA

\*\*\*\*\*  
DOUGLAS 2-8023

January 5, 1950

Mr. O. A. Smith, President  
Pacific Electric Railway Company  
675 Pacific Electric Building  
Los Angeles, California

Dear Sir:

In accordance with your request, a report has been prepared setting forth in condensed form the salient features of the Modernization Program covering the passenger transportation operations of Pacific Electric Railway Company, as encompassed by the Company's application to the Board of Public Utilities and Transportation of the City of Los Angeles for authority, pursuant to the provisions of Franchise Ordinance No. 90344.

The program as presented herein is in conformity with the presentation made to The Public Utilities Commission of the State of California in Application No. 30095, wherein authority of that body was requested for purpose of launching the plan.

Based upon the results of extensive study conducted by me with assistance of the Company's Bureau of Research, I am thoroughly of the opinion that the program of modernization as described herein and in the several other preliminary and foundation reports which I previously submitted to you, is basically sound, economically feasible, and wholly within the bounds of accepted standards of operation and service as established by the transit industry generally. I am equally confident that the plan as proposed will adequately meet the necessities and convenience of the public, as commonly defined.

Respectfully submitted,



ARTHUR C. JENKINS  
CONSULTING ENGINEER

Reg. Civ. Engr. #5246  
Reg. Elect. Engr. #2919  
Reg. Mech. Engr. #3200

REPORT ON  
PACIFIC ELECTRIC RAILWAY COMPANY

F O R E W O R D

The modernization plan set forth herein was derived from the results of extensive survey of the passenger operations of Pacific Electric Railway Company. About twelve months were devoted to the studies involved and a number of individual reports were prepared setting forth the findings. Analysis was also made of the conditions, practices and policies prevailing on other transit properties throughout the Country including both privately and publicly owned facilities. Results of those analyses were also compiled in report form. In all, ten separate principal reports were prepared supplemented by several smaller reports prepared to bring information up to date. All of those reports were submitted in evidence before the Public Utilities Commission of the State of California in the matter of Application No. 30095, Application No. 27466, Application No. 23053 and Case No. 4843, at a series of public hearings extending over a period of time from October 13, 1948 to December 15, 1949, on which date the matter was submitted with certain reservations.

Copies of all of said exhibits were furnished by Mr. C. W. Cornell and Mr. E. D. Yeomans, Attorneys for the Applicant, to Mr. Roger Arnebergh, Assistant City Attorney for the City of Los Angeles in those proceedings and to Col. K. Charles Bean, Chief Engineer and General Manager of the Department of Public Utilities and Transportation of the City, as well as to all other principal interested parties.

It is appropriate to acknowledge the highly capable assistance given me in the conduct of the studies, by Mr. D. R. Lewis, Engineering Assistant to the President and Mr. L. H. Appel, Research Engineer.

ARTHUR C. JENKINS



Pacific Electric Railway Company

REPORT ON  
PASSENGER TRANSPORTATION MODERNIZATION PLAN

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## SECTION B

### DETAILED DESCRIPTION OF PLAN

Essential features of the modernization plan as proposed in application to The Board of Public Utilities and Transportation of the City of Los Angeles, as it relates to line, facility and equipment changes, are briefly described below. Chart I of the Appendix shows the changes on a system map.

#### I - RAIL AND MOTOR COACH LINE CHANGES

##### A. VENICE SHORT LINE - RAIL

1. Replace rail passenger service with motor coach operation over the same route as the rail line, except for minor deviations as follows:
  - (a) Motor coach route will be along Olive Street in the business area of Los Angeles instead of along Hill Street - One block to west.
  - (b) Motor coach route will be along Main Street through Venice and Ocean Park instead of along Trolleyway - Less than one block to east.
2. Establish a new off-street terminal on west side of Olive Street between Fourth and Fifth Streets in Los Angeles, opposite present Olive Street motor coach terminal.
3. Connect new motor coach line with existing Los Angeles-Beverly Hills-Santa Monica motor coach line forming a loop operation through Venice, Ocean Park and Santa Monica.
4. Eliminate present rail car service and storage facilities at Ocean Park and construct new motor coach service, repair and storage facility of modern design at Ocean Park.
5. Eliminate rail freight operation throughout entire length of Venice Short Line and along San Vicente Boulevard and Burton Way between Vineyard and Beverly Hills.
6. Make rail right-of-way along Venice Boulevard and San Vicente Boulevard available to City of Los Angeles and other municipalities and public agencies for construction of improved streets and highways.
7. Eliminate all out-moded wooden-bodied rail cars and replace with modern motor coaches.

##### B. HOLLYWOOD-VENICE BOULEVARD-SAN VICENTE LOCAL RAIL LINE

1. Motor coach service to supplement rail passenger service along Sunset Boulevard between Vermont Avenue and Bonnie Brae and to replace rail service from Bonnie brae along Sunset Boulevard and Hill Street to 12th Street.

2. Retain rail passenger service along Hollywood Boulevard, but route all cars via Glendale Blvd. into Subway Terminal.
3. Discontinue local service along Venice Boulevard from Hill Street to Vineyard without replacement by motor coach operation, turning local traffic over to Los Angeles Transit Lines rail routes which parallel Venice Boulevard on either side within approximately  $\frac{1}{4}$  mile.
4. Discontinue local service along San Vicente Boulevard between Vineyard and Genesee Street, turning traffic over to other rail and motor coach lines in same area, thereby making San Vicente Boulevard available for street and highway improvement.

C. ECHO PARK AVENUE RAIL LINE

1. Replace rail passenger service with motor coach service along same route as rail line.
2. Terminate motor coach line on north end at Donaldson Street, one block south of present terminus, and on south end at 12th and Hill Streets.
3. Construct off-street turn-around loop on north end.

D. SAN FERNANDO VALLEY RAIL LINE

1. Retain present passenger rail service over same route as at present from Subway Terminal in Los Angeles, along Santa Monica Boulevard and Highland Avenue through Hollywood and over Cahuenga Pass to North Hollywood.
2. Replace passenger rail service between North Hollywood and Van Nuys with motor coach service, operating over the same route as the present rail line between such points, and which would be a branch of the present Riverside Drive motor coach line, thereby providing a faster service directly into Los Angeles by-passing traffic congestion through Hollywood.
3. Provide direct motor coach service, without transfer between Van Nuys and Hollywood along Van Nuys and Ventura Boulevards.
4. Reconstruct track along Santa Monica Boulevard between Highland Avenue and Sunset Boulevard to the extent required to conform with franchise provisions.
5. Abandon track in Chandler Boulevard west of Kester Junction and in Van Nuys Boulevard from Chandler Boulevard to end of line at Sherman Way in Van Nuys.

E. VENTURA BOULEVARD MOTOR COACH LINE

1. Discontinue service on Northridge and Woodland Hills branches beyond Tarzana.
2. Establish new branch of line to operate through from Hollywood to Van Nuys along Ventura and Van Nuys Boulevards.

F. PASADENA SHORT LINE -- RAIL

1. Replace rail passenger service with motor coach service along same route as present rail line between Pasadena and Los Angeles, except to the small extent necessary to deviate from private right-of-way to nearest parallel streets on inner end between Huntington Drive and Mission Road and Aliso Street and Mission Road.
2. Follow same route as rail line along Aliso Street and San Pedro Street into new motor coach terminal at Sixth and Los Angeles Streets.
3. Establish new high speed express motor coach service during morning and evening traffic peaks, along Arroyo Seco Parkway between Los Angeles and Pasadena to supplement motor coach service over regular route.

G. PASADENA OAK KNOLL RAIL LINE

1. Replace rail passenger service with motor coach service along same route as present rail line between Pasadena and Los Angeles, except to the small extent necessary to deviate from private right-of-way to nearest parallel streets on inner end and for short distances through San Marino and Pasadena.
2. Follow same route as rail line along Aliso and San Pedro Streets into new motor coach terminal at Sixth and Los Angeles Streets.
3. Connect with Pasadena Short Line motor coach line at Colorado Street and Fair Oaks Avenue in Pasadena to form a loop operation.

H. SIERRA MADRE RAIL LINE

Replace rail passenger service with motor coach service along same route as present rail line between Sierra Madre and Los Angeles, except to the extent of small deviation required to make use of nearest parallel streets and highways.

I. MONROWIA-GLENDORA RAIL LINE

Replace rail passenger service with motor coach service over same route as present rail line between Glendora and Los Angeles, except to extent of small deviation required to make use of nearest parallel streets and highways.

J. BALDWIN PARK RAIL LINE

1. Discontinue passenger rail service between Baldwin Park and Los Angeles
2. Establish new motor coach line from Los Angeles to San Gabriel Boulevard paralleling present rail line, as closely as adjacent streets and highways will permit, along San Pedro Street, Ramona Boulevard and Hellman Avenue.

3. Place additional motor coaches in service on both the Valley Boulevard and Garvey Avenue motor coach lines which parallel the rail line on each side, at a distance of about one-half mile.
4. Establish new branch of Garvey Avenue motor coach line to follow same route as rail line between El Monte and Baldwin Park.

K. SIERRA VISTA LOCAL RAIL LINE

1. Separate Sierra Vista end of line from Watts end.
2. Replace rail passenger service with motor coach service between Sierra Vista and Los Angeles along same route as present rail line except to extent of small deviation required to make use of nearest parallel streets.
3. In downtown Los Angeles operate motor coach service inbound along Aliso Street, Los Angeles Street and Eighth Street to Main Street, thence outbound along Main Street, Aliso Street, Ramona Freeway, Mission Road, Marengo Street and Soto Street to Huntington Drive.

L. WATTS LOCAL RAIL LINE

Retain as at present except separate from Sierra Vista end, and operate along San Pedro Street to present rail terminal at Sixth and Main Streets instead of along Ninth Street and Main Street.

M. SANTA ANA RAIL LINE

1. Discontinue passenger rail service between Watts and Santa Ana.
2. Establish direct motor coach route between Los Angeles and Santa Ana during morning and evening traffic peaks supplementing existing motor coach lines which operate over less direct routes.

N. NEWPORT BEACH RAIL LINE

Replace remaining few passenger rail schedules with motor coach service over approximately the same route as present rail line, by placing additional coaches on present motor coach line, to the extent required.

II - OTHER CHANGES

A. FREIGHT RAIL LINE CHANGES

1. Discontinue freight rail service on Venice Short Line and on San Vicente Boulevard and Burton Way.
2. Discontinue freight rail service on Huntington Drive between Valley Junction and a point immediately west of Arcadia and on the Sierra Madre Line.

Prior to World War II, the Company's financial status was becoming increasingly serious and in an effort to stem the tide of losses, a major rehabilitation program was embarked upon. That program contemplated a wide-scale replacement of losing passenger rail lines with highway motor coach service, but was interrupted by commencement of the war.

Wartime prosperity declined abruptly in 1944 and 1945, and a net loss of \$218,879 was experienced for the year of 1946. To compensate for the losses, application for increased fares in passenger service was filed with Public Utilities Commission during the first half of 1946 and by its order of July 31, 1946, increases were granted. As of that same date the Commission instituted an investigation of the Company's operations. With the continued downward trend of net earnings, another application was filed with the Commission on June 23, 1947 seeking further increase in fares to cover increased costs of labor, material, and other essential items. During the year of 1947, the Company experienced a loss to net income in amount of \$1,760,073. Hearings were held jointly on the fare application and the Commission's investigation during October and November of 1947, and a decision was issued on January 19, 1948, permitting increased fares to become effective February 1, 1948.

Benefits from that fare increase have not been sufficient to offset the effects of subsequent increases in wage rates and the persistent downward trend in passenger traffic. Although the common practice in the transit industry generally has been to meet increased costs with increased passenger fares, Pacific Electric Railway Company has declined to pursue that course in the hope and with the expectation that the conversion to motor coaches could be accomplished without undue delay and heavy fare increases could be avoided. Unfortunately, the time that has elapsed since studies were started has been extremely costly to the Company. About one year was consumed in completing the various studies and almost another year has been devoted to consideration of the results by the various interested parties in proceedings before the Public Utilities Commission of the State of California. The interim losses are, of course, beyond recovery to the Company.

### III - INVESTMENT

Aside from the immediate financial requirements as they involve current earnings and cost of providing service, there is a more basic economic aspect of the problem that should not be overlooked and that is the investment in facilities that are to be abandoned in carrying out this program. There is an inclination on the part of certain members of the public to look upon this proposal as one designed selfishly for the sole purpose of producing a profit for the Company. This is not the case. In placing this program into effect the owners of this property are making a tremendous financial sacrifice. The balance sheet shows an investment in road and equipment, which includes all physical properties required for conducting the service under the Interstate Commerce Commission classification of accounts, amounting to \$98,825,949. After deducting accrued depreciation as recorded on the books, the remaining investment is \$78,071,470 which the owners are presumably entitled to recover under the fundamental processes of business and economics.

To expel the contention that may be raised as to the validity of book figures as compared with actual valuation, an estimate has been made of the

valuation of operating properties and facilities as of September 30, 1948, and an amount of \$84,762,753 determined as the historical reproduction cost. This figure has been developed by bringing forward an official valuation of the property established a number of years ago by the Railroad Commission of the State of California, by adding thereto actual additions and betterments and deducting therefrom actual retirements.

Stepping now to the current problem, the ledger value of the properties that are to be abandoned under this program amounts to \$10,263,300. Applying the accrued depreciation percentage to this figure develops that in the program proposed herein the owners of this property will abandon completely, without recovery except to the extent of salvage value, \$7,950,000 of their investment. This is not a fictitious investment but actual dollars spent to construct or purchase the facilities presently in use that have become obsolete and non-profitable due to unforeseen changes in the economic status of the industry.

It is a distinct display of confidence in the future of its operations under the program set forth herein for the Company to consent to writing off \$7,950,000 without recovery and at the same time invest \$4,500,000 of new money. Indeed this should be an indisputable demonstration of the sincerity of the owners of this property to carry on the essential passenger transportation operations that are considered of vital necessity to the many communities served.

We should now analyze the merits of the contentions of those parties who insist that the Company is obligated to continue operating its defunct rail lines and in addition to suffering continued losses from current operations, should invest approximately \$11,000,000 of additional money to reconstruct and build up the rail facilities without any prospect of eliminating the financial losses from passenger operation. Such a position cannot be based upon a sound foundation of reasoning when taking into consideration all of the financial and physical considerations that are controlling in shaping the future of this operation. They can only be based upon personal desires and misunderstanding of the actual will of the people as a whole. The entire thesis reduces down to one of insisting upon the public being provided with a deluxe form of transportation service by a private corporation at a cost greater than the revenue that can ever be realized even under the most optimistic estimates.

#### IV - RATE OF RETURN AND OPERATING RATIO

There is no significance to discussing the matter of rate of return with respect to this operation under present conditions of facilities and earnings. Although a net profit for the year of 1948 was experienced in amount of slightly more than \$33,000, passenger rail service for the year ending October 31, 1949 was conducted at a loss of more than \$2,370,000. Even including the freight operations, there is no possibility of a reasonable return on the investment, or a reasonable earning on any basis of computation.

Based upon the rule of thumb of 10% of gross revenue representing a conservative net earning, net operating profit for the year of 1949 systemwide should be in excess of \$3,000,000, with a gross operating revenue of \$31,700,000. To the contrary, however, operating expenses amounted to \$29,600,000 and taxes, \$2,340,000, or a total cost of \$31,940,000, failing by



\$3,240,000 to meet 10 per cent of gross revenue.

The estimated valuation of Pacific Electric properties devoted to passenger operations, based upon previous valuations brought to date, indicates the valuation of properties and facilities as of September 30, 1948, in amount of \$32,639,806 devoted exclusively to passenger operations and \$21,620,534 devoted to joint passenger and freight operations. Valuation of leased facilities for exclusive passenger operation amounted to \$2,600,734 and for joint passenger and freight, \$543,062. This would mean a total of \$46,322,339 devoted to passenger operation, assuming 50 per cent of the joint facilities to be chargeable to passenger operations. Assuming only those items of property exclusively devoted to passenger service, the valuation would be \$35,240,540. Based upon actual usage of facilities, the valuation of those chargeable to passenger operations would be \$50,812,280.

On either of these rough bases, without the usual refinement of providing for Materials and Supplies, Working Cash and other elements, a rate of return of only 5 per cent would produce a net income of more than \$2,000,000 annually. Actually, however, with current losses, passenger operation falls short of that amount by \$4,500,000. Therefore, it can be seen that from any reasonable measurement of earnings the property is not returning an appropriate net.

The only feasible means of producing any appreciable margin of profit on passenger operations is to carry out the modernization program as proposed herein. Anything short of carrying out the full extent of the program will deprive the Company of the financial improvement to which it is justly entitled and will prevent it from rendering the standard of service that would otherwise be possible.

#### V - BENEFITS OF PROGRAM

As was indicated in the Foreword, separate individual reports have been prepared with respect to each phase of the modernization program thus far completed wherein replacement of passenger rail service is contemplated. In those individual reports all of the necessary detail required to explain the processes followed and the results obtained have been set forth. For the purpose of this report reference is directed to the consolidated summary of financial results from present and proposed operations as shown by Table I of the Appendix. That table shows for each of the lines involved and by Districts, the revenues, expenses and net operating income under present operations, as well as the number of units of passenger equipment required, by lines. In direct comparison it also shows the financial results anticipated under the proposed operation.

In total, the lines involved are operated at an estimated annual operating loss of \$1,890,974. Under the proposed plan of replacing rail lines with motor coach service, a net annual operating profit of \$438,000 is anticipated. Although this represents a net improvement of more than \$2,329,000, the resulting profit of \$438,000 per year still falls far short of a reasonable net earning.

Under the present arrangement on the lines considered herein, 84 motor coaches are used and 288 rail cars. Under the proposed operation as applied to the same lines, there would be 265 motor coaches and 75 rail cars. To

carry out the proposed modifications in service and operations will require an estimated expenditure of approximately \$5,000,000 for purchase of new equipment, construction of required facilities, alterations in existing plant, and removal of facilities. To continue with rail passenger operations on the lines involved would require, in accordance with the program established by the Public Utilities Commission, an expenditure of approximately \$11,000,000 for new rail cars and reconstruction and rehabilitation of track, roadway and facilities, which would only partially satisfy the rail equipment problem and would need to be augmented substantially as time passes for the purchase of additional new rail cars in replacement of present vehicles.

The proposed plan will completely eliminate all wooden bodied rail cars and all of the older steel bodied cars, leaving only three classes of rail equipment, namely, the 5000 Class which are a modern P.C.C. type, the 600-700 Class which are highly satisfactory rail cars with many years of remaining service, and the 300-400 Class steel cars which are of relatively recent manufacture and of substantial and adequate design and construction, with many years of remaining satisfactory service life.

Therefore, briefly comparing the salient features of the two plans, as related to the rail replacement part of the program, the results are as follows:

1. Proposed Operation

- (a) Eliminate annual deficit of \$1,900,000.
- (b) Create annual net operating profit of \$438,000.
- (c) Produce a net financial improvement of \$2,329,000.
- (d) Eliminate all wooden bodied cars and old steel cars.
- (e) Require total expenditure of approximately \$5,000,000.
- (f) Probably avoid the necessity for increases in fares.

2. Continued Rail Operation

- (a) Incur continued net operating deficit of approximately \$1,900,000 annually.
- (b) Require expenditure of \$11,000,000 on track, roadway and equipment.
- (c) Require further expenditure for rail car replacement within a short period of time.
- (d) Necessitate either immediate application for heavy increases in fares or drastic curtailment or elimination of passenger transportation service.

The summarized results of the proposed plan indicate conclusively the necessity of placing it into effect, and standard practice demonstrates its ability to completely comply with the requirements of public convenience and necessity. Under profitable operation it will be possible for the Company to carry on further improvements and to more nearly meet the desires of the public as to service, equipment and fares.

that drastic curtailment in service be exercised which would probably leave many of the smaller communities at remote locations without service, in order that the more populous areas might enjoy unjustified rail service.

The next question is to determine the source from which the financial betterment is to be acquired. Either costs of operations must be decreased, revenues must be increased, or a combination of the two must be effected. The magnitude of deficit is such that under continued operation without major change in facilities there is no possible means of reducing costs of operations to a sufficient degree. Careful analysis of the other side of the formula impels the conclusion that the required financial improvement cannot be completely realized through increases of passenger fares. These points having been established, then the search must extend more deeply into the functional aspects of the operation.

If the passengers presently carried by the lines of this system consider the service to be necessary to their existence and patronage is sufficient to warrant, nothing should be done to unreasonably deprive them of service. This means that the same passenger capacity presently provided should be preserved in accordance with prescribed loading standards and changed only as the trend of use inclines upward or downward.

Therefore, having established the need for financial improvement, the inability to obtain it from increased fares or reduction of operating costs, and the fact that the service is essential and should not be eliminated, there remains only one source from which the desired result can be forthcoming and that is to take advantage of the economies that can be effected by changing the physical characteristics of the operations to meet modern standards and practices. This reduces the entire problem to one element, that of replacement of obsolete rail passenger facilities that have become increasingly more costly to operate and less capable of providing the highest standard of service, with modern rubber-tired vehicles routed over the paved streets and highways, providing a flexible operation with more extensive coverage of the populated area.

#### ABILITY OF MOTOR COACHES TO PERFORM

The passenger motor coach is today one of the most important modes of mass passenger transportation in the country and has, over a period of many years, proven its ability to the fullest satisfaction of the industry and in many cases individual motor coach lines carry traffic volume equal to that transported by the heaviest rail lines. The trend away from rail to motor coach service and the acceptability of vehicle can be demonstrated by the following citations:

- (1) In San Francisco, where traffic density is second highest in the country, the municipally owned transit operation is rapidly replacing rail lines with rubber-tired vehicles.
- (2) The municipally owned transit system in Seattle has replaced all of its streetcar lines with rubber-tired vehicles.
- (3) In New York City, where traffic density reaches the highest level in the country including both vehicles and passengers, motor coaches have replaced a substantial percentage of rail operations.

- (4) In the East Bay Area of Oakland, Berkeley and Alameda, motor coaches have replaced all streetcar lines and have replaced many of the interurban electric rail lines.
- (5) Interurban Electric Railway Company, a former subsidiary of Southern Pacific Company, operated an interurban electric rail service between San Francisco and points in the East Bay Area over seven principle feeder routes serving the thickly populated territory of Alameda County. All of those lines have now disappeared due to inability of the system to meet cost of operation.
- (6) Interurban electric passenger service of Northwestern Pacific Railroad, formerly operated in Marin County to the north of San Francisco Bay, disappeared a number of years ago due to insufficient earnings.
- (7) The Sacramento Northern Railway Company, which formerly operated electric passenger rail service between San Francisco and Sacramento, discontinued such operations a number of years ago due to financial losses incurred.
- (8) Numerous lines of Pacific Electric Railway Company, formerly radiating from Los Angeles to outlying communities and cities, have heretofore been abandoned, with motor coach substitution in some cases and in others, with no replacement service.
- (9) Numerous former passenger rail lines of Los Angeles Transit Lines within the city of Los Angeles have been replaced by motor coach operation as a means of maintaining a proper earning status.
- (10) The San Diego Electric Railway, which provides passenger service in that City and adjoining communities was recently granted permission to substitute motor coach service for electric rail lines. In that instance the lines were equipped with modern, up-to-date, streamlined, P.C.C. type cars.
- (11) Motor coaches have replaced streetcar operation completely in the cities of San Jose, Stockton, Sacramento, Fresno, Bakersfield, Pasadena, Long Beach and others in the State of California.
- (12) In many other cities throughout the United States this same trend has been followed, in most instances to a greater extent than on Pacific Electric.
- (13) Tables VII, VIII and Chart V show the trend from rail to motor coach operation in passenger transit throughout the country and indicate the proportion of use of the two types of vehicles over the period of years from 1922 to and including 1948.
- (14) Table No. VII shows that in 1928, 86% of total transit passengers were carried by rail and only 14% by motor coach. For 1948, twenty years later, only 43% were carried by rail and 57% by rubber-tired vehicles. For surface rail lines, other than subways and elevated lines, the percentage dropped from 71 in 1928 to 31 in 1948.
- (15) In vehicle miles operated, 77% was by rail in 1928 as against 23%

by motor coach; in 1948 only 35% was by rail and 65% by rubber-tired vehicles, 60% of which was by motor coach. Surface rail lines, excluding subways and elevated lines, decreased from 61% in 1928 to only 21% in 1948.

- (16) For the year of 1948, 206 new subway and elevated cars were delivered and 478 surface streetcars as compared with 8,439 rubber-tired vehicles of which 7,009 were motor coaches. These figures were for the transit industry only and do not include long-haul carriers.
- (17) For the year of 1948 there was only a total of 12,993 electric railway track miles, of which 1,251 represented subway and elevated lines, as compared with 99,490 route miles for rubber-tired vehicles, of which 96,473 miles was motor coach operation.
- (18) Statistics show that 385 American cities formerly served by streetcars now rely exclusively on motor coaches for passenger transportation.
- (19) Much additional data is available, all pointing toward the same conclusion.

*Alhambra etc*  
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CONGESTION NOT CONTROLLING

Although opponents to motor coach operation contend that replacement of rail cars by motor coaches will create intolerable traffic congestion, reference to statistics and facts renders that contention relatively insignificant. Available information indicates the following:

- (1) Consideration of the congestion problem has not prevented the phenomenal growth of motor coach operation in replacement of rail cars in many other cities and communities throughout the country as referred to above.
- (2) The findings of numerous traffic checks made in many cities uniformly point out the tremendously greater number of trucks and private vehicles on city streets than mass transit vehicles, typical examples of which are as follows:
  - (a) Cordon count of traffic in San Francisco in October of 1947 indicated that during the day between 7:00 AM and 7:00 PM, of approximately 450,000 vehicles entering and leaving the downtown area, 97.4% consisted of private automobiles, taxis, and trucks, whereas only 2.4% were mass transit vehicles.
  - (b) Traffic study made in 1947 under direction of the City Planning Commission of the City of Oakland showed that 91% of passenger vehicles entering the downtown area were automobiles as compared with 9% transit vehicles.
  - (c) Recent check of traffic by the City of Los Angeles indicates that of the total vehicles entering the downtown area 87% are automobiles and 13% are transit vehicles.
- (3) In a pamphlet, dated January 1, 1948, issued by the Los Angeles

Chamber of Commerce, it is stated: "Los Angeles county has 1,333,718 automobiles registered as compared with 1,093,290 in 1940. Fine highways, attractive scenery, and sunshiny days invite the population to use their cars alike for pleasure and business. More than one car to every 3 persons is found here." The same pamphlet shows further that for 1947 in Los Angeles County there were 117,283 trucks, or a total of trucks and automobiles in the County of 1,451,001.

In view of the tremendous number of private automobiles and commercial trucks using the city streets of Los Angeles, the amount of added congestion that would be created by the relatively insignificant additional number of motor coaches under the proposed plan of substitution would be infinitesimal. It is inconsistent that all possible effort should be exerted to restrict the number of mass transit vehicles on the streets, whereas private automobiles, with their inefficient utilization of street surfaces, are permitted to increase without limit.

Were it not for the fact that the motor coach is larger than the private automobile and of a distinctive color, which makes it stand out in traffic, it would not be noticeable on the streets and certainly, with its experienced driver, would cause much less traffic interference and congestion than the relatively inexperienced and incapable drivers of private automobiles.

#### EFFECT OF AUTOMOBILE

If any semblance of reliable public transportation is to be preserved, there must be developed a new approach to the problem and a more complete understanding of the difficulties confronting the industry. Under present conditions, and in the past, the public has considered mass transportation as one problem and private transportation as another, entirely unrelated. As mass transportation has been forced into the discard by the acute competitive effect of private automobiles, its costs have increased, and its profits have disappeared. The automobile, to the contrary, has forged ahead taking away the erstwhile profitable traffic and leaving mass transportation to cope with the costly peak hour travel which becomes progressively more serious.

Whereas, due to reduced net earnings, it was impossible for transportation operations, in many instances, to obtain the necessary capital for expansion and preservation of their facilities, by joint effort, automobile users pooled their resources at high individual cost through state or other tax collecting agencies, and financed the construction of magnificent paved highways and elevated freeways in a network of traffic arteries of a magnitude and cost never dreamed of before the automobile. Any expenditure for improvement of facilities for mass transportation of passengers has had to come from the companies themselves and every dollar invested is an obligation that must be repaid, not out of public funds, but out of earnings.

During the past few decades, along with human progress has come a definite trend toward shorter working hours and the desire on behalf of a majority of the people to commence their working day at virtually the same time, and to conclude it within a very narrow time band. This has thrown upon the transit operators one of the burdens that has been responsible for forcing the industry to its financial knees. This condition is one that brings about much misunderstanding on behalf of the public generally as to the problems of the transpor-

Pacific Electric Railway Company  
 MAP SHOWING PASSENGER RAIL LINES  
 PROPOSED FOR REPLACEMENT BY MOTOR COACH SERVICE  
 AND OTHER CHANGES



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50

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SET

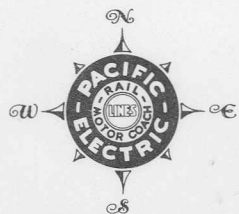
LEGEND

- Rail Lines - Passenger and Freight - to be continued
- Rail Lines - Passenger Only - to be continued
- Rail Lines - Freight Only - to be continued
- - - Motor Coach Lines - to be continued
- Proposed Motor Coach Lines To Be Established in Lieu of Present Rail Passenger Service. Exception: On Venice Blvd. between Vineyard and downtown Los Angeles, proposed motor coach line would not handle local passengers.
- Proposed Additional Motor Coach Lines
- Proposed Motor Coach Line Discontinuance
- Proposed Rail Passenger Service Discontinuance, without bus service substitution
- Proposed Rail Line - Freight Only
- ⊗ Proposed Freight Rail Line Abandonment

DOWNTOWN LOS ANGELES

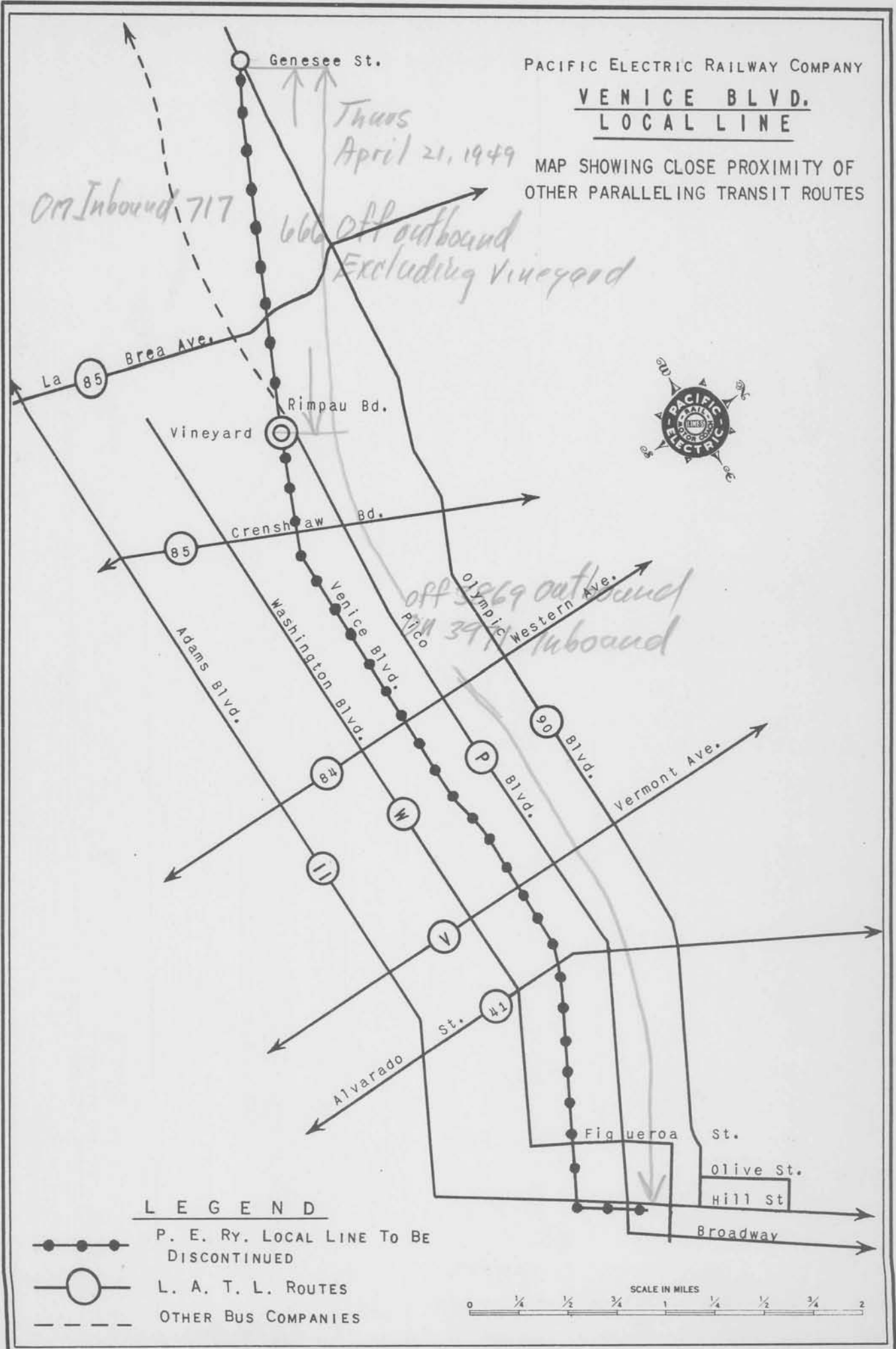
SCALE IN FEET

SCALE IN MILES






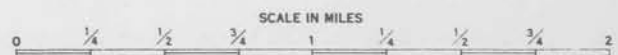
PACIFIC ELECTRIC RAILWAY COMPANY  
VENICE BLVD.  
LOCAL LINE

MAP SHOWING CLOSE PROXIMITY OF  
 OTHER PARALLELING TRANSIT ROUTES



LEGEND

-  P. E. RY. LOCAL LINE TO BE DISCONTINUED
-  L. A. T. L. ROUTES
-  OTHER BUS COMPANIES



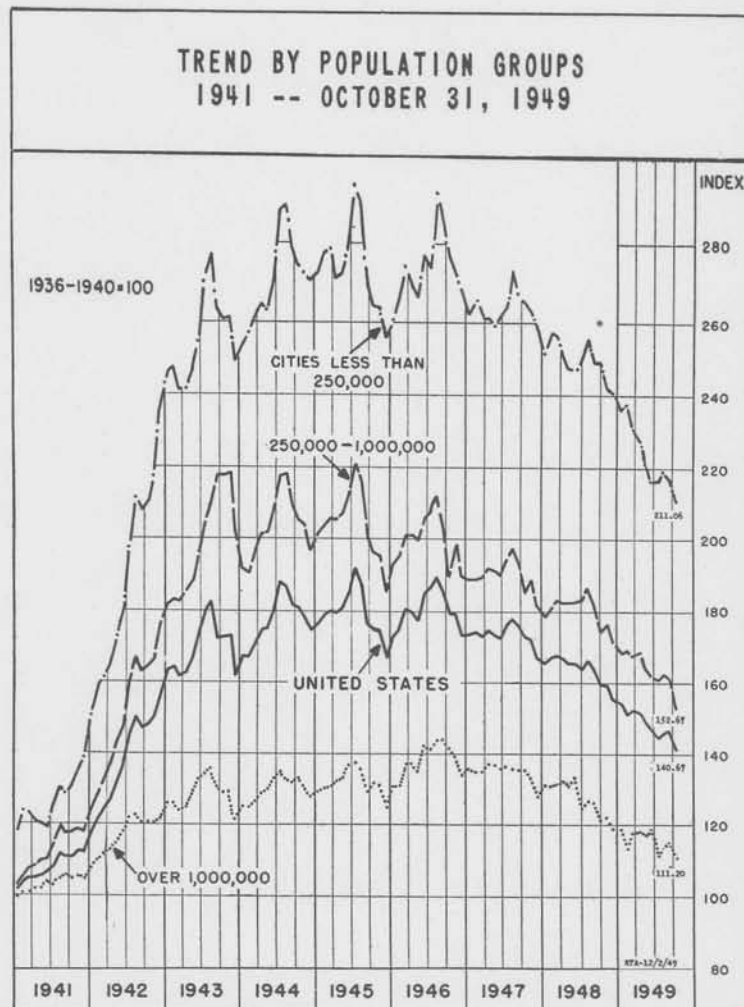


EXPENDITURES -- CENTS



Pacific Electric Railway Company  
 EXPENDITURES PER DOLLAR OF REVENUE AND TOTAL EXPENDITURES  
 BY CLASS OF EXPENSE  
 12 MONTHS ENDING OCTOBER 31, 1949

NATIONAL TREND OF PASSENGER TRAFFIC  
TRANSIT INDUSTRY

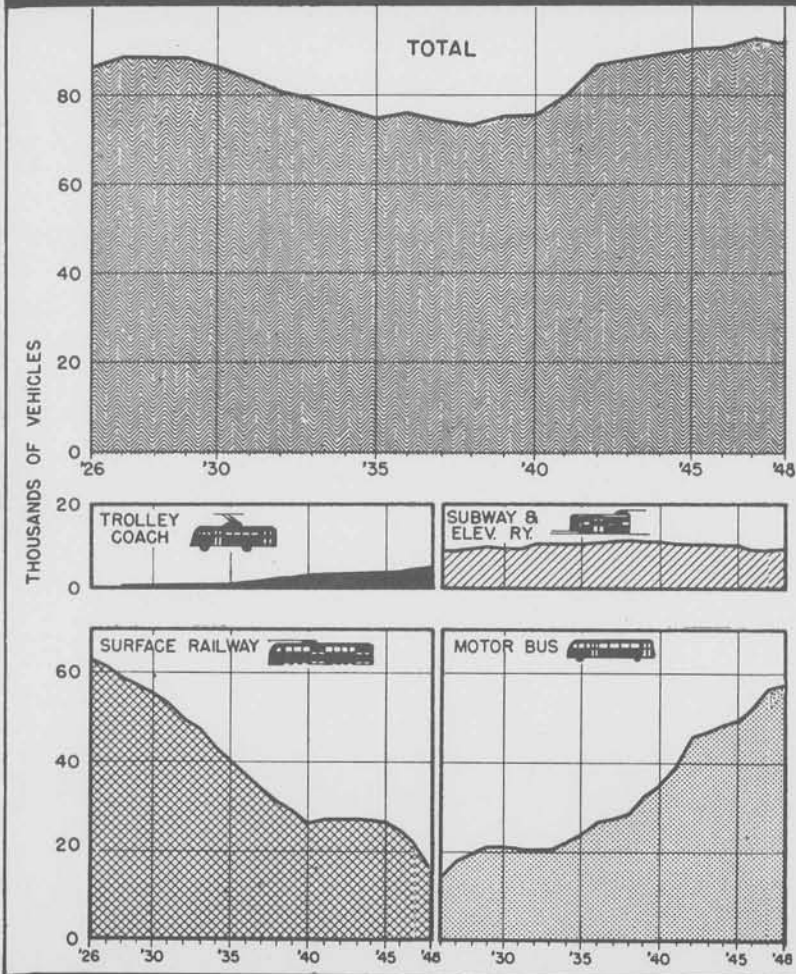


TOTAL PASSENGERS CARRIED ON TRANSIT LINES  
OF THE UNITED STATES IN OCTOBER 1949, AND  
DURING THE TEN MONTHS ENDED OCTOBER 31, 1949

Population Group	October		10 Months Ended 10/31/49	
	1949 (Thous.)	% Change	1949 (Thous.)	% Change
Cities over 1,000,000	601,511	- 8.70	6,072,057	-10.84
500,000—1,000,000	238,154	-12.44	2,442,232	-10.07
250,000— 500,000	233,292	-12.48	2,466,647	-10.18
100,000— 250,000	177,159	-15.43	1,812,969	-12.48
50,000— 100,000	141,983	-14.93	1,474,932	-10.49
Less than 50,000	73,465	-16.05	746,099	-11.20
<b>TOTAL ALL CITIES</b>	<b>1,465,564</b>	<b>-11.78</b>	<b>15,014,936</b>	<b>-10.79</b>
<b>SUBURBAN AND OTHER</b>	<b>87,682</b>	<b>-14.23</b>	<b>877,815</b>	<b>-10.50</b>
<b>GRAND TOTAL</b>	<b>1,553,246</b>	<b>-11.92</b>	<b>15,892,751</b>	<b>-10.78</b>

# NATIONAL TRENDS IN PASSENGER TRANSIT

## TREND OF TRANSIT PASSENGER VEHICLES OWNED



## PERCENTAGE CHANGE IN 1948 TRANSIT TRAFFIC BY POPULATION GROUPS

TRANSIT GROUP	%	PERCENTAGE DECREASE: 1947-1948							
		7%	6%	5%	4%	3%	2%	1%	0
SUBWAY & ELEVATED	5.44								
SURFACE LINES:									
POPULATION GROUPS									
OVER 1,000,000	5.38								
500,000-1,000,000	4.34								
250,000-500,000	5.26								
100,000-250,000	6.30								
50,000-100,000	4.68								
LESS THAN 50,000	2.31								
SUBURBAN & OTHER	6.91								
UNITED STATES	5.20								

Pacific Electric Railway Company

SUMMARY OF ESTIMATED ANNUAL FINANCIAL RESULTS FROM PRESENT AND PROPOSED OPERATIONS

PRESENT OPERATIONS

ITEM	LINES (1)	REVENUES (2)	EXPENSES & TAXES (3)	NET (4)	UNITS INCL. SPARES (M. C.) (Rail)	
					(5)	(6)
<b>NORTHERN DISTRICT LINES</b>						
1	Pasadena via Oak Knoll and Pasadena Short Line (Rail)	\$ 797,218	\$ 978,154	\$(180,936)	-	35
2	Monrovia-Glendora (Rail)	481,059	774,801	(293,742)	-	20
3	Sierra Madre (Rail and M.C.)	105,105	189,723	( 84,618)	1	8
4	Sierra Vista (Rail)	332,729	485,087	(152,358)	-	18
5	El Monte-Baldwin Park (Rail)	342,694	624,464	(281,770)	-	22
6	Total-Northern District Lines	\$2,058,805	\$3,032,229	\$(973,424)	1	101
<b>SOUTHERN DISTRICT LINES</b>						
7	L. A. -Santa Ana (Rail)	\$472,622	\$ 676,701	\$(204,079)	-	18
8	L. A. -Newport Beach (Rail)	24,129	45,866	( 21,737)	-	3
9	Total-Southern District Lines	\$496,751	\$ 722,567	\$(225,816)	-	21
<b>WESTERN DISTRICT LINES</b>						
10	Venice Short Line (Rail)	\$ 779,720	\$ 973,626	\$(193,906)	-	42
11	L. A. -Santa Monica (M.C.)	899,922	872,338	27,584	53	-
12	Subway-Santa Monica Blvd.-West Hollywood-Van Nuys (Rail)	1,133,808	1,390,306	(256,498)	-	44
13	Subway-Hollywood Blvd.-San Vicente-Echo Park (Rail)	1,768,851	1,944,639	(177,778)	-	80
14	Hollywood-Ventura Blvd. (M.C.)	223,632	235,569	( 11,937)	10	-
15	L. A. -No. Hollywood-Van Nuys via Riverside Dr. (M.C.)	238,642	317,991	( 79,349)	20	-
16	Total-Western District Lines	\$5,042,575	\$5,734,479	\$(691,904)	83	166
17	TOTAL - PRESENT OPERATIONS	\$7,598,131	\$9,489,105	\$(1,890,974)	84	268

# - Additional service proposed on present motor coach lines  
( ) - Indicates RED figures

PROPOSED OPERATIONS

ITEM	LINES (7)	REVENUES (8)	EXPENSES & TAXES (9)	NET (10)	UNITS INCL. SPARES (M. C.) (Rail)	
					(11)	(12)
<b>NORTHERN DISTRICT LINES</b>						
1	Pasadena via Oak Knoll and Pasadena Short Line (M.C.)	\$ 738,352	\$ 541,856	\$196,496	27	-
2	Monrovia-Glendora (M.C.)	539,925	466,476	73,449	24	-
3	Sierra Madre (M.C.)	105,105	108,388	( 3,283)	8	-
4	Sierra Vista (M.C.)	332,729	331,824	905	19	-
5	El Monte-Baldwin Park (M.C.)	325,676	301,765	24,911	23	-
6	Total-Northern District Lines	\$2,041,987	\$1,750,329	\$291,658	101	-
<b>SOUTHERN DISTRICT LINES</b>						
7	L. A. -Santa Ana # (M.C.)	\$ 46,611	\$ 44,532	\$ 2,079	3	-
8	L. A. -Newport-Balboa # (M.C.)	21,670	29,932	(8,262)	3	-
9	Total-Southern District Lines	\$ 68,281	\$ 74,464	\$(6,183)	6	-
<b>WESTERN DISTRICT LINES</b>						
10	Venice Short Line - Santa Monica, combined (M.C.)	\$1,679,642	\$1,532,836	\$146,806	81	-
11	Subway-Santa Monica Blvd.-West Hollywood-North Hollywood (Rail)	900,694	897,617	3,077	-	35
12	Subway-Hollywood Blvd.-Beverly Hills (Rail)	999,772	951,964	47,808	-	40
13	Echo Park Avenue (M.C.)	178,647	174,285	4,362	12	-
14	Hollywood-Ventura Blvd. # (M.C.)	295,654	298,427	( 2,773)	13	-
15	L. A. -No. Hollywood-Van Nuys via Riverside Dr. # (M.C.)	417,797	473,487	(55,690)	27	-
16	Hill St.-Sunset Blvd. (M.C.)	482,893	463,294	(19,599)	25	-
17	Total-Western District Lines	\$4,935,099	\$4,781,890	\$153,209	158	75
18	TOTAL - PROPOSED OPERATIONS	\$7,045,367	\$6,606,683	\$438,684	265	75

TABLE II

Pacific Electric Railway Company

STATEMENT OF INVESTMENT AND REMOVAL COSTS AS RELATING  
ONLY TO THOSE LINES INCLUDED IN MODERNIZATION  
PROGRAM AS PROPOSED

		PRESENT OPERATIONS CONTINUED WITH ALL NEW RAIL EQUIPMENT			
LINES		TRACK	NEW	EQUIPMENT	TOTAL
		REHABILITATION	CONSTRUCTION		
(1)		(2)	(3)	(4)	(5)
1	Northern District	\$2,796,584	\$2,516,000	\$ 4,040,000	\$ 9,352,584
2	Southern District	621,000	476,000	920,000	2,017,000
3	Western District	<u>3,448,410</u>	<u>101,800</u>	<u>6,960,000</u>	<u>10,510,210</u>
4	Total	\$6,865,994	\$3,093,800	\$11,920,000	\$21,879,794

		PRESENT OPERATIONS CONTINUED WITH ONLY SUFFICIENT NEW RAIL EQUIPMENT TO REPLACE WOODEN-BODIED CARS			
LINES		TRACK	NEW	EQUIPMENT	TOTAL
		REHABILITATION	CONSTRUCTION		
(1)		(2)	(3)	(4)	(5)
5	Northern District	\$2,796,584	\$2,516,000	\$ -	\$ 5,312,584
6	Southern District	621,000	476,000	-	1,097,000
7	Western District	<u>3,448,410</u>	<u>101,800</u>	<u>1,280,000</u>	<u>4,830,210</u>
8	Total	\$6,865,994	\$3,093,800	\$ 1,280,000	\$11,239,794

9 Note: Equipment requirements eliminated amount to:

Northern District	\$ 4,040,000
Southern District	920,000
Western District	<u>5,680,000</u>
	\$10,640,000

		OPERATIONS AS PROPOSED IN MODERNIZATION PROGRAM				
LINES		TRACK	NET COST	NEW	EQUIPMENT	TOTAL
		REHABILITATION	TO REMOVE	CONSTRUCTION		
(1)		(2)	TRACK	(4)	(5)	(6)
10	Northern District	-	\$ 257,770	\$625,000	\$1,818,000	\$2,700,770
11	Southern District	-	-	15,000	108,000	123,000
12	Western District	<u>\$954,589</u>	<u>198,965</u>	<u>86,000</u>	<u>981,000</u>	<u>2,220,554</u>
13	Total	\$954,589	\$456,735	\$726,000	\$2,907,000	\$5,044,324

TABLE III

Pacific Electric Railway CompanyINCOME STATEMENT BY YEARS

: YEAR :	OPERATING	NON-OPERATING	INTEREST ON	OTHER	NET	
	INCOME	INCOME	FUNDED DEBT	DEDUCTIONS	PROFIT	LOSS
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1916	\$2,261,823	\$ 52,567	\$2,835,898	\$460,950	-	\$ 982,458
1917	2,490,313	65,730	2,830,787	610,372	-	885,116
1918	1,692,189	150,974	2,818,542	772,813	-	1,748,192
1919	897,772	134,824	2,808,281	992,041	-	2,767,726
1920	2,714,411	91,432	3,727,251	236,637	-	1,158,045
1921	3,192,424	104,382	3,841,976	254,463	-	799,633
1922	3,542,207	98,215	3,912,135	304,276	-	575,989
1923	4,463,752	216,292	3,994,269	354,860	\$ 330,915	-
1924	3,714,351	292,163	4,143,720	454,979	-	592,185
1925	2,356,582	539,356	2,533,725	404,651	-	42,438
1926	1,563,161	381,788	2,704,393	336,589	-	1,096,033
1927	2,149,421	243,797	2,692,565	297,357	-	596,704
1928	1,296,204	384,523	2,631,439	282,341	-	1,233,053
1929	1,805,404	376,658	2,638,121	259,501	-	715,560
1930	610,512	331,484	2,652,669	259,149	-	1,969,822
1931	292,188	220,867	2,564,621	202,921	-	2,254,487
1932	(121,154)	197,125	2,484,608	188,090	-	2,597,546
1933	(156,986)	193,486	2,468,670	182,232	-	2,614,402
1934	(323,811)	159,146	2,449,035	165,622	-	2,779,322
1935	(202,516)	225,015	2,439,041	145,881	-	2,562,423
1936	(17,743)	316,074	2,441,883	140,953	-	2,284,505
1937	(687,962)	261,117	2,416,905	138,632	-	2,982,382
1938	(826,505)	126,876	2,403,362	145,393	-	3,248,384
1939	(608,989)	138,381	2,389,462	58,664	-	2,918,734
1940	(264,709)	220,043	2,373,857	124,597	-	2,543,120
1941	480,476	168,062	2,162,096	150,277	-	1,663,835
1942	3,447,097	159,220	1,876,245	183,265	1,546,807	-
1943	7,460,340	139,505	1,845,451	152,079	5,602,315	-
1944	3,420,514	184,925	1,572,706	110,539	1,922,194	-
1945	1,547,830	203,496	1,328,065	66,997	356,264	-
1946	485,615	668,108	1,227,254	145,348	-	218,879
1947	(837,607)	369,807	1,227,215	65,058	-	1,760,073
1948	878,604	434,903	1,227,200	53,127	33,180	-
1949*	(221,746)	424,124	1,226,867	52,925	-	1,077,415

\* 12 months ending October 31, 1949

(LOSS)

Pacific Electric Railway Company

OPERATING INCOME - SYSTEM

YEAR	PASSENGER			FREIGHT	P. E. RAILWAY BUILDING	SYSTEM TOTAL
	RAIL	MOTOR COACH	TOTAL			
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1936	\$ (938,590)	\$ 1,310	\$ (937,280)	\$ 835,904	\$ 83,633	\$ (17,743)
1937	(1,385,486)	57,345	(1,328,141)	608,601	31,578	(687,962)
1938	(1,676,900)	79,870	(1,597,030)	657,413	113,112	(826,505)
1939	(1,602,327)	137,302	(1,465,025)	899,394	(43,358)	(608,989)
1940	(1,856,773)	374,311	(1,482,462)	1,285,494	(67,741)	(264,709)
1941	(1,315,294)	436,390	(878,904)	1,404,445	(45,065)	480,476
1942	(381,010)	1,377,044	996,034	2,394,124	56,939	3,447,097
1943	810,647	2,156,763	2,967,410	4,407,854	85,076	7,460,340
1944	339,108	1,297,809	1,636,917	1,733,449	50,148	3,420,514
1945	(422,319)	769,825	347,506	1,161,333	38,991	1,547,830
1946	(2,168,487)	1,561,251	(607,236)	1,073,999	18,852	485,615
1947	(3,426,189)	632,313	(2,793,876)	1,851,547	104,722	(837,607)
1948	(2,363,521)	389,284	(1,974,237)	2,641,626	211,215	878,604
1949*	(2,373,470)	(178,924)	(2,552,394)	2,132,755	197,893	(221,746)

NOTE: For the purpose of comparing Operating Income with Net Income. Example: Whereas the former is shown to be (\$221,746) for the period 1949, Net Loss after adjustment for non-operating revenue, interest on debt and other miscellaneous deductions, was (\$1,077,415).

(LOSS) \*--12 months ending October 31, 1949.

TABLE IV

TABLE V

## Pacific Electric Railway Company

OPERATING REVENUE AND EXPENSES—SYSTEM

: YEAR :	P A S S E N G E R :		: FREIGHT :	: P. E. BLDG. :	: TOTAL :
	RAIL :	MOTOR COACH :			
(1)	(2)	(3)	(4)	(5)	(6)

OPERATING REVENUE

1936	\$ 5,959,758	\$ 1,457,492	\$ 3,119,809	\$ 420,100	\$10,957,159
1937	6,259,464	1,733,326	3,167,289	488,860	11,648,939
1938	5,844,360	1,755,555	2,946,742	514,822	11,061,479
1939	5,578,642	2,077,712	3,202,159	436,948	11,295,461
1940	4,945,392	2,945,976	3,742,119	429,798	12,063,285
1941	5,184,978	3,062,588	4,744,832	430,716	13,423,114
1942	7,012,345	5,087,734	7,460,965	190,066	19,751,110
1943	10,971,107	7,695,656	12,901,733	228,429	31,796,925
1944	13,036,792	9,510,449	14,100,049	239,629	36,886,919
1945	13,629,263	9,784,055	12,738,614	260,023	36,411,955
1946	12,740,051	9,592,750	9,749,173	269,197	32,351,171
1947	11,261,629	9,952,222	12,259,809	324,825	33,798,485
1948	11,001,541	10,552,172	12,374,910	384,840	34,313,463
1949*	9,918,322	9,832,288	11,628,419	376,996	31,756,025
	1,083,217	719,884	746,491	7,844	2,557,438

OPERATING EXPENSES

(Excluding Taxes Assignable to Operations)

1936	\$ 6,299,484	\$ 1,407,029	\$ 2,121,295	\$ 304,235	\$10,132,043
1937	6,839,724	1,604,135	2,308,837	415,999	11,168,695
1938	6,664,236	1,588,446	2,071,552	350,212	10,674,446
1939	6,353,178	1,836,460	2,095,049	420,016	10,704,703
1940	6,040,756	2,395,745	2,206,178	433,320	11,075,999
1941	5,857,358	2,459,106	3,015,087	415,551	11,747,102
1942	6,873,607	3,459,382	4,515,347	112,147	14,960,483
1943	9,483,474	5,060,717	7,823,138	124,266	22,491,595
1944	11,618,939	6,571,442	9,709,719	153,733	28,053,833
1945	13,213,647	8,460,309	10,921,522	205,008	32,800,486
1946	14,256,266	8,162,374	9,268,200	239,481	31,926,321
1947	13,596,142	8,545,552	9,449,812	184,253	31,775,759
1948	12,553,809	9,355,355	8,970,593	144,286	31,024,043
1949*	11,529,667	9,241,035	8,719,067	148,990	29,638,759
	1,024,142	1,143,200	2,511,526		1,385,284

TAXES ASSIGNABLE TO OPERATIONS

1936	\$ 598,863	\$ 49,153	\$ 162,610	\$ 32,232	\$ 842,858
1937	805,226	71,846	249,851	41,283	1,168,206
1938	857,023	87,239	217,778	51,498	1,213,538
1939	827,791	103,950	207,717	60,290	1,199,748
1940	761,408	175,922	250,447	64,220	1,251,996
1941	642,914	167,092	325,300	60,230	1,195,536
1942	519,748	251,308	551,493	20,980	1,343,530
1943	676,986	478,175	670,741	19,088	1,844,990
1944	1,078,745	1,641,198	2,656,880	35,749	5,412,572
1945	837,935	553,921	655,760	16,024	2,063,639
1946	652,271	(130,875)	(593,026)	10,865	(60,764)
1947	1,091,675	774,358	958,450	35,850	2,860,333
1948	811,253	807,533	762,690	29,339	2,410,816
1949*	762,126	770,176	776,598	30,110	2,339,010

\* 12 Months ending October 31, 1949

(LOSS)



TABLE VI

## Pacific Electric Railway Company

PASSENGER STATISTICS

YEAR	RAIL		MOTOR COACH		TOTAL	
	NUMBER	% INCR.	NUMBER	% INCR.	NUMBER	% INCR.
(1)	(2)	(3)	(4)	(5)	(6)	(7)
1936	59,756,955	-	20,815,802	-	80,572,757	-
1937	60,304,692	0.92	24,584,814	18.11	84,889,506	5.36
1938	53,598,263	(11.12)	24,666,277	0.33	78,264,540	(7.80)
1939	49,773,804	(7.13)	25,691,496	4.16	75,465,300	(3.58)
1940	48,071,234	(3.42)	31,768,416	23.65	79,839,650	5.80
1941	49,464,879	2.89	28,301,345	(10.91)	77,766,224	(2.60)
1942	60,324,100	21.95	38,841,645	37.24	99,165,745	27.52
1943	84,071,038	39.37	53,333,938	37.31	137,404,976	38.56
1944	104,124,721	23.85	64,302,382	20.57	168,427,103	22.58
1945	109,103,535	4.78	68,719,273	6.87	177,822,808	5.58
1946	103,081,715	(5.84)	71,001,117	3.32	174,082,832	(2.10)
1947	90,369,385	(12.33)	73,038,753	2.87	163,408,138	(6.13)
1948	75,280,914	(16.70)	68,639,730	(6.02)	143,920,644	(11.93)
1949*	67,890,477	(8.90)	60,378,005	(12.04)	128,268,482	(10.88)

VEHICLE MILES

YEAR	RAIL		MOTOR COACH	
	NUMBER	% INCREASE	NUMBER	% INCREASE
(1)	(2)	(3)	(4)	(5)
1936	18,276,962	-	7,569,772	-
1937	18,299,843	0.13	8,308,072	9.75
1938	16,571,868	(9.44)	8,113,729	(2.34)
1939	15,554,208	(6.14)	9,287,231	14.46
1940	13,486,593	(15.33)	13,515,593	45.53
1941	11,834,791	(12.25)	12,196,202	(9.76)
1942	12,778,267	7.97	13,854,560	13.60
1943	17,147,747	34.19	16,501,342	19.10
1944	18,887,729	10.15	18,441,759	11.76
1945	19,424,202	2.84	19,145,839	3.82
1946	17,979,187	(7.44)	19,504,188	1.87
1947	15,765,586	(12.31)	20,366,301	4.42
1948	14,538,444	(7.78)	20,945,078	2.84
1949*	13,245,041	(9.82)	20,429,824	(2.46)

\* 12 months ending October 31, 1949.

(LOSS)

TABLE VII

Pacific Electric Railway CompanyTOTAL TRANSIT PASSENGERS IN THE UNITED STATES BYTYPES OF SERVICE--1922 - 1948

CALENDAR YEAR	RAILWAY			TROLLEY COACH	MOTOR COACH	GRAND TOTAL
	SURFACE	SUBWAY & ELEVATED	TOTAL			
	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)	(Millions)
1922	13,389	1,942	15,331	.....	404	15,735
1923	13,569	2,081	15,650	.....	661	16,311
1924	13,105	2,207	15,312	.....	989	16,301
1925	12,903	2,264	15,167	.....	1,484	16,651
1926	12,875	2,350	15,225	.....	2,009	17,234
1927	12,450	2,451	14,901	.....	2,300	17,201
1928	12,026	2,492	14,518	3	2,468	16,989
%	71	15	86	.....	14	100
1929	11,787	2,571	14,358	5	2,622	16,985
1930	10,513	2,559	13,072	16	2,479	15,567
1931	9,175	2,408	11,583	28	2,313	13,924
1932	7,648	2,204	9,852	37	2,136	12,025
1933	7,074	2,133	9,207	45	2,075	11,327
1934	7,394	2,206	9,600	68	2,370	12,038
1935	7,276	2,236	9,512	96	2,618	12,226
1936	7,501	2,323	9,824	143	3,179	13,146
1937	7,161	2,307	9,468	289	3,489	13,246
1938	6,545	2,236	8,781	389	3,475	12,645
%	52	17	69	3	28	100
1939	6,171	2,368	8,539	445	3,853	12,837
1940	5,943	2,382	8,325	534	4,239	13,098
1941	6,081	2,421	8,502	652	4,931	14,085
1942	7,290	2,566	9,856	899	7,245	18,000
1943	9,150	2,656	11,806	1,175	9,019	22,000
1944	9,516	2,621	12,137	1,234	9,646	23,017
1945	9,426	2,698	12,124	1,244	9,886	23,254
1946	9,027	2,835	11,862	1,311	10,199	23,372
1947	8,096	2,756	10,852	1,356	10,332	22,540
1948	6,506	2,606	9,112	1,528	10,728	21,368
%	31	12	43	7	50	100

TABLE VIII

Pacific Electric Railway CompanyTRENDS OF PASSENGER EQUIPMENT IN THE UNITED STATES 1926-1948

CALENDAR YEAR	RAILWAY CARS			TROLLEY COACH	MOTOR COACH	GRAND TOTAL
	SURFACE	SUBWAY AND ELEVATED	TOTAL			
1926	62,857	8,909	71,766	.....	14,400	86,166
1927	61,379	8,957	70,336	.....	18,000	88,336
1928	58,940	9,611	68,551	41	19,700	88,292
%	66	11	78	.....	22	100
1929	56,980	9,983	66,963	57	21,100	88,120
1930	55,150	9,640	64,790	173	21,300	86,263
1931	53,120	9,638	62,758	225	20,700	83,683
1932	49,500	10,434	59,934	269	20,200	80,403
1933	47,700	10,424	58,124	310	20,200	78,634
1934	43,700	10,418	54,118	441	22,200	76,759
1935	40,050	10,416	50,466	578	23,800	74,844
1936	37,180	10,923	48,103	1,136	26,800	76,039
1937	34,180	11,032	45,212	1,655	27,500	74,367
1938	31,400	11,205	42,605	2,032	28,500	73,137
%	43	15	58	3	39	100
1939	29,320	11,052	40,372	2,184	32,600	75,156
1940	26,630	11,032	37,662	2,802	35,000	75,464
1941	27,092	10,578	37,670	3,029	39,300	79,999
1942	27,230	10,278	37,508	3,385	46,000	86,893
1943	27,250	10,255	37,505	3,501	47,100	88,106
1944	27,180	10,105	37,285	3,561	48,400	89,246
1945	26,680	10,075	36,755	3,716	49,670	90,141
1946	24,730	9,232	33,962	3,916	52,450	90,328
1947	21,607	9,370	30,977	4,706	56,917	92,600
1948	17,911	9,456	27,367	5,708	58,540	91,615
%	20	10	30	6	64	100