METROPOLITAN TRANSIT

RESEARCH STUDY

By Werner W. Schroeder

Member and Vice Chairman, Chicago Transit Board

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METROPOLITAN TRANSIT RESEARCH

By

Werner W. Schroeder
Member and Vice-Chairman
Chicago Transit Board

A NOTE BY THE AUTHOR

The author has been keenly interested in the problems of local transit for many years and had the privilege of serving actively as a special attorney in the drafting of the Metropolitan Transit Authority Act and later as general counsel of Chicago Transit Authority during its formative years.

The need for an impartial study of this nature became apparent in early 1954 and the author accepted the appointment as a member of the Chicago Transit Authority Board from the Honorable William G. Stratton, Governor of the State of Illinois, with the understanding that such a study would be undertaken.

There was no single collection of material dealing with this subject. Information had to be sought in many different places - in ordinances, legislative enactments and decisions of courts, in numerous studies, reports, plans and proposals of special commissions, various publications and individuals, and financial reports of the predecessor companies.

Mr. V. E. Gunlock, Board Chairman, Mr. Walter J. McCarter, General Manager, and members of their staff have co-operated and contributed much to this work and, while it is not practical to list all the individuals who contributed in one way or another, particular credit is given to Mr. Clyde B. North, Assistant Comptroller, whose exceptional research abilities and keen perception as to detail proved invaluable, and to Mr. H. L. Polland, Director of Public Information, for his editorial work. To all of them the author wishes to express thanks for their interest and help.

W. W. S.

INTRODUCTION

METROPOLITAN TRANSIT DEVELOPMENT

By Stanley Berge
Professor of Transportation
Northwestern University

In the twelve chapters of this book, Werner W. Schroeder, Vice Chairman of the Chicago Transit Board, presents a wealth of factual data collected during two years of research into the problem of transporting large numbers of people economically and efficiently in large and growing metropolitan areas.

This volume is a most welcome addition to the literature of transportation, for it represents a painstaking, authoritative collection of previously unpublished information concerning transit in Chicago, together with a good many references to transit developments in New York, Boston and other large urban centers. The summary in Chapter 12 and the detailed index of contents will make this study a valuable reference book for years to come. The boldness of some of the author's proposals may shock the reader at first, and will probably never satisfy those who believe the automobile should completely replace public transit in the city of the future. However, abundant evidence cited herein supports Mr. Schroeder's basic conclusion that great capital improvements both for highways and mass transportation are necessary for efficient living in the Chicago metropolitan area and that immediate steps should be taken to integrate the planning and financing of a regional transportation system.

Motor Vehicles, Population and Transit

From 1945 to 1955, automobile registrations in the United States doubled from 26 million to 52 million and motor truck registrations doubled from 5 million to 10 million. Thus, the total vehicles on our roads and streets doubled from 31 million to 62 million. Were this flood of vehicles evenly spread over the 3 million miles of rural roads that serve the 3 million square miles of the United States, there would be no problem of congestion such as now plagues our large cities and their suburbs. But motor vehicles follow population and 60 per cent of our people live, work and play in but one per cent of the land.

Two-thirds of the people of the United States now live in urban localities, and each census reveals a heavier concentration in our 168 metropolitan areas. Over 80 per cent of the 19 million increase in U.S. population from 1940 to 1950 took place in these areas, and nearly half of the increase was in the 25 largest cities and their suburban fringes. From 1950 to 1955 it has been reported that out of a growth of approximately 12 million in the national population, almost 98 per cent took place in urban areas, and the suburbs were found to be growing seven times as fast as the central cities.1/

1/ Wilfred Owen, The Metropolitan Transportation Problem.

While motor vehicle usage doubled during the decade preceding 1955, transit riding was cut in half from 23 billion rides in 1945 to 11.5 billion in 1955. The following data furnished by the American Transit Association indicate the trend in transit passengers by types of service at five-year intervals since 1935 and annually since 1950. Note that the decline in riding since the wartime peak in 1945 has continued unabated each year since 1950, although the rate of attrition seems to be slowing down in recent years:

U.S. Transit Passengers By Types of service (Millions)

Year	Surface Railways	Subway & El.	Trolley Coach	Motor Bus	Total
1935	7,276	2,236	96	2,618	12,226
1940	5,943	2,382	534	4,239	13,098
1945	9,426	2,698	1,244	9,886	23,254
1950	3,904	2,264	1,658	9,420	17,246
1951	3,101	2,189	1,633	9,202	16,125
1952	2,477	2,124	1,640	8,878	15,119
1953	2,036	2,040	1,566	8,260	13,902
1954	1,489	1,912	1,367	7,624	12,393
1955	1,207	1,870	1,202	7,250	11,529

Transit as a Factor in Urban Life

Henry A. Babcock, Los Angeles engineer and specialist in urban land economics, prepared a thoughtful paper for the Southern California Planning Institute at the University of California - Los Angeles last summer presenting the thesis that "in an urbanized geographical area, the means by which its inhabitants and their visitors move about in their daily goings and comings is one of the most important factors in determining the character and the quality of the community . . . No statement of the transit problem can be made, much less its solution effected, until the kind of urban community which it is desired to produce has been agreed upon." What is the best kind of urban community? Babcock says he believes "it is one in which each individual has the maximum opportunity to pursue economic, social, cultural, and recreational advantages." He believes that these advantages of urban life can be achieved to a greater extent in an integrated metropolitan region than in "a loose aggregation of small towns more and more tending to become self-sufficient and isolated from the rest." Said he:

> The integrated metropolitan region is one in which separate but contiguous land areas are devoted to functionally different urban activities and one in which the expeditious movement of persons between these areas is accomplished by a comprehensive integrated system of transit facilities . . . In the integrated metropolitan

> region the use of the private automobile will be supplemental to that of a new-type mass transit system so devised that the healthy and desirable dispersion of dwelling units will be preserved, but, at the same time, commercial industrial and professional activity will be concentrated in an efficient manner.

A study of parking and its relationship to business by the Automotive Safety Foundation published in November 1955 is optimistic over the prospects of the central business district to survive decentralization. It argues that no matter to what degree the satellite business districts provide shopping opportunities and facilities, demonstrable economics of retailing point to only one super-retail district in each metropolitan area, where merchants provide the largest and most concentrated display of shopping goods, with the widest variety of quality, style, price, color and size. In addition, downtown remains the hub of a wide range of other essential activities - transportation, commerce, finance, government; educational, cultural and professional services; recreation and amusements. The central city is not only the place with most attractions, but the place that the greatest number of people in the metropolitan area can reach most economically.

In a provocative collection of essays entitled Cities are Abnormal, Elmer T. Peterson says:

> From almost every angle that we view urban life in America, the decentralization of cities seems desirable - public health, economic betterment, economic logistics, moral welfare, better utilization of natural resources, better distribution of manufactured products, a better conceived military defense, a more rational architecture, and, in general, a happier adaptation to the changing mores . . .
>
> In opposition to decentralization, it has been argued that our very civilization has depended upon the leadership and stimulus of cities, and the propinquity of many specialists has proved advantageous, both for the perfection of technology and for service to the public. It may also be argued that cultural, religious, and entertainment organisms have flourished best where large populations have congregated in compact groups, that short distances are advantageous in transportation and other vital economic facilities, and, in general, that the gregarious instinct of mankind is exercised logically in the complex mechanisms of urban life, involving social welfare, education, frequent stimulating contacts, and convenience in all manner of transactions.

There are some other very practical reasons for improving transportation in such a way as to liberate the central business district from its present choking burden of traffic congestion. Alderman Robert E. Merriam addressing the Junior Association of Commerce and Industry in Chicago October 5, 1954, put it this way:

> Why should we be concerned about the Loop? . . . . We should be concerned because it provides gainful employment for almost 40 per cent of the city's working population. We should be concerned because it contains one-sixth of the assessed valuation in the city, the single largest tax-producing area, a major factor in providing our citizens with a public school system, fire protection, parks and all the other amenities of civilization. In short, every Chicagoan has an economic and social stake in the preservation and growth of this vital nerve center of our regional economy.

Automobiles Versus Public Transportation

In Chapter 2 Mr. Schroeder asks: "Why pay $2.50 per day for transportation that can be obtained for 40 cents a day?" He calculates that a Chicagoan can spend 40 cents per day for tyansportation to and from work by public mass transportation, or he can spend more than six times as much to go to and from his job via private automobile. The most important reason for this phenomenon, according to Mr. Schroeder, is that "without doubt the private automobile can make better time . . . Americans are an impatient people who are generally in a hurry to get somewhere, and a saving of some minutes is more important to them than the saving of the dollars and cents that could come by riding the public mass transportation vehicles." In addition the automobile offers advantages of convenience and comfort plus such intangible rewards as "extension of one's personality" and "feeling of social distinction."

There is no evidence in this book to suggest that urban people will forsake the automobile in such numbers as would restore transit to its pre-automobile-era status. Nor is there indication that the automobile will destroy transit. Indeed, current trends in public policy appear to favor the restoration and improvement of public transit as much to protect the motorist as to protect the transit riding public. The problem as stated in a recent study of transportation in the San Francisco Bay Area is this:

> Today's age of automobiles has brought with its miracles a level of travel discomfort, cost and hazard that is critical. In the Bay Area, home now for some three million people, traffic problems are aggravating. With population forecasted to increase by more than 50 per cent in the next 15 years, they loom as staggering. 3/

3/Parsons, Brinckerhoff, Hall & MacDonald, Regional Rapid Transit, Jan. 1956.

With urban expressways filling up as fast as they can be built and with parking becoming both scarce and expensive, more attention will have to be given to the more efficient use of space by transit vehicles. One fully-loaded bus carries as many people as ride in 40 automobiles at the usual peak hour occupancy rate of 1.5 people per automobile. A single track of rail rapid transit line is equal in passenger-carrying capacity to all of the private automobiles that can be accommodated on 12 to 15 lanes of modern expressways.

It is doubtful if Chicago's automobile-commuters saw very much humor in a newspaper headline several years ago which read: "Outer Drive Extension Opened - Bottleneck Moved Four Blocks North", or a later one: "Crash Halts North Side Rush Hour Traffic - Cars Tied Up 3 1/2 Miles on Drive - Jam Lasts for Half Hour." In Los Angeles, the Hollywood Freeway, ten miles long costing $55 million, was opened in 1954 designed to carry an ultimate future volume of 100,000 vehicles per day, but within one year the traffic had grown to 168, 000 vehicles per day. In Chicago, at a cost of $100,000,000 we are building the Congress Street Expressway - eight miles long and eight lanes wide. The Northwest Expressway will soon be under construction, and several other freeways costing six to seven million dollars per mile are in the planning stage.

In Chapter 7, Mr. Schroeder cites the rated capacity of Congress Street (6,000 vehicles per hour) and Northwest (9, 000 vehicles per hour) - just these two new routes capable of bringing 37,500 additional automobiles into the Chicago Central Business District during the 2 1/2 hour rush period. Where will all of these new vehicles go, he asks, when the streets of the area are already overtaxed with the 55,000 to 60,000 vehicles now entering the district during the morning rush hours ?

Five years ago, Major Fletcher Bowron of Los Angeles in a radio broadcast over Station KFI said:

> Los Angeles is reaching the saturation point in the use and operation of private automobiles and we are driving business away from the city. Substantial investments are going outside of the city limits and property values are being affected because so many people feel that it is just not worth while to fight the traffic to get from one place to another in those areas where we have serious vehicular traffic congestion . . . . Time is going by, and year after year our problem is growing worse, and <u>we still do not have improvement of public transportation and no feasible plan for rapid transit,</u> either wholly within the city of Los Angeles or connecting other centers of population in the metropolitan area.

<u>Current Problems of Urban Transit</u>

In 1954, almost half of the transit business in the United States was concentrated in the ten largest cities where the 1950 population density per square mile exceeded

10,000 persons except in the case of Los Angeles: New York 24,950, Chicago 17,335, Boston 17,190, Philadelphia 16, 310, St. Louis 13,975, Detroit 13,320, Washington 13,150, Cleveland 12,075, Baltimore 11,900 and Los Angeles 4,350. New York City alone accounted for one-fifth of all the transit riding in the country. Chicago was second but with less than half the transit business of New York.

Wilfred Owen's new book, The Metropolitan Transportation Problem, (Brookings, 1956), from which the above statistics are drawn, also reports that a few large companies account for the major share of the immediate financial problem of the transit industry. Nine of the 35 largest transit operations in the United States reported a deficit in 1954. The loss in Boston was $6.6 million and in New York $3.3 million, exclusive of debt service charges. By 1955, public ownership had taken over transit operations in seven large cities - New York, Chicago, Detroit, Cleveland, Boston, San Francisco and Seattle. Subways used by transit companies were also publicly-owned in Philadelphia and Newark. The reasons for public ownership of transit in Chicago* are explained in detail by Mr. Schroeder in Chapters 1 and 4 which follow.

The importance of transit services in the life of a great city is illustrated by the movement of people to and from the Central Business District of Chicago discussed in Chapters 2 and 12. Cordon counts on a typical day in May each year indicate the means of transportation used by passengers entering and leaving the central district from 7 AM to 7 PM. The most recent count showed 63 per cent of the passengers used public or private mass transportation media, 30 per cent used automobiles, 4 per cent taxicabs and 3 per cent used service vehicles.

However, Mr. Schroeder points out that the majority of the passengers arriving by automobiles during the morning rush hours move on through to

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* In Chicago the subways are owned by the city and operated by Chicago Transit Authority, a municipal corporation. The two subways now in operation - the State Street subway and the Milwaukee Avenue-Dearborn Street subway - were constructed at a cost of $74,117,086. 13 from the following sources:

Traction Fund	$47,070,659.63
Transit Fund	1,079,426.50
Public Works Administration Grant	25,967,000.00
Total	$74,117,086.13

Of the expenditures for these subways a total of $9,125,349.00 is being repaid to the city by CTA over the estimated life of the equipment as reimbursement for the cost of fixed transportation equipment.

The third subway - an extension of the Milwaukee-Dearborn subway providing a connection to the Congress Street Expressway - is now under construction. The City of Chicago issued $2,000,000 of revenue bonds for construction of this extension under the Chicago River and $25,000,000 of general obligation bonds for construction of this facility west of the Chicago River.

destinations beyond the central district. By subtracting passengers leaving from those arriving during the morning rush hours (7 to 9: 30), he arrives at the number remaining in the Central Business District after 9:30 AM - and hence presumed to be employed in the area. Out of some 260,000 persons employed in the Central Business District who depend on some mode of transportation, approximately 90 per cent used some form of public or private mass transportation, and less than 10 per cent used private automobile or taxicab. "Yet this small group who come by automobile and taxicab, plus the service vehicles," says Mr. Schroeder, "are directly responsible for most of the present traffic congestion."

Efforts to Solve the Transit Problem

During the last five years, ten states have acted to grant tax relief to transit systems. For example, the Wisconsin legislature exempted transit companies from motor fuel taxes and municipal license fees and fixed the charge for annual license fees at one dollar per vehicle. The same law makes a new tax applicable only to transit companies, requiring them to pay the state 50 per cent of all net profits, after federal income and excise taxes and after deduction of an eight per cent return on the depreciated cost of their operating property. The transit industry has also been given exemption from increased federal fuel and tire taxes in connection with the new multi-billion dollar federal highway program.[4]/

In July 1956, the New England Governors' Committee on Public Transportation called attention to the threat of discontinuance of mass transportation in some major cities of New England and recommended: (1) tax relief, (2) relaxation of regulation to permit adjustment of fares and service, (3) traffic controls to increase the average speed of transit vehicles through areas of heavy traffic density, and (4) staggered working hours to spread rush hour travel. The committee concluded by pointing out that "the public insists on availability of service at all times, but transit has no means of being compensated by a 'readiness-to-serve' charge as do other utilities. A transit tax for this purpose may offer a partial solution to the serious financial problems that lie ahead."

Lack of an adequate fare to maintain good service was apparently the most important reason for the failure of Chicago's surface lines and elevated system under private management. Increasing cash fares from 10 and 12 cents to 20 cents in five different adjustments between 10-1-47, when the properties were taken over by the CTA, and 6-1-52 has largely made possible the remarkable 10-year $130 million modernization program which Mr. Schroeder describes in Chapter 5 - 4,256 new buses and cars plus new garages and modernization of shops - more in the way of physical improvements than had been accomplished in the 38 years preceding CTA.

Transit fares are still cheap when compared with the cost of automobile transport plus parking. Yet the high cost of the automobile has not discouraged its use any more than the low cost of public transit has retained its patronage. Clearly, the way to improve the popularity of transit is to put more effort into building up the service and less effort into keeping the fares down. Here perhaps

4/ George W. Anderson, "Urban Mass Transportation", Traffic Quarterly, April, 1956

it is safe to predict that in the face of rising costs and expansion of metropolitan transit services over wider areas, the flat or single fare for the entire community will perforce give way to a more flexible fare structure with variations based upon distance, speed, time and traffic density.

In an award-winning essay entitled "Moving People", Don C. Hyde, General Manager of the Cleveland Transit System, says that it takes something more than modern vehicles, frequent services, or lower fares to get people to voluntarily choose to use public transit. The answer is speed! Directly quoting Mr. Hyde:

> Experience in Cleveland with Express Service is a clue to what we think it takes. In Cleveland, there is a premium charge of 5 cents for express service. The inauguration of every express line developed increased riding . . . For some time the Cleveland Transit System has believed that speed of transit service was the number one consideration in meeting the competition of the automobile and thereby minimizing growing traffic congestion . . . Express service, therefore, is provided to eighteen distinct areas in Cleveland and its suburbs.5/

However, as Mr. Schroeder points out in Chapter 8, "surface mass transformnation can never match the speed, comfort and safety of mass transportation over a private right-of-way." From 1950, when CTA's rapid transit service was speeded up by installation of new rolling stock, inauguration of A and B skip- stop schedules, abandonment of certain lightly-used stations and other operational improvements, the rapid transit system had by 1955 accomplished a gain of 2.1 per cent in passengers while during the same period the surface system lost 29.3 per cent of its passengers.

So, while greater efficiency in the use of street space will help solve the problem of moving people and goods in urban areas, the Chicago Transit Authority from its inception has advocated rapid transit extensions as "the most effective and economical means of providing urgently needed additional transportation facilities for corporate Chicago and its satellite communities."

Planning and-Financing Rapid Transit Improvements

In Chapter 8 as well as in his concluding chapter, Mr. Schroeder urges that prompt action be taken in the "planning of a comprehensive program of future mass transit requirements with emphasis on construction of long-needed extensions of off-the-street rapid transit facilities." Specific extensions largely through provision of rapid transit median or other strips in freeways yet to be built are suggested. Generally speaking, it is far more economical to combine rapid transit rights-of-way with those of new expressways than to build separate facilities - rapid transit space only adding about 10 per cent to the cost of the freeway, according to some estimates. This, of course, does not include the cost of the fixed transportation

5/ Urban Land Institute, Technical Bulletin No. 26, (1737 K Street, N. W., Washington 6, D. C., June, 1955)

equipment, including track, signals, etc.

The first great achievement of this kind in the history of metropolitan transit will be completed in the near future when CTA trains of the latest type will operate in the Congress Street Expressway extending some ten miles west of the "Loop". In this case, the City of Chicago is installing all of the fixed equipment with the understanding that the CTA will repay the City in monthly payments over a period of approximately 30 years without interest charges. The cost of the right-of-way and stations is not included in the amount to be repaid to the City.

It is reported in Chapter 11 that the designers of the Northwest Expressway - next major project in a half billion dollar expressway program approved for Chicago and Cook County - have become convinced that rapid transit in the median strip is needed to prevent the highway from becoming overcrowded as soon as it is opened. Steps are being taken by the City of Chicago to install a double track rapid transit line with island platform stations approximately every 7/10ths of a mile. This line will extend the downtown subway system from a connection at or near Milwaukee Avenue and Rockwell Street to the city limits at Canfield Avenue and Higgins Road. Consideration is being given to a possible further extension of this service from the city limits at Canfield Avenue to O'Hare International Airport. Other rapid transit extensions have been proposed in conjunction with other free-ways - South, Southwest, and Cross Town. The latter, in a north-south direction approximately 3 1/2 miles west of and paralleling State Street, should permit large numbers of transit passengers and automobiles to by-pass the Central Business District rather than add to congestion as they now do by crossing the downtown area during morning and evening rush periods.

All of this will require financing far beyond the financial resources of the Chicago Transit Authority, limited by law, as it now is, to revenues collected directly from riders and other relatively minor revenues incident to transportation operations. The City of Chicago has already provided $100 million (See foot note Page 7) for construction of the State Street and Dearborn Street - Milwaukee Avenue subways plus the extension of rapid transit lines now being constructed in the Congress Street Expressway. To finance further extensions Mr. Schroeder (in Chapter 8) offers for consideration a number of suggestions. One of these is that one or more municipal corporations be established or authorized with power of issuing bonds and levying general taxes to carry on highway and mass transportation route improvements.

Another suggestion is to use railroad rights-of-way where this can be done with safety and at reasonable cost (Chapter 12). Here he is referring to such projects as the proposed operation of CTA Lake Street trains on 2 1/2 miles of the Chicago & North Western elevated right-of-way in the vicinity of Oak Park. This opens the broader question of the problem of privately-operated suburban railroads in Chicago and other metropolitan areas. What role will suburban railroads perform in the future transportation of people in metropolitan areas? Should they continue their present independent hand-to-mouth existence as indivi-

dual step-children of long-haul freight-carrying railroads? Should they be integrated into a system of through routes to create a "super rapid transit system" coordinated with the CTA system to facilitate convenient transfers? While the scope of Mr. Schroeder's treatise does not permit exploration of this phase of the metropolitan transportation problem, there are increasing signs that it cannot be left unresolved indefinitely.

Comprehensive Metropolitan Transportation Plan Needed

It seems unlikely that we can ever achieve an efficient, economical and well-coordinated metropolitan transportation system as long as we have no comprehensive metropolitan transportation plan. Such a plan is urgently needed for the Chicago region as we must make important decisions with respect to highways and parking, rapid transit and suburban railroads. We have too long considered each of these components of the transportation system separately and in piece-meal fashion.

A step in this direction is the Chicago Area Transportation Study begun in November 1955 and scheduled for completion in 1958. This is a joint coordinated effort of the City of Chicago, Cook County, the State of Illinois and the Federal Government in which $1,850,000 has been appropriated to provide statistical background for consideration of long-term needs for transportation facilities in the Chicago metropolitan area. The study includes a land use survey and an analysis of present and prospective travel patterns.6/

Along these same lines, in April 1956 the City of Philadelphia Urban Traffic and Transportation Board recommended that "a regional transportation organization be created as soon as possible to develop a comprehensive transportation system including streets, highways and bridges, urban and suburban transit, parking facilities, taxicabs and (if desirable and necessary) passenger and freight terminals." The proposed regional agency would be empowered to plan, acquire, construct, operate or supervise facilities under regional control; to set up service standards for facilities and services under its policy control; to collect revenues, issue bonds and have a voice in the control of all public financial resources available for capital construction of the regional transportation system.

An interesting suggestion included in the Philadelphia study was that in case the City should acquire the transit system (now privately operated) "the City should seriously consider an agreement by leasing or contracting for the operation of the system by a private company for a fee." This would be similar to the present arrangement by which the United Gas Improvement Company operates the city-owned gas works. Personnel relations, public relations and operating and management practices would be responsibilities of the private operators. The city or its agent would take financial responsibility and therefore control of policies. While it is not known how such a scheme would work, certainly some arrangement whereby the advantages of regional planning and public financing of facilities plus tax relief may be combined with private management of some parts

6/ Chicago Tribune, September 6, 1956

of the system - suburban railroads and local bus services, for example - is worthy of consideration. Cooperation between public agencies and private management has been attempted recently in the New York metropolitan area in connection with two suburban railroads - the Long Island and the Staten Island Rapid Transit.

Consideration of Ways and Means

As has been pointed out, the development of an adequate metropolitan transportation system to serve the needs of a rapidly growing urban population will require large-scale financing. How can the money be raised? Shall each part of the transportation system be made self-supporting or should revenues from the entire system be pooled in such a way that users of highways, let us say, contribute to the cost of public transit facilities? How much of the cost of urban highways and off-the-street transit facilities should be financed from the proceeds of taxes reaching the entire community, such as the general property tax and the sales tax?

In the first place it must be admitted that metropolitan transit is like other public utility services. Everyone in the community benefits from its presence even when he is not using it. Such utilities as water, gas, electric power and telephone service have a standby charge in recognition that it is expensive to maintain the service in readiness for use at any time. The standby charge in the case of fire protection, police, public health service and many other public services is covered by general tax funds. It seems equally logical to cover part of the cost of public transportation out of general funds. This is consistent with our traditional policy of financing urban streets and highways partially from motor vehicle user charges and partially from the proceeds of general taxes.

Indicating the large extent to which urban highway improvements are still being financed out of general tax funds, Mr. Schroeder in Chapter 6 presents a detailed analysis of highway revenues and expenditures in the City of Chicago during the year 1954. Against total highway costs (including capital outlay for construction and bond redemption) of $128.08 for each motor vehicle licensed by the City, the City and Park Distrirt collected only $43.54 per licensed vehicle from all motor vehicle sources including the City's share of the state motor fuel tax and all motor vehicle license, parking and franchise fees. Thus motor vehicle user charges covered only one-third of the 1954 total outlay for streets and highways in Chicago. Data published by the U.S. Bureau of Public Roads indicate throughout the country, until the last few years, more than half of the cost of urban streets and hignways has been financed out of general tax funds. While the current trend is toward greater reliance upon motor vehicle user charges, the fact remains that automobile transportation in urban areas has been partially supported by "standby charges" levied upon the whole community. Is it not equally logical that public transit improvements should be partially financed from the proceeds of general taxes?

Just as public policy has long provided for indirect financial support of

urban highway facilities by the sharing of general tax funds, there are now indications that public policy will provide for indirect financial support of urban transit facilities by the sharing of motor vehicle tax funds.

Walter S. Douglas says the relation of mass transit to the automobile is similar to the relation of an auxiliary steam generating plant operated in conjunction with a hydro-electric project. Mass rapid transit, like the steam generating plant, can handle peak loads at a lower capital cost than automobiles with a multiplication of freeways and parking facilities. The hydro-electric project with its dams, canals, penstocks, surge tanks, power houses and allied structures, should be built with capacity to handle the base load. An auxiliary steam plant provides at low capital cost the ability to meet the peak. Savings in the cost of debt service are used to offset the higher operating cost of the steam plant for short periods. "The power project is considered as a whole and rates worked out to sustain it as a whole. . . And so it may be that revenue from the motor vehicle on the base may make possible the mass rapid transit on the peak, that may make possible the overall convenient transportation to serve the public need."7/

7/ Walter S. Douglas, Partner, Parsons, Brinckerhoff, Hall & Mac Donald, New York

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FINANCIAL HISTORY

TRANSIT OPERATING COMPANIES IN CHICAGO

METROPOLITAN TRANSIT RESEARCH

By

WERNER W. SCHROEDER,
Member and Vice-Chairman
of
Chicago Transit Board

For Release To All Papers of Monday, November 15, 1954, and Thereafter.

Chicago -- Chicago local transit fares were subsidized to the extent of more than 250 million dollars by investors in Surface Lines and Elevated securities in the 40-year period from 1907 to the date of the take-over of these properties by Chicago Transit Authority in 1947.

This is the conclusion of the first chapter of extensive transit studies being carried on by Werner W. Schroeder, newly appointed member and Vice-Chairman of Chicago Transit Board, in a documented manuscript released by him today (Monday, November 15th).

Schroeder's studies are directed first to an analysis of the historical background of present-day transit operation. This is necessary, he maintains, to gain a proper perspective of the transportation problem in Chicago as well as to learn what mistakes have been made in the past, the correction of which might bring better service at realistic rates.

The Schroeder figures are based upon claims actually allowed or recognized by the United States courts in the receivership and bankruptcy proceedings which preceded the take-over by CTA. He believes that in addition there were losses to stockholders which may well have exceeded 11 million dollars.

The actual determinable loss as found by Schroeder for principal and interest during the 40-year period under study came to a total of over 259 million dollars, in addition to the estimated stockholder loss of more than 11 million dollars.

It is pointed out in the study that in addition to these losses, the Federal Government for aid in building of the subways contributed a sum just below 26 million dollars.

The loss to investors, plus the grant by the Federal Government through the U. S. Public Works Administration, constitute, Schroeder believes, a subsidy of

between 285 and 300 million dollars to transit in Chicago. This sum was consumed by transit riders over the 40-year period at the expense of the investing public, and as to the subways, to the extent of almost 26 million dollars, at the expense of the Federal Government.

Possible reasons for the disastrous financial results of 40 years of transit operation are suggested by Schroeder in his study. The reasons are summarized as: Lack of good public relations; the failure of the companies to protect themselves against new bus lines, with the result that some of the choicest potential routes were taken by the companies that developed this new field; inadequate rates fixed by regulatory commissions; the lack of an adequate depreciation reserve fund which in turn is based upon inadequacy of rates; the supplying of off-hour service, particularly nighttime service, at a great loss; the rendering of service in areas which did not pay the cost of operation; duplication of services and expenses by the Surface Lines and Elevated System; the spread of population and industrial plants into outlying areas and the suburbs; and above all, the competition of the privately owned automobiles. Another reason pointed out is the constant increases in the rates of salaries and wages.

The Schroeder study points out that the difficulties were not limited to the City of Chicago, but that they were general throughout the nation to such an extent that the Supreme Court of the United States referred to the metropolitan transit industry as a "generally sick industry."

Future chapters of the study will cover such subjects as the following:

(a) The relationship between rates of fare and basic wage rates.

(b) Passenger trends on public transportation as related to automobile registrations.

(c) Was it necessary that the public take over through CTA.

(d) Fare increases and alternative methods of financing.

Later chapters will analyze suggestions and criticisms of present public mass transportation and will suggest and review many ideas having to do with the possible solution of transportation problems.

It is estimated that the Schroeder studies will occupy a period of from 2 to 4 years.

When these studies have been completed, they will be submitted for critical examination to Mr. Malcolm J. Proudfoot, Chairman of the Center for Metropolitan Studies, and Mr. Franklin M. Kreml, Director of the Northwestern University Traffic Institute.

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FROM: CHICAGO TRANSIT AUTHORITY
DEPARTMENT OF PUBLIC INFORMATION
H. L. POLLAND, DIRECTOR
MDSE. MART PLAZA, P.O. BOX 3555, CHICAGO 54
TELEPHONE: MOHAWK 4-7200
11/15/54

CHAPTER I.

FINANCIAL HISTORY

TRANSIT OPERATING COMPANIES IN CHICAGO

To gain a perspective of transit operation and its problems in Chicago, it is desirable to analyze the results of 40 years of transit operations by privately owned companies in Chicago for the period from 1907 to October 1, 1947, being the period from the 1907 franchise ordinances to the take-over by Chicago Transit Authority. Such a perspective is necessary not only to learn the net financial result of transit operation but also to point up the problems that confronted the City and State and later the Chicago Transit Authority in attempting a solution of traction difficulties in that City.

This part of the study is an effort to gain a fair estimate of what happened to the funds of private investors in Chicago transit during this 40-year period. It includes a study of capital originally invested in the purchase of bonds, plus interest which the companies had agreed to pay on them, and in the case of the Elevated Lines, of the accumulative dividends on preferred stock issued by some of the companies. The accrued and unpaid interest and such accumulative dividends are considered because they were based on contracts that such interest and accumulative dividends be paid, and when the interest and dividends respectively became due, they were as much a debt of the respective companies as was the principal itself. Included also is a study of the established loss in the stocks of the Elevated companies and an estimate of loss on stocks in the Surface Lines companies.

No estimate is made of unpaid dividends on any common stock for the reason that no contract was made or could be implied for the payment of dividends on such stock. In many years no dividends were paid on such stock. It appears probable that no dividends were paid on any of the Surface Lines' common stocks since February 1, 1927. * Such unpaid dividends on common stock are not, however, considered as part of the investors' loss.

Overall Result of Operations

The overall financial result of 40 years of operations as it affected investors may in general be summarized as follows:

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* Annual Report, Chicago City Railway Co., Jan. 31, 1929.

In the case of the Surface Lines operation by five separate corporations, the total loss exceeded 110 million dollars; in the case of the Elevated operations, which began with five corporations and ended with the operation by Chicago Rapid Transit Company, the overall loss of principal and interest contracted to be paid, plus certain losses on stocks, exceeded 149 million dollars.

In addition there was a loss on participation shares of Chicago City and Connecting Railways Collateral Trust, the amount of which has not yet been determined. It appears probable at this point in the investigation that this loss was about 10 million dollars--it may have been as much as 40 million dollars.

Losses in other Surface Lines stocks were apparently another million dollars.

Transit operation in that period of time also involved the expenditure by the Federal Government of nearly 26 million dollars for subway construction, which will not be repaid and which the Federal Government did not demand be promised to be repaid, apparently because of the financial weakness of the operating companies. Part of this subway construction has been completed since the take-over of the transit lines by Chicago Transit Authority.

In summary, therefore, it appears that the loss to investors (including the Federal Government) from Chicago transit operations during the 40-year period under discussion was not less than 285 million dollars and may have exceeded 300 million dollars.

The discussion and tables which follow contain a detailed analysis of the figures leading to these conclusions.

The Surface Lines Financial Results

Following this discussion is a table showing the debts of Chicago Surface Lines as recognized and allowed by the Federal Court in the receivership and bankruptcy proceedings of those lines which came to a climax by the sale of the Surface and Elevated lines' properties, to the Transit Authority on October 1, 1947.

Companies Involved.

Five corporations constituted the Chicago Surface Lines. Separate franchises for periods of 20 years had been granted to these companies in 1907 or shortly thereafter. Later, in 1913 unification ordinances were adopted by the City providing for joint operation by these five corporations of the Surface Lines. The companies after that time were often called Chicago Surface Lines.

The north side lines and a few lines south of the Chicago River were owned by the largest of the companies-- Chicago Railways Company. During the course of the years involved or shortly prior thereto that company had issued bonds on which the outstanding principal balance at the close of the bankruptcy proceedings exceeded

80 million dollars with unpaid interest on February 1, 1946, exceeding 37 million dollars. The total indebtedness of Chicago Railways on February 1, 1946, exceeded 118 million dollars. There were also outstanding 1, 000 shares of capital stock that had once been placed in a trust. *

The principal south side line was Chicago City Railway Company. Its unpaid indebtedness exceeded 27 million dollars, and unpaid interest on its one issue of first mortgage bonds was almost 700 thousand dollars on February 1, 1946. Its total debt at that time exceeded 28 million dollars.

Another south side company, Calumet and South Chicago Railway Company, had outstanding indebtedness exceeding 3-1/3 million dollars, with unpaid interest bringing its indebtedness to about 83 thousand dollars more on February 1, 1946.

The other two railways, the Southern Street Railway Company and Chicago and Western Railway Company, had no outstanding debts, but had certain outstanding stock. All stock of those two corporations, plus the stock of Calumet- - 100, 000 shares, plus 171, 001 shares of Chicago City, were owned by Chicago City and Connecting Railways Collateral Trust, against which the Trust had issued bonds of over 20 million dollars on which the unpaid interest on February 1, 1946, exceeded 19-1/2 million dollars. Connecting Trust had also issued 250, 000 preferred participation shares and 150, 000 common participation shares.**

No payments were made on the unpaid balances of any of the Surface Lines securities until after October 1, 1947. The interest from the calculation date of February 1, 1946, to October 1, 1947, on all outstanding Surface Lines bonds increases the interest accrual to an estimated 11 million dollars more.

So that at the time the lines were sold to CTA, the total bonded debt with accrued interest exceeded 201 million dollars. Besides, there were outstanding 1,000 shares of Chicago Railways stock and 8,999 shares of Chicago City stock in the hands of the public as well also as the 400,000 participation shares of the Connecting Trust--which probably totaled at least 11 million dollars.

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* No dividends were paid on these shares after 1918. The claim that this stock had a prior right to the bondholders in the earnings of the property was denied. Harris Trust & Savings Bank v. Chicago Rys. Co., 56 Fed. (2d) 942.

* *To what extent these participation shares represented investment in the transit companies is not established. However, it seems probable that they represent approximately 10 million dollars in capital investment. The basis for this conclusion is analyzed in Addendum A attached to this chapter.

What Part of the Bonded Debt and Interest Was Paid?

Against that rather substantial debt, distributions were made after the sale to CTA and up to January 1, 1954, of a total of $91, 287, 929.89. This is shown in the statement of distributions which follows and which is based upon the report of the Trustee filed in court.

The total distribution to all Chicago Railways security holders aggregated something in excess of 55 million dollars. With respect to the Chicago Railways, the first mortgage issue only was paid in full, both principal and interest.

A partial distribution amounting to approximately 50% of the principal was made on the Railways consolidated mortgage series A bonds, and a distribution amounting to about one-third of the principal was made on its so-called purchase money bonds.

Its other bonds and its stock received nothing.

The Chicago City first mortgage bondholders received approximately 85% of the remaining balance, with no payment to the stockholders. The distribution here exceeded 26 million dollars.

In the case of the Calumet, its first mortgage bonds were fully paid- - principal and interest- -with a total distribution exceeding 3. 7 million dollars.

The Connecting Trust on the basis of its stock ownership as outlined above, received enough to pay approximately 25% of the principal of the outstanding bonds of that trust, with no payment on interest. The distribution here was something in excess of 5. 4 million dollars.

As pointed out, the total distribution was somewhat more than 91 million dollars. The total loss, principal and interest, to investors exceeded 110 million dollars.

Besides that is the loss suffered by the investors in the participation shares of the Connecting Trust, which at this point is estimated at 10 million dollars; and by investors in common stocks, amounting to another million dollars. None of these shares or stocks received anything.

The amounts of principal and interest due to investors on the various bond issues have been judicially established in the bankruptcy proceedings by the allowance of claims. It must be concluded that those investments represented the amounts so allowed and accrued interest. As to stocks, there was no such judicial determination, and the amount of capital lost on the stocks is based upon the best information obtainable.

Later in this chapter are figures prepared by the Department of Public Works--Bureau of Engineering of the City of Chicago, showing the investment

by the Federal Government in the subway system of the City of Chicago. This was an outright donation by the Federal Government, and in that sense must be considered a loss so far as transit operations are concerned. The amount donated will never be repaid to the Federal Government by transit operations.

A part of the subway expense- -that for fixed operating equipment which was paid by the City of Chicago- -is being repaid to the City by the Transit Authority. The amount of that investment was $9,125,349.00, and is now being repaid to the City by CTA at the rate of $291,335.89 per year. That investment is not counted as a loss in transit operation.

The details of the debts of Chicago Surface Lines and of the outstanding shares and stocks follow:

SURFACE LINES COMPANIES *

	BONDS			STOCKS
	Principal	Accrued Interest on Bonds to February 1, 1946	Total of Principal and Interest	(Shares)
Chicago Railways Company:				
First Mortgage (5%) 20-year Gold Bonds due Feb. 1, 1927	$ 41,741,250.00	$ 1,043,531.25	$ 42,784,781.25	
Consolidated Mortgage 20-year 5% Gold Bonds Series "A" due Feb. 1, 1927	15,696,600.00	14,911,770.00	30,608,370.00	
Consolidated Mortgage 20-year 5% Gold Bonds Series "B" due Feb. 1, 1927	16,934,405.00	16,087,685.00	33,022,090.00	
Purchase Money Mortgage 5% Gold Bonds due Feb. 1, 1927	3,969,155.00	3,770,697.00	7,739,852.00	
Adjustment Income Bonds (4%) due Feb. 1, 1927	2,379,136.66	1,808,143.87	4,187,280.53	
Capital Stock				1,000
Totals	$80,720,546.66	$37,621,827.12	$118,342,373.78	1,000

* In re. Chgo. Rys. Co., 160 F. 2d. 59, 61.
In re. Chgo. Rys. Co., 160 F. 2d. 59, (No. 9057- -Consolidated Causes), Brief of Chicago Transit Authority, appellee, pages 3-4; Brief of Securities & Exchange Commission, appellee, page 4.
Reorganization Plan of Chicago Surface Lines, Article V.

SURFACE LINES COMPANIES, (Continued)

	BONDS			STOCKS
	Principal	Accrued Interest on Bonds to February 1, 1946	Total of Principal and Interest	(Shares)
Chicago City Railway Company:				
First Mortgage Gold Bonds (5%) due Feb. 1, 1927	$27,644,550.00	$ 691,113.75	$28,335,663.75	
Capital Stock (In hands of public)				8,999
Capital Stock (Owned by Chicago City and Connecting Railways Collateral Trust)				171,001
Totals	$27,644,550. 00	$ 691,113.75	$ 28,335,663.75	180,000
Calumet and South Chicago Railway Company:				
First Mortgage Gold Bonds due Feb. 1, 1927	$ 3,332,550.00	$ 83,313.75	$ 3,415,863.75	
Capital Stock (All owned by Chicago City and Connecting Railways Collateral Trust)				100,000
Totals	$ 3,332,550.00	$ 83,313.75	$ 3,415,863.75	100,000
The Southern Street Railway Company:				
Capital Stock (All owned by Chicago City and Connecting Railways Collateral Trust)				24, 000
Total				24, 000
Chicago and Western Railway Company:				
Capital Stock (All owned by Chicago City and Connecting Railways collateral Trust)				720
Total				720

SURFACE LINES COMPANIES, (Continued)

	BONDS			STOCKS
	Principal	Accrued Interest on Bonds to February 1, 1946	Total of Principal and Interest	(Shares)
Chicago City and Connecting Railways Collateral Trust:				
(This Trust owns 95% of the Stock of the city Railway Company and all of the stock of the Calumet, Southern and Chicago and Western companies) Sinking Fund 5% Gold Bonds	$ 20,616,000.00	$19,585,200.00	$ 40,201,200.00	
Preferred Participation Shares				250,000
Common Participation Shares				150,000
Totals	$ 20,616,000.00	$19,585,200.00	$40,201,200.00	400,000
TOTAL FUNDED DEBT AND ACCRUED INTEREST TO FEBRUARY 1, 1946	$132,313,646.66	$57,981,454.62	$190,295,101.28	
Estimated interest on foregoing debt from February 1, 1946, to October 1, 1947			11,000,000.00	
TOTAL DEBT OF SURFACE LINES			$201,295,101.28	
Estimated original purchase price of capital stock of Chicago City Railways Company			$ 100,000.00	
Estimated original purchase price of capital stock of Chicago City Railway Company in hands of the public			899,900.00	

The above does not include the amount originally paid for preferred and common participation shares of Chicago City and Connecting Railways Collateral Trust, which is believed to have been 10 million dollars.

Against those debts and liabilities the following payments have been made by the Trustee of the Surface Lines Companies:

STATEMENT OF DISTRIBUTIONS *

Chicago Railways Company:		
First mortgage 5% bonds (principal and interest paid in full)	$46,344,475.05	
Consolidated mortgage 5% bonds, series A	7,958,176.20	
Purchase money mortgage 5% bonds	1,018,643.95	$ 55,321,295.20
Chicago City Railway Company:		
First mortgage 5% bonds		26,786,593.26
Calumet and South Chicago Railway Company:		
First mortgage 5% bonds (principal and interest paid in full)		3,700,514.79
Calumet and South Chicago Railway Company, The Southern Street Railway Company and Chicago and Western Railway Company:		
Chicago City and Connecting Railways Collateral Trusting Sinking Fund 5% bonds		5,479,526.64
Total Distributions		$ 91,287,929.89

RECAPITULATION

Total Debt of Surface Lines	$201,295,101.28
Total Distributions	91,287,929.89
NET LOSS ON SURFACE LINES INVESTMENTS	$110,007,171.39

In addition there was a probable loss of 11 million dollars on certain stocks and participation shares.

* Report of John E. Sullivan, Trustee, Receiver and Attorney and Agent, Chicago Surface Lines Constituent Companies, filed in U. S. District Court, Northern Dist. of III., Eastern Div. (Period from October 1, 1947, to January 31, 1954).

The Elevated Lines Financial Results

The picture of the Elevated Lines is even more distressing than that of the Surface Lines.

Originally there were five companies operating various parts of the Elevated System which were eventually merged into Chicago Rapid Transit Company. In the bankruptcy proceedings, the outstanding bond debt of these companies was recognized as having a total unpaid principal exceeding 64 million dollars and unpaid interest exceeding 57 million dollars. There were other debts in addition to the debt represented by bonds. Also, the stocks of the Elevated companies, preferred and common, were recognized to the extent of over 6. 6 million dollars and accumulative dividends on the preferred stock for an amount slightly in excess of 7 million dollars. Previously the common stock of the Elevated had in 1938 been reduced by the amount of $99. per share, which was taken from the common stockholders' account and placed in the surplus account. This made a loss at that time exceeding 19. 6 million dollars. The total outstanding debts, interest, stocks and accumulative dividends on the preferred stock and previously accrued loss on the reduction of the common stock came to a total exceeding 168 million dollars.

Against this the Trustees in Bankruptcy have paid and will pay a total somewhat exceeding 19 million dollars with a loss of over 149 million dollars to investors in the Elevated System.

The details of the debt of the Elevated and of the payments by the Trustees follow:

ELEVATED COMPANIES *

Statement of Funded Debt- -December 31, 1945:

Secured by Liens on Property:			
Union Elevated Railroad Company , 5% first mortgage gold bonds, due October 1, 1945		$4,373,000.00	
Less:			
On deposit as collateral to Northwestern Elevated Railroad Company, first mortgage bonds	$528,000.00		
On deposit as collateral to Chicago Rapid Transit Company, first and refunding mortgage gold bonds	43,000.00	571,000.00	$ 3,802,000.00
Union Consolidated Elevated Railway Company, divisional first mortgage 5% gold bonds, Series A, due November 1, 1936		$498,000.00	
Less:			
In treasury–unpledged	$45,000.00		
On deposit as collateral to Chicago Rapid Transit Company, first and refunding mortgage gold bonds	46,000.00	91,000.00	407,000.00
Northwestern Elevated Railroad Company, first mortgage 5% gold bonds, due September 1, 1941		$12,708,000.00	
Less: Held alive in sinking fund		3,269,000.00	9,439,000.00
The Metropolitan West Side Elevated Railway Company, first mortgage 4% 40-year gold bonds, due August 1, 1938		$10,000,000.00	
Less: In treasury- -unpledged		193.91	9,999,806.09

* Report of Operations of A. A. Sprague & Bernard J. Fallon, Trustees for Chicago Rapid Transit Company for year ended Dec. 31, 1945, pages 5, 7, 9. Trustee's Final Report & Account (In the Matter of Chicago Rapid Transit Co. --No. 65037, Dist. Ct. of U.S., No. Dist. of Ill., E. Div.), filed Nov. 30, 1953, Exhibit III.

ELEVATED COMPANIES, (continued)

Statement of Funded Debt- -December 31, 1945, (Continued):

The Metropolitan West Side Elevated Railway Company, extension mortgage 4% 37-year gold bonds, due July 1, 1938		$ 5,000,000.00	
Less:			
In treasury- -unpledged	$ 1,000.00		
On deposit as collateral to Chicago Rapid Transit Company, first and refunding mortgage gold bonds	567,000.00	568,000.00	$ 4,432,000.00
Chicago Rapid Transit Company, first and refunding mortgage gold bonds, 6-1/2% series, due July 1, 1944			10,316,200.00
Chicago Rapid Transit Company, first and refunding mortgage gold bonds, 6%, series A, due July 1, 1953		$ 8,033,500.00	
Less: In treasury- -unpledged		100.00	8,033,400.00
			$ 46,429,406.09
Unsecured:			
Chicago Rapid Transit Company, adjustment debenture bonds, due July 1, 1963		$18,563,000.00	
Less: In treasury- -unpledged		1,200.00	18,561,800.00
			$ 64,991,206.09
Interest on Funded Debt, as Allowed:			37,827,866.17
Interest on Funded Debt, from December 31, 1945, to October 1, 1947:			5,830,558.68
Accrued Interest on Adjustment Debenture Bonds- -December 31, 1945			20,974,400.53
Unsecured Notes Payable at date of Receivership- -September 30, 1947:			1,472,892.59

Interest Accrued on Unsecured Notes Payable- -September 30, 1947:			$ 1,359,696.18
Accounts Payable at Date of Receivership:			2,881,738.44
Capital Stock- -December 31, 1945:			
Prior preferred stock– Authorized- -100,000 shares of $100. each Issued- -			
Series "A", 7.8% cumulative		$ 5,000,000.00	
Less: In treasury- -unpledged		4,200.00	
		$ 4,995,800.00	
Series "B", 7.2% cumulative		1,500,000.00	
Preferred stock- - Authorized- -10 shares of $100 each Issued- -None			
Common stock- - Authorized- -203, 295 shared of $1. each- -Issued	$203,295.00		
Less: In treasury- -unpledged	4,666.00	198,629.00	6,694,429.00
Dividends in Arrears:			
Cumulative dividends on the prior preferred stock are in arrears from December 1, 1931, in the following amounts:			
Series "A", 7.8%	$109.85 per share	$ 5,487,886.30	
Series "B", 7.2%	101.40 per share	1,521,000.00	7,008,886.30
Paid-in Surplus arising from reduction in common stock from $100. par value to $1. par value per share, as authorized by the stockholders on May 17, 1938 (see note below):			19,664,271.00
TOTAL DEBT OF ELEVATED COMPANIES			$168,705,944.98

Note: On May 17, 1938, the stockholders approved an amendment to the Articles of Incorporation reducing the common stock from $100. par value per share to $1. par value per share. On June 8, 1938, the Board of Directors passed a resolution authorizing the elimination of any deficit arising from operating and other losses against the paid-in surplus created by the reduction in the common stock until such paid-in surplus should be eliminated.

PAYMENTS ON ELEVATED DEBTS AND CLAIMS *

Paid by the Trustee in four distributions on principal of the secured bonds	$ 18,615,957.86
Fifth distribution paid on said bonds, February 15, 1954	234,533.97
Funds on hand to pay unclaimed dividends prior to 1959	283,847.70
Paid on accounts payable, reclassified as preferred claims	57,626.29
Total Payments on Elevated Debts and Claims	$ 19,191,965.82

RECAPITULATION

Total debt of Elevated Lines, plus recognized stock investments, unpaid preferred dividends and write-down of common stock	$ 168,705,944.98
Total Distributions	19,191,965.82
NET LOSS ON ELEVATED INVESTMENTS	$ 149,513,979.16

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* Trustee's Final Report & Account (In the Matter of Chicago Rapid Transit Co. --No. 65037, Dist. Ct. of U.S., No. Dist. of Ill., E. Div.), filed Nov. 30, 1953, Exhibit III.

It is quite clear that the investors in transit- -the Surface and the Elevated lines- -in the 40-year period beginning with the City franchise ordinances of 1907 to the time of the sale of the properties to CTA, have taken losses well in excess of a quarter billion dollars, and that the Federal Government has, in addition, contributed nearly 26 million dollars for subway construction.

Subsidy by Private Investors

One conclusion may be drawn from this cold recital of facts: that private investors in the United States contributed an enormous subsidy to the operation of common carriers in the City of Chicago over a period of many years.

It is not probable that the loss on each bond fell on the investor who originally put up the money. The bonds were sold and resold. Sometimes the prices would rise temporarily and then fall again. The loss in a large majority of the cases was distributed as to each bond over a series of investors, one taking part of the loss by selling below what he had paid, and another (or a succession of others) taking additional loss, and the ultimate holder taking the final loss. Over the whole period of time, the result to the investing community in the United States represents what might be called a private capital subsidy of Chicago transit exceeding one-quarter billion dollars. In addition, the Federal Government contributed nearly 26 million for subway construction;* this will not be repaid.

Possible Reasons for These Results

This dismal picture probably cannot be accounted for by any single reason. Some of the reasons, however, may be summarized as follows:

(1) The public relations of the transit companies had unfortunately not been good during the early period of street railway operation in Chicago. Since 1859 when the first street railway company was organized for operation in Chicago, there had been 30 companies in operation. By means of foreclosure sales, leases, consolidations and otherwise, the properties of these companies were acquired by the street railways companies above described as Surface Lines. During that period there was much manipulation of street railway franchises and capital stock issues with apparently endless controversy regarding services

* The Department of Public Works, Bureau of Engineering, of the City of Chicago, reports under date of October 6, 1954, that the Federal contribution, made through the United States Public Works Administration, for subway costs totaled $25,967,000.00.

and rates. The traction issue had become a political football in the City of Chicago. Whether this could have been avoided is not now material to determine; but that public relations were not good is an undeniable conclusion that follows from the early history of transit operations. (See: People v. City of Chicago, 349 Ill. 304, at 312.) An exception to this statement is probably the period from 1907 to 1918, when relations were reasonably good.

(2) There were a number of factors that contributed to the delay in development of bus transportation in Chicago during the decade from 1920 to 1930. One factor was the provisions of the 1907 Surface Lines Ordinances relating to capital value, purchase price at which the city could buy the street railway properties, and responsibilities in the event of abandonments. Since earnings allowed by regulatory commissions were not sufficient to reimburse investors for retiring used and useful property to meet advances in the arts, managements of the transit companies were unwilling to reduce capital value by substituting less costly facilities.

Furthermore, these ordinances were specific in their various requirements and made no provision for motor bus service. Undoubtedly there were differences of opinion among the managements of the various underlying street railway companies during the later years of this decade as to the desirability of extensive introduction of bus service.

The 1907 ordinances expired early in 1927, and during the later years of the decade, the lack of an ordinance agreement was a deterrent to financing that might otherwise have been possible for the purchase of modern passenger equipment. As a result of these and other factors, there was no significant amount of bus operation on the Surface Lines until later, although this type of service was developing over the nation. During this period, one principal company- -the Chicago Motor Coach Company- -and some smaller companies succeeded in obtaining choice routes for bus service. These routes were largely on boulevards which were not available for streetcar operation. The routes, developments proved, were wisely chosen, as generally, they operated through communities that were well developed with population of a type that had comparatively steady employment. By the mid-'40's, these independent lines had acquired more than 6% of the total passenger riding in the Chicago area. They had also succeeded in obtaining higher rates of fare from the regulatory commission and were not operating night service, which, as later herein pointed out, is an expensive part of the service. The result of this was that the older lines lost to competitors an amount of traffic exceeding 6% in a developing territory, which, under the conditions operated, was inherently very profitable.

(3) Soon after the unification ordinances of 1913, the State, through a regulatory commission, assumed jurisdiction over the rates and services of the operating companies. This jurisdiction continued until the take-over by the CTA in 1947- -even during the years of the Federal Court receivership and bankruptcy proceedings.

The study of operating results, particularly of the Surface Lines, leaves no doubt that had the rates of fare been somewhat higher, particularly during the years when patronage was the greatest, namely in 1927 and just before and after that year, and in 1946 and during the preceding War period, the financial results of the Surface Lines would have been very much better. The same is true with reference to the Elevated Lines, although there the additional rate would need to have been much higher. This is based on the assumption that the rider patronage would have been substantially the same with a higher rate than it was with a lower rate.

During those years there was not adequate provision for the carrying of the capital structure which existed, and which in the end was largely wiped out, with great loss to investors as we have seen.

In 1920 the Federal Electric Railways Commission reported to the President recommending the adoption of cost-of-service rates in the electric railway industry. The report received little attention in practice.

The operating companies in Chicago, as well as in cities throughout the United States, were embarrassed by the fact that when they had obtained municipal franchises, they had almost invariably contracted to supply the services at a fixed rate. Thus, in the 1907 ordinances granted to the various Surface Lines companies it was agreed that during the term of the ordinances, the fare should be 5¢ for each passenger 12 years of age or over and 3¢ for each passenger under 12 years of age, with the provision that children under 7 when accompanied by a fare-paying passenger should be permitted to ride free. These ordinances were looked upon as "contract ordinances. " (Outline of Chicago Traction, Weber, page 66.)

Twelve years later, the Supreme Court of Illinois held that the rates could be changed--either increased or decreased- -by the Public Utilities Commission.

The decisions of the Supreme Court were Public Utilities Commission v. Quincy, 290 Ill. 360, and Chicago Railways Co. v. City of Chicago, 292 Ill. 190. The rationale of the decisions was:

> "These principles are embodied in the familiar rule that the State cannot barter away the right to use the police power, and cannot by any contract divest itself of the power to provide for acknowledged objects of legislation falling within the domain of the police power. Accordingly the legislature cannot surrender or limit such powers, either by affirmative action or by inaction, or abridge them by any grant, contract or delegation whatsoever. The discretion of the legislature can not be parted with, any more than the power itself. " (290 Ill. 365)

This rule is general in the United States (39 ALR 1523 and 1534).

While the legal barrier to increase in fares was in this manner removed in 1919, it was many years before the public became satisfied with the idea that the street railways companies could violate their "contracts" with respect to rates of fare. This public attitude undoubtedly influenced the action of regulatory commissions.

(4) Another contributing cause was undoubtedly that the rate structure of the two underlying systems was not sufficient to set up an adequate depreciation reserve. The Surface Lines did make some provision for a renewal fund, but that it was sufficient may well be doubted. In the case of the Elevated, there was little set aside for this item. The result of this was that the rolling stock and other properties had depreciated without replacement to a point where the condition of the cars and tracks was such as to repel patronage to a certain degree.

In 1945 the SEC reported* that in the Surface Lines, the average age of all cars was then approximately 28 years, only 2-1/2% being less than 15 years old. The then average age of gasoline buses was 6-1/2 years and of trolley buses, 9-1/2 years. With respect to the Rapid Transit, it reported that there were 1, 600 useable cars of which 450 were of all steel design, having been purchased between 1918 and 1923. The remainder were primarily of wood construction and had been acquired 40 years before.

(5) Another probable reason is that the companies were required to and did supply a service in off-peak hours, particularly during the night, which was extremely unprofitable.

The patronage during the 8 to 10 night hours is and long has been extremely light, and yet the cost of operating cars is as much per car during that period as it is during the rush hours. In fact, for some years a bonus has been paid to those who work on the night runs. That this "owl service" has been a constant burden cannot be denied. Perhaps such service is necessary to keep some transportation running in a large city such as Chicago, but that it was a constant source of loss is shown by even a most cursory examination.

Those lines which operated in Chicago other than the Surface and Elevated systems--and which did not supply the unprofitable nighttime service--had a much better financial history than did the companies whose results appear and have been analyzed.

(6) Undoubtedly the Surface and Elevated lines were financially injured by the continuance of service which had become unprofitable. In certain areas there were found to be lines, and in the case of the Elevated, individual stations, whose gross income did not even come close to the payment of operating costs--in which every hour of operation represented a financial setback. The continuance of such

* Report to Federal Court on Plan of Reorganization.

service was not in many cases the choice of the operators, but was forced by political pressures, local desires and in some cases by regulatory orders.

There were also cases in which service was supplied in territories which had not yet been developed. In some instances the territory would eventually develop so as to make the lines worthwhile, but for long periods of time even such operations were carried at substantial losses until population had followed transportation.

In other instances, particularly in the case of the Elevated, population shifted away from the established lines. But as such lines are fixed and no capital was available for new construction, it was not possible for service to follow population to its new locations.

(7) Another part of the loss to the Surface and Elevated systems undoubtedly came from service which in effect was a duplication; and from administrative staffs, which performed similar services, that could have been performed by far fewer people had the two systems been unified at an earlier date. In the transit reorganization, which came to a head in 1947, this duplication of service was considered a very important factor.

(8) The spread of population and factories has been an important contributing factor. In recent years there has been a tendency for population to spread out, both in parts of the city and in the suburbs. This has been a thinning out of population, usually a movement from city apartments to privately owned homes. At the same time there has been a spread of industry into outlying territories. Often this has been followed by the development of new retail centers to serve this spreading population and the spreading industrial plants.

The result has been to take many prospective customers from the established lines of mass transportation and to put them in places where only the automobile can give them the service which they require. In many instances a public mass transportation service would be a vast loss in such areas because of the large ownership of automobiles and because of the thinness of the population.

(9) The greatest single factor in bringing about the financial difficulties of the two basic systems was competition.

One form of competition lay in the fact that human beings are able to walk. With increase in fares, there was always a percentage of patronage loss which occurred in instances in which the potential rider decided to walk a short distance rather than pay the increased fare. Thus, the short-haul business, which ordinarily should be more profitable to the carrier than a long-haul ride, was seriously affected.

But the most important form of competition came in the enormous growth of automobile ownership. In these studies the relationship between automobile ownership and patronage of public carriers will later be analyzed in greater detail. That public mass transportation has suffered grievously from automobile competition can hardly be doubted. It is probably the most serious single factor involved in this entire picture.

The growth of that form of competition has had no relationship to fares, as the cost of automobile driving per person, together with the cost of storage of the automobile at the end of the trip, is far greater than the cost of any transit ride that has been offered in Chicago or in any city.

Those who can afford to drive an automobile and pay the parking charges have grown in number, but there are still, even at this date in late 1954, over a million people per regular working day who must go to and from work by public transportation. All public officials are therefore in the dilemma that public mass transportation must be continued as being indispensable to the operation and prosperity of the business and industry and social life of the community, but at the same time the more prosperous members of the community are creating a competitive factor which has had a devastating effect.*

(10) Another enormous handicap has been the constant increase in the rates of salaries and wages. This is a factor of such importance that it will be analyzed in a separate division of this discussion.

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* In 1920, when the automobile and bus transportation industries were in their infancy, (for example, in 1920 the passenger car registrations in Chicago were under 90, 000; in 1953, there were approximately 765, 000), the "Analysis of the Electric Railway Problem", prepared for the Federal Electric Railways Commission by DeLos F. Wilcox, page 99, said:

> " The experience of numerous communities, even before the extraordinary conditions growing out of the war, made it clear that unrestricted jitney operation, though more or less temporary and precarious in character, means destruction to the street railway from the financial point of view. It seems to be the general opinion of those who have given the subject study that the two agencies of local transportation cannot exist side by side as free competitors for urban traffic without destroying each other.
>
> " The effect of automobile competition has been felt from California to Massachusetts."

The metropolitan transit industry was one, during the entire period here under consideration, which was beset by a multitude of difficulties. A review of the industry was made by the Supreme Court of the United States in early 1945 in a case entitled Market Street Railway Co. v. Railway Commission of California, 324 U.S. 548, 89 L. ed. 1171.

It was referred to as a "generally sick industry. " A note was appended by the Court in which the difficulties in metropolitan local transportation are traced to a point at least 25 years before the time of the decision. It is set out in the footnote. *

The Court remarked (page 565):

> " It has long been recognized that this form of transportation could be preserved only by the most complete cooperation between management and public and the most enlightened efforts to make the service attractive to patrons. "

It is probable that local transportation in Chicago, as in other cities, had suffered from this lack of cooperation which that high Court considered indispensable to successful transit operation.

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* "In May of 1919 the Secretary of Commerce and the Secretary of Labor joined in a letter to President Wilson, advising him that 50 or more urban street railway systems representing a considerable percentage of the electric railway mileage was in the hands of receivers, affecting some of the largest cities of the country, and that other systems were on the verge of insolvency and the industry as a whole was virtually bankrupt. They urged the appointment of a commission to study and report upon the problem. President Wilson on June 1, 1919 named a commission which held extensive public hearings. The first witness was ex-President William Howard Taft, speaking for the National War Labor Board, and others, including leading municipal and railway officials and such experienced persons in the problem of regulation as Newton D. Baker, Milo R. Maltbie, Morris L. Cook, Joseph B. Eastman, and many others. Proceedings of the Federal Electric Railways Commission, v. 1. An exhaustive report with many recommendations was made. See Analysis of the Electric Railway Problem prepared for the Federal Electric Railways Commission by De Los F. Wilcox, New York City, 1921. Its recommendations were extensive, including certain changes both by the municipalities and by the companies affected. The recommendations were not generally heeded by either. "

ADDENDUM A

A special study was conducted with reference to the Chicago City and Connecting Railways Collateral Trust.

Through the courtesy of the Chicago Title and Trust Company, the original books of account of 1910 pertaining to this Trust were obtained. The first entries in these books read as follows:

1910	Investment Account:	$62,000,000.	$62,000,000.	
	To 5% Bonds			$22,000,000.
	To Capital Stock			40,000,000.

Being purchase price of the following stocks and bonds acquired in terms of the Trust Agreement made and entered into at Chicago, Illinois, dated January 1, 1910, between Cobe & McKinnon, a co-partnership composed of Ira M. Cobe and John W. McKinnon and Elbert H. Gary of New York and Albert J. Garling and Samuel W. Felton of Chicago:

Shares	Corporation	Par Value
169,719	Chicago City Railway Co.	$16,971,900.
50,000	Calumet & So. Chgo. Railroad	5,000,000.
8,000	Southern Street Ry. Co.	800,000.
10,000	Hammond, Whiting & East Chgo. Ry. Co. (Ind.corp.)	1,000,000.
720	Chicago & Western Ry. Co.	72,000.
	Total Shares	$ 23,843,900.

Bonds	Corporation	
	Calumet & So. Chgo. Railroad (Consolidated Mortgage)	$ 5,000,000.
	Hammond, Whiting & East Chgo. Ry. Co. (1st Mtge)	1,000,000.
	Southern Street Ry. Co. (1st Mtge.)	1,600,000.
	Chicago & Western Ry. Co. (1st Mtge.)	74,000.
		$ 7,674,000.

Treasury Bonds	$ 556,000.		
To Surplus Account		$	556,000.

For 5% Bonds of this par value set aside in terms of Article 2, Section 2, of the foregoing trust agreement.

From the foregoing it appears that the managers of the Trust purchased bonds and stocks having an aggregate par value of approximately 32 million dollars. For this they issued 22 million dollars of bonds (less 556 thousand thereof retained in the treasury) and 250 thousand preferred participation shares and 150 thousand common participation shares. These participation shares were carried on the books at a capital value of 40 million dollars. However, since the bonds issued by the Trust totaled 22 million dollars, and the stocks and bonds acquired by the Trust totaled a par value of approximately 32 million dollars, it is probable that the participation shares actually represented an original investment of about 10 million dollars. The other 30 million dollars of par value of such participation shares appear to have been a" write-up." No satisfactory evidence, either written or oral has been obtained to controvert this conclusion. It is therefore assumed--unless and until additional evidence is obtained--that the participation shares actually represented an original investment of 10 million dollars rather than the par value of 40 million dollars.

CHAPTER II

DECLINE IN RIDING ON MASS TRANSPORTATION

For Release To Afternoon Papers Of Monday, December 20, 1954,

And All Papers Thereafter.

Chicago, December 20 - - Local transit, an indispensable public service and once a lush monopoly, is now engaged in a terrific competitive struggle with the private automobile for its very existence. Already this competition has driven local transit companies out of business, depriving some communities of this essential public service.

This is one of the conclusions reached by Werner W. Schroeder, member and Vice Chairman of Chicago Transit Board in the second chapter of his Metropolitan Transit Research study which he released today.

Supporting this conclusion and other information assembled in this second chapter- -56 pages in length- -is considerable documentary material dealing principally with Chicago, but to some extent with the transit industry generally.

A drastic decline in mass transportation riding has taken place since 1946 not only in Chicago but throughout the United States, due primarily to tremendous expansion in the ownership and use of private automobiles, Mr. Schroeder said. In Chicago the falling off of local transit patronage by the end of 1953 has amounted to approximately 40 per cent. During these same years, automobile registrations in Chicago has increased about 66 per cent.

In 1910 there was one automobile for each 219 people in Chicago's population, Mr. Schroeder pointed out, while in 1953 there was one automobile for each 4.8 persons, a number sufficient to provide transportation for every man, woman and child in the city if all of the automobiles could get on the streets at the same time.

In relative efficiency in the use of street space, Mr. Schroeder said, mass transportation has no equal. On a typical 12-hour week-day period in May 1953, Mr. Schroeder continued, 6,897 CTA street vehicles and 5,522 rapid transit cars brought a total of 417,219 people into the area bounded on the north and west by the Chicago river, on the south by 12th Street, and on the east by the lake while 147,777 privately owned automobiles carried only 221,665 people into the area. Railroads and out-of-town buses carried 151,549 persons.

The relative efficiency of the various modes of travel from a community standpoint is summarized by Mr. Schroeder as follows:

Type of Vehicle	Average Passengers Per Vehicle
Streetcar	39.01
CTA Bus	22.69
Out-of-town bus	18.54
Elevated or subway car	41.44
Railroad car	50.00
Private automobile	1.50

On the basis of cost to the individual, Mr. Schroeder pointed out, local transit has a tremendous advantage over the private automobile, inasmuch as a round trip by streetcar, bus or rapid transit costs only 40 cents compared to at least $2.50 per day for a private automobile. But local transit has obtained little, if any, benefit from this substantial cost advantage. It is evident, said Mr. Schroeder, that persons who use the private automobile as a substitute for local transit almost entirely, if not completely, ignore the economics of the situation.

Neither does it appear from analysis of revenue passenger statistical data, Mr. Schroeder continued, that increases in rates of fare affect local transit riding as adversely as has been generally assumed. This is corroborated to some extent, he said, by the results of a CTA experiment in November of 1953 when a 10 cent fare was in effect between 9:30 a.m. and 1:30 p.m. on certain days. CTA's loss in revenue on those days, he said exceeded $50,000, and may have been as high as $65,000.

As reasons for the apparent preference for the private automobile, regardless of its economic disadvantages to the individual, and to the community, Mr. Schroeder listed the following:

> Greater speed, the time and effort generally being less to get to the private automobile; the instant availability of the automobile; the certainty of a seat; the privacy that the automobile affords; the lack of crowding which at times occurs on mass transit vehicles; the deductibility of automobile expense in some cases; the desire of a person for the ownership of his own vehicle, which is explainable psychologically as an "urge to extend one's personality"; and the social distinction that some people feel comes from the ownership of an automobile.

The five-day week and television were cited by Mr. Schroeder as two other factors responsible for the decline in local transit traffic. Television, Mr. Schroeder said, has brought about "a re-discovery of the American home."

His research disclosed, Mr. Schroeder said, that during the '20's Saturday riding was the heaviest of the week. By 1940 this had changed so that on the CTA surface system Saturday patronage had dropped to a point between 85 per cent and 90 per cent of the average number of week-day rides, he said.

Then there was a rise during the war period so that for a short time in 1944 and again in 1945, Saturday riding was the heaviest. But from the war time forward, the decline in Saturday riding as compared to average week-day riding has been very marked. By October 1954, Saturday riding was about 66.6% of average week-day riding. The proportionate falling off in Sunday riding has been even greater,

falling to 37.5%.

A separate study has been made for the post-war period by comparison of Saturday and Sunday riding in the first 10 months of 1947 and of 1954. In 1947 it was found that Saturday riding was about 87% of week-day riding, and in October 1954, it had dropped to 66%, whereas, Sunday riding was even less. In October 1947, the latter was 57% of average week-day riding, whereas in October 1954, it had dropped to 37 1/2%.

Further to test the Saturday situation a comparison was made between October 1929, and October 1954. In the former period, Saturday patronage was 102% of average weekday patronage, Sunday patronage, 58%; whereas, in 1954 these had dropped to the figures mentioned. This special part of the study indicated that if the Saturday riding in October 1954, had been in the same ratio to week-day riding as was the case in 1929, the difference in money for the year 1954 would have been 11-3/4 million dollars.

In discussing "rediscovery of the American home through television, " and the resulting adverse affect upon local transit passenger volume, Mr. Schroeder expressed the belief that his study is original in making an estimate of the number of television sets in use in the City of Chicago from 1946 to September 30, 1954.

From information on sales in the Chicago area and estimates based on information found in the 1950 census, it is calculated that on September 30, 1954, there were in use in the City of Chicago a total of over 996 thousand television sets, and in the metropolitan area (being the territory within fifty miles of the center of the loop), there were in use on that day 1,443,000 sets.

The conclusion is drawn that the presence of television sets keeps people at home and deprives the carrier systems of a certain amount of patronage.

To show the impact of television on one segment of city life, the number of movie picture theatres licensed is set forth. From the coming of the television enmasse in 1948 to the present time in 1954, there was a drop in moving picture theatres in the city proper of from 305 to 193, or a decline of over 36%.

Mr. Schroeder suggested for thought rather than as a matured conclusion that if each automobile owner in Chicago would increase his riding or that of his family by two rides a week, the situation would be helped considerably, or if automobile licenses were increased by 40¢ a week, and this increase given as a help to transit, a like benefit could be obtained. Mr. Schroeder listed pros and cons on this suggestion and said it would be discussed in detail in later chapters of the study.

He pointed out that this problem is receiving consideration in other places. For example, in Bridgeport, Connecticut, the union has put on a drive to bring about increased riding.

Mr. Schroeder said that his next chapter will deal with wage increases, rates of fare and inflation.

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CHAPTER II.

DECLINE IN RIDING ON MASS TRANSPORTATION

One of the problems confronting mass transportation management in Chicago and in other cities has been the loss of passenger traffic.

A high point in total riding in Chicago occurred in 1946, with 1.147 billion riders. By 1953 the total riding had fallen off approximately 40%. In those years automobile registrations in the City of Chicago increased by about 66%. Chicagoans in 1946 made an average of 319 rides per year on mass transportation vehicles. In 1953 the per capita riding had dropped to 187 rides per year.

Taking a longer time view, it is found that the riding in 1910 averaged 296 rides per person per year; and in 1953, the 187 rides mentioned. During that longer period, the ownership and use of passenger automobiles had increased enormously.

In 1910 there were registered 9,963 automobiles in Chicago to serve its 2,185,283 people. This was equivalent to one passenger automobile per 219.3 people in Chicago's population. By 1953, however, the registration of passenger automobiles in Chicago was 764,942, which meant one for each 4.8 persons in Chicago; its population then being 3,665,792.

There have been other reasons than the use of automobiles for the decline of traffic, but the increased popularity of that means of transportation is undoubtedly the most important factor contributing to the declining use of public mass transportation.

Five Phases of Mass Transportation

It has been possible to compare with accuracy the figures dealing with passenger traffic in Chicago during the years 1906 to 1953, inclusive.

During the first eleven years of that period, the calculations include only the Chicago Surface Lines and Rapid Transit (or Elevated)- -those were then the only operators. Beginning with 1917, the patronage figures of Chicago Motor Coach Company and its predecessor corporation, which started in that year, are included.

Later in this chapter the detailed figures for the 48 years under discussion will be set forth.

The operating history may roughly be divided into five phases. The first from 1906 to 1922, inclusive, when the combined passenger traffic, on first the two and then the three operating lines, increased from over 505 million to over 948 million per year.

Beginning with 1923 and going through 1930 is the second phase. During that time the combined passenger traffic exceeded 1 billion revenue passengers per year, the highest point being in 1927, when 1.167 billion passengers were carried. The year 1926 had not been quite as high in total, but was the highest in Chicago traction in the rides per capita. In that year (1926), the people of Chicago averaged 366 rides per person per year.

After the beginning of the depression in late 1929, a decline began. The lowest point in the decade of the 1930's was 1932, when the total passenger volume on the three lines was over 808 million and the rides per capita of Chicago's population were 239 per year. There was a slight increase during the remainder of the decade and up to 1941.

The coming of the war with shortages in automobiles, coupled with restrictive gasoline and tire rationing, plus full employment with three shifts per day and a six-day work week, caused an increase which reached its highest point in 1946 with 1.147 billion passengers--equivalent to 319 rides per capita. The war period may be termed the fourth phase.

There was a slight falling off in 1947 and a greater one in 1948, which was the beginning of the fifth phase. In that phase passenger traffic on the three lines dropped from 1.05 billion (being 287 rides per capita) in 1948 to 686 (plus) million (or 187 rides per capita) in 1953.

Thus we find that in 1953 the total riders using the vastly enlarged network of mass transportation facilities readily available was less than in any year since 1910, despite a population growth of 1,480,500 persons.

The details of these five phases will presently be set forth.

The experience in Chicago is not unique or peculiar. There is a similar history since the war in all other large cities.

The statistics dealing with the Chicago operations during the 48 years from 1906 to 1953, inclusive, are summarized in the table which is about to set forth. The passengers referred to are originating passengers; that is to say, the figures do not include any who rode on intra-company transfers or on inter-company transfers.

The table is self-explanatory. It includes passenger automobile registrations in the City of Chicago, and in the last column, a calculation of the population per passenger automobile during 46 of the 48 years. This column-- the last on the sheet that follows- -will be referred to in a subsequent part of this discussion.

The table is as follows:

REVENUE (ORIGINATING) PASSENGERS CARRIED BY LOCAL TRANSPORTATION COMPANIES
OF CHICAGO DURING YEARS 1906 TO 1953

	Chicago Surface Lines	Chicago Rapid Transit Company	Chicago Motor Coach Company	Combined	* Population of Chicago	Rides per Capita	PERCENTAGE OF TOTAL Chicago Surface Lines	Chicago Rapid Transit Company	Chicago Motor Coach Company	* Passenger Automobile Registration	Population per Passenger Automobile
1906	373,900,000	131,958,605		505,858,605	2,049,185	247	73.91%	26.09%			
1907	372,123,199	147,263,985		519,387,184	2,039,202	255	71.65%	28.35%			
1908	396,073,965	150,371,374		546,445,339	2,087,862	262	72.48%	27.52%		5,475**	381.3
1909	442,511,273	152,423,961		594,935,234	2,136,525	278	74.38%	25.62%		7,110**	300.5
1910	481,822,110	164,875,974		646,698,084	2,185,283	296	74.50%	25.50%		9,963	219.3
1911	561,517,222	162,866,136		724,383,358	2,249,363	322	77.52%	22.48%		11,876	189.4
1912	589,178,708	164,314,524		753,493,232	2,301,946	327	78.19%	21.81%		15,807	145.6
1913	634,026,040	164,164,225		789,190,265	2,354,529	339	79.43%	20.57%		22,136	106.4
1914	629,931,909	165,770,135		795,702,044	2,410,806	330	79.17%	20.83%		26,814	89.9
1915	619,547,956	164,673,516		784,221,472	2,464,189	318	79.00%	21.00%		34,441	71.5
1916	681,583,470	180,654,632		862,238,102	2,517,172	343	79.05%	20.95%		48,358	52.0
1917	700,462,712	193,205,096	3,077,558	896,745,366	2,569,755	349	78.11%	21.55%	0.34%	58,486	43.9
1918	676,263,883	197,440,107	4,571,374	878,275,364	2,622,338	335	77.00%	22.48%	0.52%	59,965	43.7
1919	741,252,551	184,663,025	6,060,365	931,975,941	2,674,921	348	79.54%	19.81%	0.65%	73,581	36.4
1920	768,042,418	190,630,210	6,395,472	965,068,100	2,701,705	357	79.59%	19.75%	0.66%	86,709	31.2
1921	750,386,454	180,629,282	7,774,953	938,790,689	2,831,923	332	79.93%	19.24%	0.83%	137,752	20.6
1922	758,040,458	181,280,754	9,619,558	948,940,770	2,897,557	327	79.88%	19.10%	1.02%	172,655	16.8
1923	821,409,074	203,953,594	21,916,485	1,047,279,153	2,964,692	353	78.43%	19.47%	2.10%	218,991	13.5
1924	829,700,944	212,901,024	49,268,427	1,091,870,395	3,031,300	360	75.99%	19.50%	4.51%	260,887	11.6
1925	840,972,623	216,045,575	57,492,529	1,114,510,727	3,096,409	360	75.46%	19.38%	5.16%	290,956	10.6
1926	874,242,057	228,812,766	55,838,927	1,158,893,750	3,162,239	366	75.44%	19.74%	4.82%	317,433	10.0
1927	881,948,268	226,302,172	59,270,849	1,167,521,289	3,228,981	362	75.54%	19.38%	5.08%	337,502	9.6
1928	890,960,073	207,864,238	61,836,233	1,160,660,544	3,295,027	352	76.77%	17.91%	5.32%	359,997	9.2
1929	899,878,161	196,774,395	69,001,990	1,165,654,546	3,360,154	347	77.20%	16.88%	5.92%	401,669	8.4
1930	821,166,771	182,945,846	58,310,208	1,062,431,825	3,376,438	315	77.29%	17.22%	5.49%	406,619	8.3
1931	739,903,327	152,414,248	49,571,371	941,888,946	3,377,250	279	78.56%	16.18%	5.26%	417,922	8.1
1932	641,101,119	126,989,541	40,799,663	808,890,323	3,378,062	239	79.26%	15.70%	5.04%	396,889	8.5
1933	645,576,749	124,855,354	49,298,578	819,730,681	3,378,874	243	78.76%	15.23%	6.01%	367,507	9.2
1934	676,906,698	127,276,803	43,698,473	847,881,974	3,379,686	251	79.84%	15.01%	5.15%	368,725	9.2
A 1935	664,742,602	127,459,188	40,019,162	832,220,952	3,380,498	246	79.88%	15.31%	4.81%	396,727	8.5
B 1936	706,631,957	129,568,257	47,827,417	884,027,631	3,381,310	261	79.93%	14.66%	5.41%	461,527	7.3

1937	709,304,031	128,005,374	55,618,162	892,927,567	3,382,122	264	79.43%	14.34%	6.23%	504,188	6.7
1938	663,673,976	121,702,877	54,812,976	840,189,829	3,382,934	248	78.99%	14.49%	6.52%	507,911	6.7
1939	660,324,561	121,426,629	55,386,336	837,137,526	3,383,746	247	78.88%	14.50%	6.62%	516,030	6.6
1940	672,205,539	123,704,810	57,410,265	853,320,614	3,396,808	251	78.77%	14.50%	6.73%	549,537	6.2
1941	690,592,406	127,133,614	60,304,813	878,030,833	3,420,000	257	78.65%	14.48%	6.87%	585,219	5.8
1942	747,407,420	133,208,577	69,189,952	949,805,949	3,478,971	273	78.70%	14.02%	7.28%	545,777	6.4
C 1943	818,117,640	140,905,171	67,835,380	1,026,858,191	3,452,825	297	79.67%	13.72%	6.61%	467,423	7.4
1944	842,862,953	151,062,563	70,986,197	1,064,911,713	3,450,000	309	79.15%	14.18%	6.67%	433,880	8.0
1945	844,844,660	157,344,085	75,018,686	1,077,207,431	3,594,889	305	78.43%	14.61%	6.96%	427,779	8.4
1946	917,002,050	157,876,421	72,732,022	1,147,610,493	3,594,889	319	79.90%	13.76%	6.34%	461,721	7.8
1947	888,533,148	145,755,514	85,835,806	1,120,124,468	3,594,889	312	79.33%	13.01%	7.66%	512,810	7.0
1948	825,136,366	137,621,520	89,210,955	1,051,968,841	3,661,024	287	78.33%	13.47%	8.20%	567,726	6.5
1949	724,653,883	122,181,328	82,841,920	929,677,131	3,694,051	252	77.95%	13.14%	8.91%	634,352	5.8
1950	641,597,249	110,603,719	80,911,483	833,112,451	3,727,078	224	77.01%	13.28%	9.71%	705,197	5.3
1951	584,141,163	112,807,016	82,297,751	799,245,930	3,620,962	215	74.96%	14.48%	10.56%	734,785	4.9
1952	525,415,421	112,687,227	82,796,043	720,898,691	3,665,792	197	72.88%	15.63%	11.49%	725,746	5.1
1953	501,072,848	111,738,513	73,748,715	686,560,076	3,665,792	187	72.98%	16.28%	10.74%	764,942	4.8

* Source - Municipal Library
** All automobiles, including trucks.
*** CHICAGO MOTOR COACH CO. LINES WERE TAKEN OVER BY CTA 9/30/52.
4/28/54

NOTE: Above revenue passengers do not include inter-company transfer passengers.
A - Inter-company transfer privileges between Chicago Surface Lines and Chicago Rapid Transit Co.-Inaugurated 9/22/35
B - " " " " " Chicago Motor Coach and " " " " - " 1/19/36
C - Universal transfer privileges inaugurated 10/1/43

Passenger Traffic Trends in Other American Cities

The experience in other American cities in respect to traffic on mass transportation lines closely parallels that of Chicago. The table set forth below gives the passenger traffic statistics in United States cities having a population of over one million. These figures are for the period since the war.

Total Passenger Traffic in U.S. Cities of Over 1,000,000 Population *

Compared with Trend in Chicago, Illinois, on CTA and Predecessor Companies' Lines

	Total Passenger Traffic (In Thousands)		Per Cent Decrease Under Prior Year		Per Cent Decrease Under Year 1947	
Year	National	Chicago	National	Chicago	National	Chicago
1947	8,611,462	1,120,124				
1948	8,145,511	1,051,969	5.41%	6.08%	5.41%	6.08%
1949	7,250,138	929,677	10.99	11.63	15.81	17.00
1950	6,695,520	833,112	7.65	10.39	22.25	25.62
1951	6,239,357	779,246	6.81	6.47	27.55	30.43
1952	6,019,421	720,899	3.52	7.49	30.10	35.64
1953	5,652,129	686,560	6.10	4.76	34.37	38.70
1954- 9 Mos.	3,834,819	479,217	9.21	6.46	40.33	42.07

For the entire period since the end of the war, (which from October 1, 1947, is also the period of CTA operation), this table shows a passenger decline approximately 2% greater in Chicago than in the other cities having a population in excess of a million, but it can be seen that the experience in all of these larger cities is similar.

The same trend is shown with respect to rides per capita. The following table- -1940 to 1953- -includes all cities in the United States having mass transportation. The total population, the total number of rides and the rides per capita followed by the trend of rides per capita in Chicago are shown. This last column--per capita rides in Chicago--is taken from the exhibit set forth earlier in this chapter.

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* (Source: American Transit Association "Monthly Distribution of Total Passenger Traffic of the Transit Industry in the United States" for years 1947 thru 1950 and from A.T.A. Publication "Passenger Transport" for subsequent years.)

Trend of Rides Per Capita *

Urban Population, Total Rides and Rides Per Capita Compared with Trend in Chicago, Illinois

Year	Urban Population (Millions)	Total Rides (Millions)	Rides per Capita of Population	
			United States All Cities	Chicago
1940	74.4	13,098	176	251
1941	75.1	14,085	188	257
1942	75.3	18,000	239	273
1943	75.7	22,000	291	297
1944	74.6	23,017	309	309
1945	74.5	23,254	312	305
1946	82.8	23,372	282	319
1947	83.9	22,540	269	312
1948	84.7	21,368	252	287
1949	86.6	19,008	219	252
1950	88.4	17,246	195	224
1951	89.5	16,125	180	215
1952	90.6	15,119	167	197
1953	91.1	13,902	153	187

Here it will be noted that comparing all cities in the United States, the per capita patronage had declined to 153 in all American cities, whereas in Chicago it had declined only to 187 rides per capita for the year 1953.

It would appear to be a fair conclusion that mass transportation riding has dropped off throughout America, and that the experience in various municipalities closely parallels that of Chicago.

Relative Efficiency of Mass Transportation and Private Automobiles

Even with the great falling off of patronage, mass transportation still remains, from the standpoint of the community as a whole, a most efficient and important means of bringing people to and from their work.

Test counts indicate that on a typical day in May 1953, in the central business district of Chicago, 1,952 streetcars brought in 76,141 people; 4,945 CTA buses transported into the area 112,225 people; and 5,522 subway and elevated cars brought in 228,853 people. Thus, 6,897 CTA street vehicles and 5,522 vehicles on the elevated or subway account for a total of 417,219 people as against an over-all total of 850,847 entering the area on that day.

* (Source: Transit Fact Book Published by American Transit Association.)

The railroads and out-of-town buses brought in 151,549. This makes a total for publicly owned and privately owned mass transportation media of 568,768, or approximately 67% of the total.

On the same typical day, 147,777 privately owned automobiles carried 221,665 passengers into the area or approximately 26% of the total. The remaining 7% was brought in by service vehicles and taxi cabs.

The situation stated differently may be summarized as follows:

Type of Vehicle	Average Passengers Per Vehicle
Streetcar	39.01
CTA bus	22.69
Out-of-town bus	18.54
Elevated or subway car	41.44
Railroad car	50.00
Private automobile	1.50

This test will be more fully explained in the paragraphs that follow. The figures for this typical day indicate that mass transportation vehicles brought into the area of the central business district a vastly greater number of people than other media with a far smaller aggravation of the congestion in city streets and boulevards.*

* The congestion of streets is not the only problem involved with private automobiles. Those who have been active in selling or renting space for parking areas advise that the space required for each automobile is 200 square feet. If all of the almost 150 thousand automobiles entering the central business district stay in that area, it creates a requirement of 30 million square feet. A building such as the 44 story Field Building contains 1 million square feet. The space requirement is therefore equivalent to 30 such buildings. If the 188 thousand CTA passengers entering the central business district were to do so by automobile and park in the area, 125 thousand automobiles would be required (at the rate of 1-1/2 passengers per automobile), and a parking area of 25 million square feet would be required. Again, if the 228 thousand CTA passengers entering the district via "L" and subway elected to do so by automobile, there would be required 150 thousand more automobiles for that purpose requiring 30 million more square feet for parking. In other words, if all CTA passengers entering the central business district elected to remain therein, but desired to do so by private automobile, then 55 million additional square feet of parking area would have to be found in this district. (Information supplied by Mr. H. E. Olson, President, Real Estate Corporation.)

The details of this test in 1953, as well as for other years, will now be set forth.

The Cordon Count

For many years a "cordon count" has been made of the central business district. The area in which the ingress and egress of vehicles and passengers is counted is bounded on the north and west by the Chicago River and on the south by 12th Street. This count is coordinated by the Chicago Association of Commerce and Industry. It is made principally by the Bureau of Street Traffic of the Department of Streets and Sanitation of the City, with the Transit Authority (or its predecessors) and the railroads making the count of certain elements involved.

This, as indicated, is done within one week (but represents one typical business day) in each year, usually in the month of May. However, in a few years the count has been made in other months: Once in January and once in June. Only once was the count made on days which cannot be regarded as typical. This was in 1952, during the coal strike and the railroad strike.

The figures are available covering the counts from 1926 to 1953.* They are summarized in the table which follows. The first table shows the number of vehicles entering and leaving the district bounded by the cordon. This table is as follow:

DAILY NUMBER OF VEHICLES
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO
7:00 A.M. to 7:00 P.M.
Comparison by Years -- 1926 to Date
(Surveys generally made during the month of May)

Year	Streetcars		C.T.A. Buses (1)		Private Autos		Service Vehicles		Taxicabs (2)		Out of Town Buses (3)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	8432	8469			92425	88421	30224	20750					132913	129441
1928	8380	8312			109374	104752	29948	31784					150189	147289
1929	8660	8607			113331	102269	28959	27556					152629	141002
1931	7963	7954			119951	111247	23124	22975					153278	144341
1935	7705	7720			120452	112266	22931	20764					153325	142864
1936	7436	7419			126970	121038	25339	25633					162023	156285
1937	7547	7536			133352	124500	24843	25516					168251	159970
1938	6615	6685			140832	137598	24596	24665			267	186	174636	172226
1939 (4)	6761	6769			144106	137259	25485	25910			262	206	178712	172226
1940	6193	6192			150676	140889	24826	25015			316	262	184062	174434
1941	6171	6163			148213	142540	25591	24892			453	353	182674	176171
1942	6673	6663			126537	116674	21426	21421			442	377	157547	147513
1943	6672	6677			97110	86549	19540	19274			430	386	125946	115027
1944	6209	6216			96574	90166	19079	19445			458	448	124485	118416
1945	5639	5642			100248	94126	11035	11576			481	384	119614	113864
1946 (5)	5845	5861			136001	126392	22525	22434			715	560	167396	157469
1947	6324	6315			140096	129432	21303	20403			1150	1080	171335	159681
1948	6147	6106			153775	144399	23155	23354			939	762	186698	177309
1949	6061	6053			161232	148632	22228	22423			925	825	193139	180626
1950	4363	4361	1220	1194	166272	155188	20790	20982			919	852	196030	185047
1951	3401	3426	1716	1670	171772	160531	22145	21949			931	810	202273	190706
1952 (6)	2190	2209	4850	4825	143577	134808	20204	21925	23321	23288	854	796	194996	187851
1953	1952	1960	4945	4778	147777	134219	21505	21399	25939	25220	1018	1074	203136	188650

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined totals C.T.A. and C.M.C. buses.
(2) Taxicabs included with private autos prior to 1952.
(3) Includes all buses except Chicago Transit Authority.
(4) Count made in January. Weather - Cloudy - Mean Temp. 22°.
(5) Count made in June due to coal strike and railroad strike.
(6) Count made during period of gasoline refinery strike.

* Since the writing of the text of this chapter, the 1954 Cordon Count figures have been released. They appear as Addendum C to this chapter.

The foregoing refers merely to the vehicles that are upon the public highways and boulevards. The passenger count, however, which is about to be set forth, includes not only passengers on street vehicles but also those entering by subway and elevated and by the railroads.

The number of passengers entering and leaving the test area is shown in the table which follows. The calculations as to the passengers per auto and per taxicab are based on a spot check of a representative number of such vehicles.

This table is:

DAILY NUMBER OF PASSENGERS
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO

7:00 A.M. TO 7:00 P.M.
Comparison By Years - 1926 to Date
(Survey generally made during the month of May)

Year	Streetcars		C.T.A. Buses (1)		Subway and Elevated (2)		Railroad		Out of Town Buses (3)		Private Autos (4)		Service Vehicles (5)		Taxicabs (6)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	294958	283967			256286	231320	118857	103225	44391	44878	166367	159157					880859	822547
1928	282013	261041			243594	216241	124107	109310	47472	50234	196873	188554					894059	825380
1929	296690	290592			236575	196988	132723	115996	55161	62264	203996	189084					925145	849924
1931	281312	271007			191540	159469	119742	108290	46500	44187	203916	189120					843010	772073
1935	254528	246048			169690	137223	84251	72595	42465	36449	204760	190852					775694	683167
1936	246781	235391			200212	164845	92144	75367	46812	41171	215849	205765					801798	722539
1937	248946	239388			209590	169111	103505	86885	57106	47996	226868	211651					846015	755031
1938	228236	222754			193005	166855	94208	81311	57270	52235	239414	233917					812133	757031
1939 (7)	235182	228172			205142	174840	99970	87291	54100	48711	244980	233340					839374	757072
1940	213043	201377			191875	169995	100246	87230	63052	53710	256150	239512					824366	772354
1941	208927	201156			191851	158972	103405	90394	67728	57639	251962	242318					823873	750479
1942	200168	186860			192623	179208	116946	102340	78671	67581	215113	198346					803521	734335
1943	219418	209492			212825	187666	139966	119182	77529	64434	165087	147133					814825	727907
1944	201786	193626			206613	189912	146334	122278	77107	64422	164175	153282					796015	723520
1945	209079	199942			212215	193245	148964	127973	77112	68747	170422	160014					817792	749921
1946 (8)	238865	231500			229430	199782	158001	139580	92512	83879	231201	214866					950009	869607
1947	231893	223899			229164	204085	152082	135465	88679	77333	238163	220034					939981	860816
1948	219936	214657			238830	216706	156205	136798	94583	87947	261418	245478					970972	901586
1949	202240	193830			224932	197757	142521	126876	84361	75644	274094	252674					928148	846781
1950	147949	141330	29420	28617	199351	189499	138741	122781	82113	76125	282659	263819					880233	822171
1951	119364	119554	36657	34334	216288	204877	139188	127240	75131	67216	292014	272902	22145	21949			900787	848072
1952 (9)	86538	81628	121771	107382	222753	205532	137191	125683	13372	12073	244081	229174	20204	21925	39649	39590	885559	822987
1953	76141	75264	112225	103550	228853	219080	132678	119303	18871	17472	221665	201329	21505	21399	38909	37830	850847	795227

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined totals C.T.A. and C.M.C. buses.
(2) Includes Chicago Aurora & Elgin Railroad and the Chicago, North Shore & Milwaukee Railroad.
(3) Includes all buses except Chicago Transit Authority.
(4) Passengers per auto and per taxicab considered as 1.8 from 1926 to 1929, 1.7 from 1929 to 1952, and 1.5 in 1953.
(5) Service vehicles not included prior to 1951.
(6) Taxicabs included with private autos prior to 1952.
(7) Count made in January. Weather - Cloudy - Mean Temp. 22°.
(8) Count made in June due to coal strike and railroad strike.
(9) Count made during period of gasoline refinery strike.

Supplementing the last table, the following shows the daily number of Rapid Transit cars entering and leaving the central business district of Chicago:

7: 00 A.M. to 7: 00 P.M. for a Typical Weekday in May

Year	Rapid Transit Cars Entering the Central Business District	Rapid Transit Cars Leaving the Central Business District
1950	5,792	5,797
1951	5,678	5,713
1952	5,450	5,546
1953	5,522	5,650
1954	5,474	5,462

Note: Rapid Transit cars also include the Chicago Aurora and Elgin Railroad and the Chicago, North Shore and Milwaukee Railroad. (Passengers carried by Chicago Aurora and Elgin and North Shore trains were also included in Cordon Count figures.)

Because the Cordon Count of vehicles does not include CTA subway and elevated cars nor railroad cars, although the passengers carried by these media are included in the "Daily Number of Passengers," the following table has been prepared to incorporate these media so that the statistical data presented therein will be in proper perspective:

Cordon Count Data for 1953
Amplified to Include Elevated Cars and an Estimated Number of Railroad Cars

	Vehicles In	% of Surface Vehicles	% of All Vehicles	Passengers In	% of Surface Passengers	% of All Passengers	Passengers per Vehicle
Street Cars	1,952	0.96%	0.92%	76,141	15.56%	8.95%	39.01
C.T.A. Buses	4,945	2.43	2.34	112,225	22.94	13.19	22.69
Total Surface Sys.	6,897	3.39	3.26	188,366	38.50	22.14	27.31
Out of Town Buses	1,018	0.50	0.48	18,871	3.86	2.22	18.54
Private Autos	147,777	72.75	69.93	221,665	45.30	26.05	1.50
Service Vehicles	21,505	10.59	10.18	21,505	4.39	2.53	1.00
Taxicabs	25,939	12.77	12.28	38,909	7.95	4.57	1.50
Total All Surface	203,136	100.00%	96.13	489,316	100.00%	57.51	
Elevated Cars	5,522		2.61	228,853		26.90	41.44
Railroad Cars	2,654	(A)	1.26	132,678		15.59	50.00
Grand Total	211,312		100.00%	850,847		100.00%	

(A) Estimated at an average of 50 passengers per vehicle.

Note: Railroad cars are considered to be non-surface operation because they enter the central business district on their own right-of-way by either elevated or under-cut roadbeds and do not contribute to the surface traffic congestion.

It is interesting to note that in 1953, transit surface vehicles, being 3.39% of the total entering the area, carried in 188,366 people; whereas, private automobiles, numbering 72.75% of all surface vehicles entering the area, carried 221,665 people. On the same day the subway and elevated, with 5,522 vehicles, which were not on the street, brought into the area 228,853 passengers.

The CTA vehicles alone- -streetcars, buses and elevated cars- -only 5.87% of total surface and elevated vehicles entering the area- -brought in 49% of the total people who entered the area on this typical day.

The Cordon Count figures cover the 12-hour period from 7:00 A.M. to 7:00 P.M. They also disclose a large service by the Rapid Transit in comparison to the Surface vehicles of the common carriers.

A projection and analysis has been made by the Schedule -Traffic Department of the CTA covering the 1950 to 1954, inclusive, Cordon Counts to ascertain the total number of passengers crossing the central business district in 24 hours; and then a calculation aimed to show the percentage of passengers carried into the central business district as compared to the total number of passengers carried by each division in the 12-hour period and also in the 24-hour period. This is appended as Chapter II, Addendum B. These calculations are estimates, but they indicate that over 95% of the Rapid Transit total patronage crosses the loop boundaries whereas only between 13% and 14-1/2% of the total passengers carried on the Surface vehicles (streetcars and buses) cross these lines. As part of Addendum B is the explanation of the analysis by Mr. F. A. Forty, Superintendent of the Schedule - Traffic Department.

In May and June, 1952, the Schedule-Traffic Department conducted a more comprehensive study on the relative effectiveness of the automobile and mass transit vehicles in transporting people over streets where both operate. These counts were made at 132 principal locations in Chicago. The results of this check show:

The traffic checks City-wide on CTA routes at 132 points disclosed these average passengers carried per vehicle:

	Private Automobile	CTA Vehicles
6:30 - 7:00 A.M.	1.5	44.0
7:00 - 7:30 A.M.	1.5	52.0
7:30 - 8:00 A.M.	1.5	52.0
8:00 - 8:30 A.M.	1.4	41.0
4:00 - 4:30 P.M.	1.2	42.0
4:30 - 5:00 P.M.	1.6	52.0
5:00 - 5:30 P.M.	1.6	52.0
5:30 - 6:00 P.M.	1.6	43.0

On such City-wide basis again, for the maximum hour period in the A.M. rush (above described), 2,553 CTA vehicles carried 135,756 persons or an average of 53 passengers per vehicle, in contrast to 74,342 automobiles carrying 110,841 persons with an average of 1.5 passengers per automobile. On the same basis, for the maximum hour in the P.M. rush (I. e. maximum hour between 4:00 and 6:00), 2,354 CTA vehicles carried 124,894 passengers with an average of 53 per vehicle in contrast to 74,623 automobiles carrying 121,048 or with an average of 1.6 persons per automobile.

Again, for the whole morning check period 6:30 A.M. to 8:30 A.M. there were 4,558 CTA vehicles carrying 217,843 persons or an average of 47 per bus or car in contrast to 124,961 autos carrying 181,423 persons or 1.45 passengers per car. For the whole P.M. check period 4:00 to 6:00 P.M., there were 4,256 CTA vehicles carrying 203,027 persons or 48 per vehicle in contrast to 132,688 autos carrying 211,702 persons with an average of 1.60 passengers per automobile.

From this it is apparent that the private automobile is a strong competitor with the surface vehicles, but is a very extravagant user of street space.

This detailed report is available for examination by any interested party and will be kept in a volume hereafter referred to as Research Data.

Conclusions

Certain conclusions can be drawn from this study;

(1) The competition of private automobiles is very important and is unquestionably the major explanation for the fall-off in passenger patronage of mass transportation vehicles.

(2) If automobiles did not enter the area (or if the automobile had never been invented), many who now come by private automobiles would normally use mass transportation.

(3) From the community standpoint, mass transportation vehicles are far more economical in transporting people and more efficient in use of street space. One modern bus will carry comfortably as many passengers as 35 private automobiles at the present rate of occupancy, requiring approximately only one-twelfth of the street space.

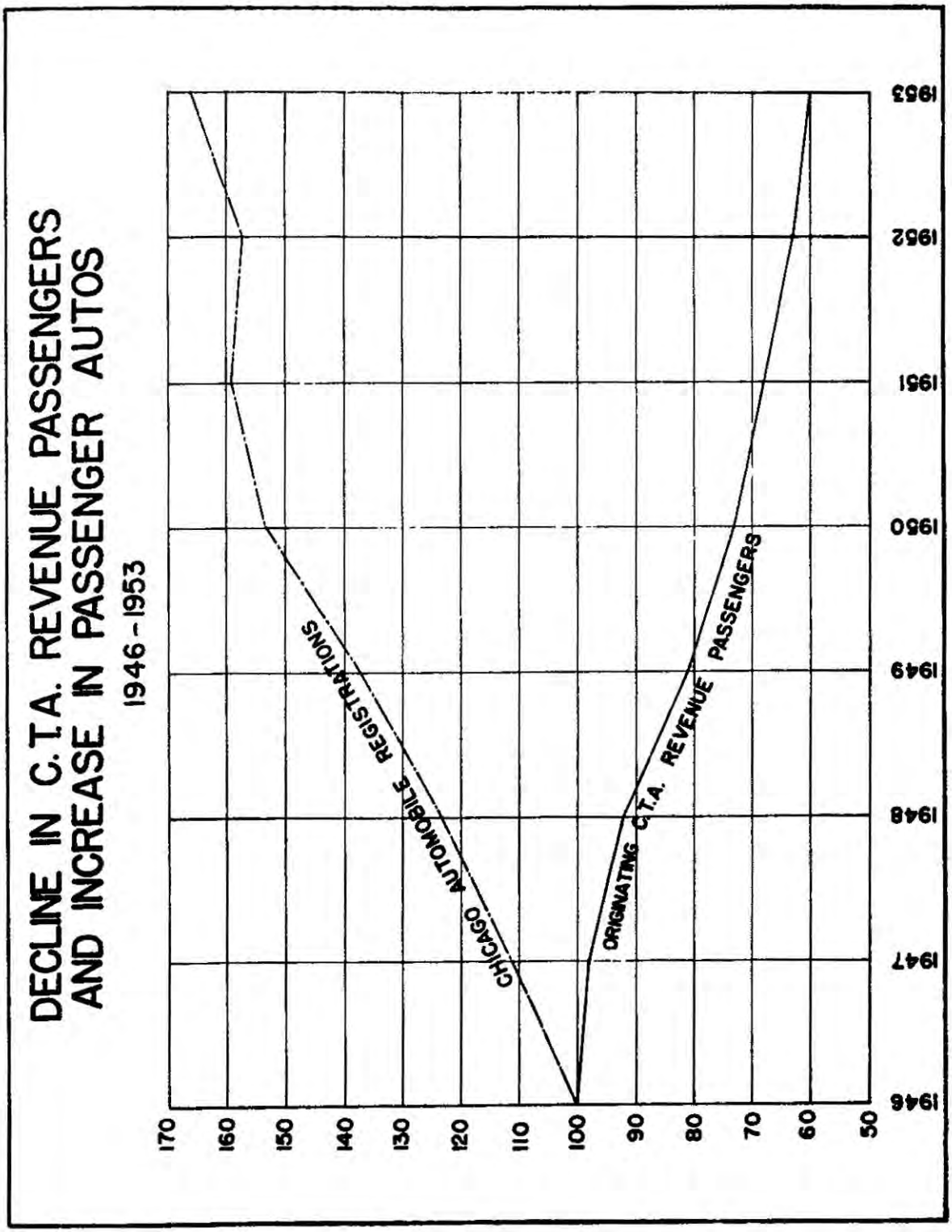
That there is a relationship between the fall-off of traffic and the growing use of private automobiles is indicated by the following graph.

This graph begins with the year 1946. The automobile registrations and the originating CTA revenue passengers of that year are considered as 100%.

The figures listed on the left of the table are percentages--namely 100% in 1946 rising to over 166% for automobile registrations in 1953. Similarly, revenue passengers begin at 100% in 1946 and drop off to approximately 60% in 1953.

This graph is based upon the figures that appear in the foregoing exhibits, particularly in the first exhibit in this chapter.

The graph is as follows:



In many public utility operations the business is inherently such that it becomes a monopoly. This is recognized as legal and inevitable.* Thus, in the supplying of water, electricity and gas, the people who desire that type of service are usually limited to the company operating in the area in which they reside.

Bus mass transportation facilities are far from monopolistic. They have the competition not only of the person who walks short distances, but of the thousands of automobiles and taxicabs, carrying a large number of passengers.

Doubtless there was a time in history when the urban transportation lines were monopolistic in character. There was no other effective way of getting around (except within walking distances). But as the automobile developed, and its ownership became more general, the competitive factor became more and more important. During the period since the Second World War, the competition of the privately owned automobile has become greater as the years have progressed.

Cost of Private Automobile Compared to Mass Transportation Travel

The reasons for the preference of many people for private automobile transportation are not economic. Even with the prevailing rate of fares of 20¢ on the public mass transportation systems, the cost of transportation is much less on them than in the private automobile.

Doubtless every person would have a different set of figures for the cost of his automobile travel. There follows, however, a calculation based upon what is considered a fair average. It contemplates an automobile having a cost of $2,800., traveling 10,000 miles per year, of which one-half represents miles to and from work. The fixed costs and operating costs of such travel are first set forth and then the operating costs are compared with the expense of traveling by mass transportation vehicles. This calculation is:

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* Neither the most rigid common law concept of monopoly nor the limitations in the Constitution of 1870 (Art. IV, Sec. 22) on the subject of eliminating competition, conflicts with the modern notion that publicly regulated non-competitive enterprise in the field of public utility operation is more often than otherwise better calculated to promote the public welfare than is unrestricted competition. Public Utilities Commission v. Romberg, 275 Ill. 432,434; People v. City of Chicago, 349 Ill. 304, 326.

Approximate Cost to Operate the Average
Family Automobile 10,000 Miles Per Year
(5,000 Miles to and from Work)

	Cost Per Year	Cost Per Mile
Fixed Costs:		
Depreciation - Avg. cost $2,800 - -		
Trade-in value $600 - - 5-Year Life	$ 440	$0.0440
Insurance	150	0.0150
State and City Licenses - $25.50 low,		
$47.00 high - Avg.	36	0.0036
Interest on investment at 3%	84	0.0084
Total Fixed Costs	710	0.0710
Operating Costs:		
Gasoline - 30-1/2¢ per Gal. at 15 M.P.G.	203	0.0203
Motor Oil	10	0.0010
Tires	40	0.0040
Maintenance (Greasing, Washing and Repairs)	70	0.0070
Miscellaneous Expenses	10	0.0010
Total Operating Expenses	333	0.0333
Total Cost	$1,043	$0.1043

Annual Operating Costs Saved by Using Public Transportation

Estimated average round trip of 20 miles per day for 250 days - 5,000 miles at $0.0333	$166.50
Parking fee - Average between 60¢ in Monroe St. Lot to $1. to $1.75 in other parking lots or garages - 250 days at 85¢	212.50
Savings under current and contemplated revisions in rates for public liability and property damage insurance on cars used for pleasure only, up to 30% of $90. Average annual cost	27.00
Saving in depreciation, life of car increased 100%	220.00
Annual savings in car expense	626.00
Deduct - Cost of carfare - 250 days at 40¢ round trip	100.00
Net annual saving	$526.00

The estimated savings of $526. per year, if retained and invested, would build a fair-sized estate in the course of a person's working years. The calculation of such an estate is:

Interest Compounded Annually	At 3%	At 4%	At 5%
In 25 Years	$19,178	$21,906	$25,104
In 30 Years	25,025	29,501	34,947
In 35 Years	31,803	38,741	47,508

Whether a person would have the perseverance to accumulate and invest such savings is, of course, another question. Moreover, each person's calculations would be different, based upon individual circumstances. Some of the costs would be higher, some lower. For example, the calculation accepts 85¢ as the parking fee, and yet there are in the Loop area many places where the parking fee would run from $1.00 to $2.00 per average working day. On the other hand, the depreciation factor saving might conceivably be less due to the fact that the automobile suffers some depreciation even when it is not used.*

But granted these and other possible variations, it is yet apparent that the use of public transportation facilities is more economical from the standpoint of the individual than is the use of the private automobile.

There must therefore be some other reasons than purely economic ones for the preference which riders have for private automobile travel. Some of these will now be discussed.

Why Pay $2.50 Per Day for Transportation That Can Be Obtained for 40¢ a Day?

The foregoing calculation indicates a cost of approximately $2.50 per day for transportation to and from work by private automobile. This is probably a conservative estimate.

The driver of that automobile can get to and from work by public mass transportation for 40¢ per day. Why does he not travel at the more economical rate ?

Observation, supplemented by discussion with many automobile drivers, suggests these as some of the reasons for automobile preference:

(1) Without doubt, the private automobile can make better time. It is more maneuverable, and the rate of acceleration of such a vehicle is greater than that of buses or even modern PCC cars. Moreover, the public vehicles

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* Also since the private automobile carries an average of 1.5 persons, the average saving would be reduced by 20¢ per day for 250 working days, or by $50.00 per year.

must stop to receive and discharge passengers on fixed routes. This consumes time, which is not lost by the private automobile that must make stops only for traffic and stoplights. Observers of public mass transportation, who have spent their life efforts in that activity, believe that the difference in speed is perhaps the most important advantage that the private automobile has. Americans are an impatient people who are generally in a hurry to get somewhere, and the saving of some minutes is more important to them than the saving of the dollars and cents that could come by riding the public mass transportation vehicles.

(2) The private automobile is usually kept in or near the residence and is parked not far from the place of business. This saves the time and the effort of walking from home or place of business to the loading point of the general carrier. To many this advantage is decisive.

(3) The automobile is available for use at the moment when its owner desires it. This is almost always true at the home, and in the public parking place, where there may be a slight delay, the advantages on this score are still with the private automobile. With the streetcar or bus there is often a waiting period at the loading point.

(4) The automobile driver always has a seat; in the common carrier he may or he may not have this accommodation.

(5) The automobile affords privacy, which is not to be had on the mass transportation vehicle.

(6) Some people may believe their health could be affected (particularly as to colds and respiratory difficulties) by being crowded into a mass transportation vehicle. Connected with this is that in the private automobile, the owner may adjust the temperature to suit himself, which is not always true in a streetcar or bus.

(7) A limited number of people who use their cars in connection with business find it possible to deduct part or all of the cost, sometimes in their own income tax return, and in other cases, in the income tax return of their employing corporation, when it reimburses the cost of such travel. (The writer does not pass on the legal soundness of such deductions in all cases.)

(8) There is another general reason which may have more applicability and force than any of these. It is, however, more vague. Every person seems to have some hankering for a privately owned and managed vehicle. This is seen in children who commonly get much pleasure out of owning a wagon, bicycle or other self-propelled vehicle. This desire for one's own transportation means is not lost as the boys and girls grow up. Psychologists may perhaps refer to this as the "urge to extend one's personality. " For the youngster who did not

get a cart, the auto is a belated gratification of a "repressed desire."* This remains one of the potent forces that causes a preference for the privately owned automobile.

(9) Also involved is the feeling of social distinction. In olden days the prominent families had horse and carriage. Later the wealthy members of the community acquired automobiles. There is a feeling on the part of many that the driving of one's own motor vehicle is some indication of social position, distinction and leadership.

Disproportionate Fall-Off in Weekend Riding

The downward trend of patronage has been accentuated by a disproportionate fall-off in weekend riding, particularly since the war.

There have been periods in transit history to Chicago in which Saturday riding was the heaviest of the week. This is believed to have been the case through most of the decade of 1920 to 1930. A sample of a period from 1926 to 1930 will be presented in the course of this discussion.

Again for a short period during the last war, Saturday riding was the heaviest of the week. Graphs are about to be presented showing the relationship, from 1940 to 1953, between Saturday and Sunday riding, respectively, and average weekday riding. The first graph shows that in 1940 on the Surface Division the Saturday patronage was between 85% and 90% of the average weekday rides. This rose gradually to the war period. During 1944 there was a short time in which average Saturday riding was slightly greater than average weekday riding. During 1945 again there were two periods of time when the same situation prevailed. From then on, however, the percentage of Saturday riding on both the Surface and Rapid Transit divisions fell rapidly in comparison to average weekday riding. This means that while there has been a general falling off in patronage, the fall-off in patronage on Saturdays has been far greater than that during weekdays. This graph is now presented and is self-explanatory.

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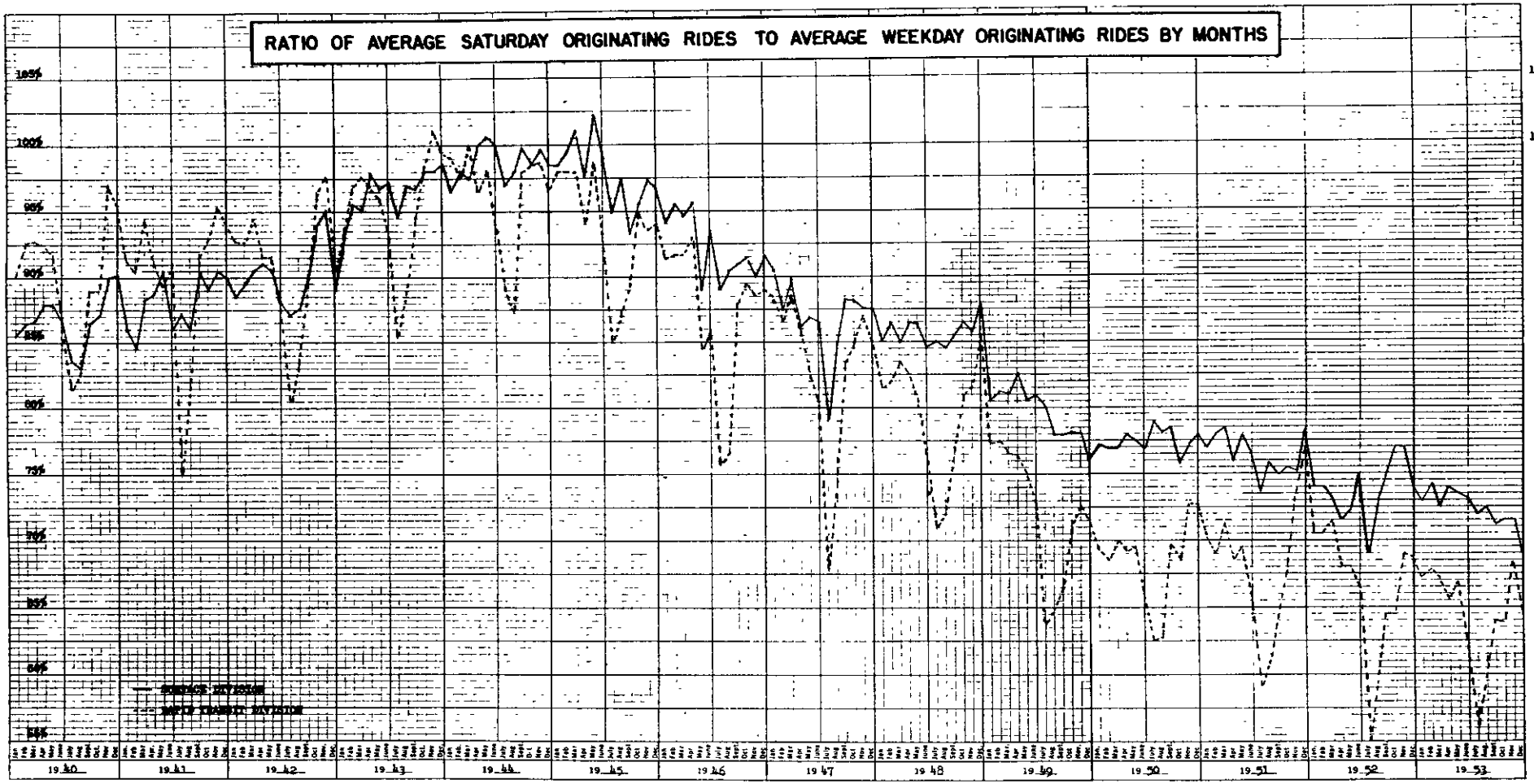
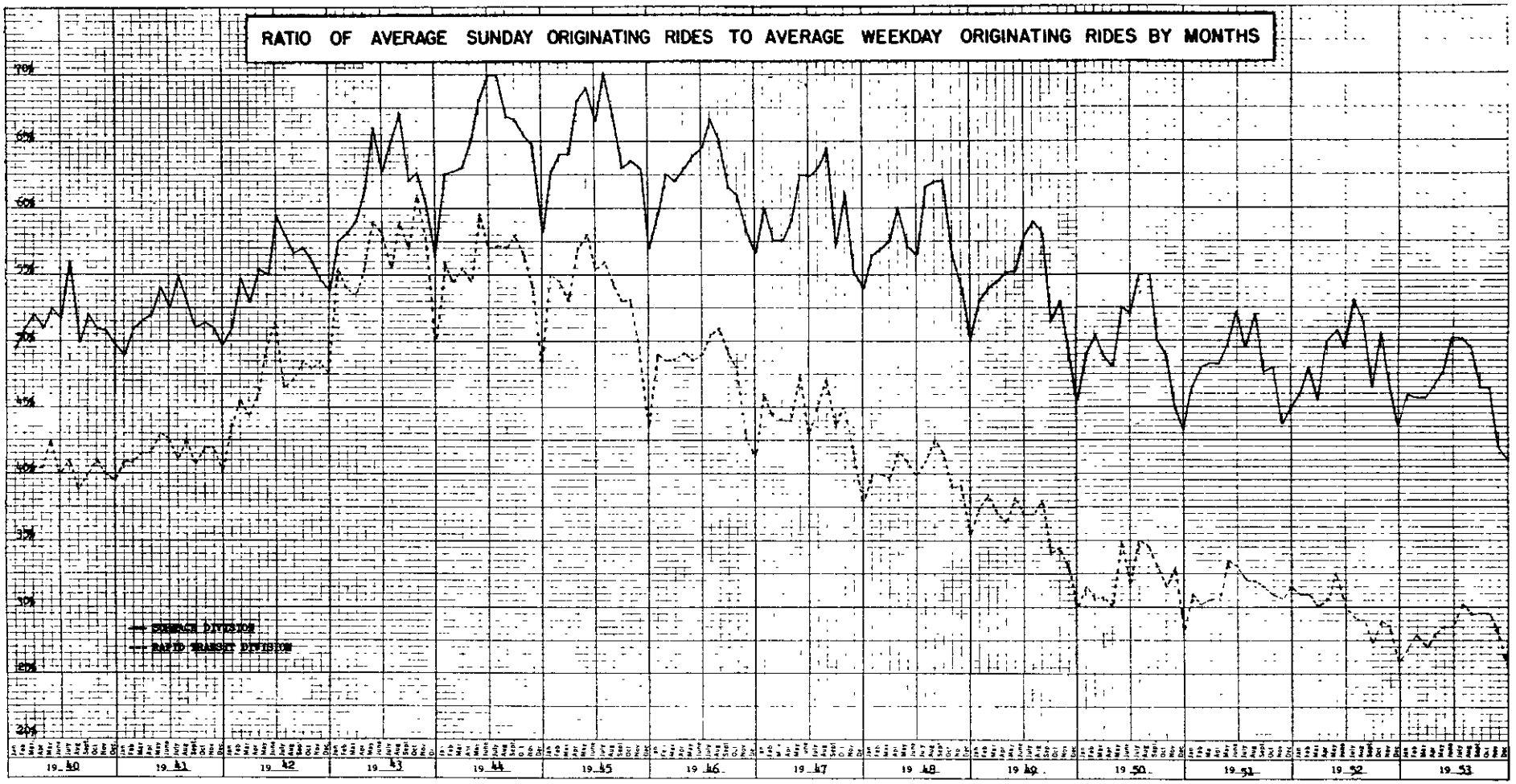
* Psychology by Sophie Schroeder Sloman, M.D., formerly Superintendent, Juvenile Research Institute of Illinois.



On this graph the term originating rides means the rides other than those on transfers. Here can be seen the effects of the growing acceptance of the five-day week, and the competition by private automobile for weekend pleasure and shopping riding. (Weekday evening shopping by private automobile has also doubtless taken some former local transit riders.)

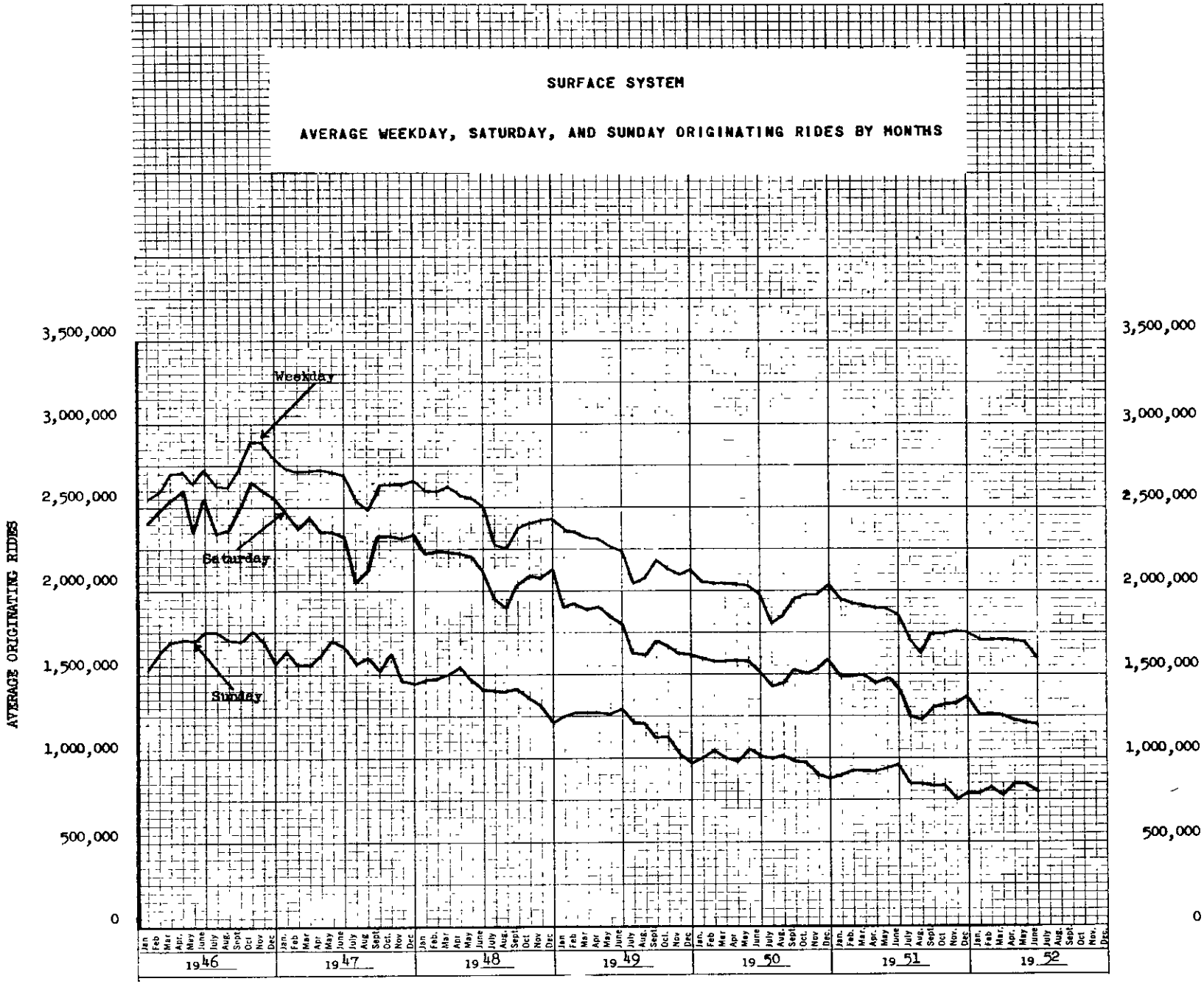
From the standpoint of the Authority operating the lines, that is a serious development. There are many costs that continue on Saturday, such as interest on borrowed money, salaries which are paid on a monthly rather than on a daily or hourly basis, and certain amounts of depreciation. These and other fixed costs cannot be reduced because patronage falls off more heavily on Saturday than on other days of the week. Another factor that enters is that the disproportionate fall-off in Saturday patronage means that more cars and buses are running with empty seats. It costs as much to carry an empty seat as a seat occupied by a passenger. A spot check analysis of the loss due to this disproportionate fall-off will presently be shown.

There has also been a disproportionate fall-off in Sunday riding. During the period from 1940 to 1953, average Sunday rides at no time exceeded 70% of average weekday riding on the Surface Lines and never exceeded 61% on the Rapid Transit Division. Those high points occurred during the war. Since that time there has been a steady decline in the percentage of Sunday rides as compared to average weekday rides. This is demonstrated by the following graph:



Showing the same relationship between Saturday and Sunday and weekday riding is the following graph extending from 1946 to 1952. This is in terms of average originating rides. Here the basis is the number of rides rather than a comparative percentage. The situation illustrated is the same as the one shown on the percentage ratio charts above.

CHART "B"



To particularize a part of the period shown in these graphs, there has been prepared by the Schedule-Traffic Department of the Authority a table showing in figures and percentages a comparison between ten months of the year 1947 and ten months of the year 1954. There is shown as to each of those months in 1947 the average weekday rides, the average Saturday rides and the percentage relationship of such rides to the weekday rides. Then the same as to average Sunday rides. Next appears the same information for 1954.

Taking the months of October in 1947 and 1954, respectively, as typical, it appears that in 1947, Saturday riding was approximately 87.37% of weekday riding; that Sunday riding was 57.36% of weekday riding. However, by October 1954, Saturday riding had dropped to 66.6% of weekday riding and Sunday riding to 37.5%. These figures, which particularize part of the period shown on the graphs, demonstrate that the decline in Saturday riding, due to the five-day week, is considerably greater than the decline in weekday riding. It also shows that Sunday riding has been affected even more than has that of Saturday. This table is as follows:

CHICAGO TRANSIT AUTHORITY

AVERAGE DAILY ORIGINATING REVENUE PASSENGERS BY MONTHS
AND RELATIONSHIP OF SATURDAY AND SUNDAY RIDING TO WEEKDAY RIDING

	YEAR 1947					YEAR 1954				
		SATURDAY		SUNDAY			SATURDAY		SUNDAY	
	Weekday Revenue Rides	Revenue Rides	Percent of Weekday	Revenue Rides	Percent of Weekday	Weekday Revenue Rides	Revenue Rides	Percent of Weekday	Revenue Rides	Percent of Weekday
JANUARY	3,457,224	3,116,027	90.13	1,940,237	56.12	2,132,641	1,398,668	65.58	812,441	38.10
FEBRUARY	3,446,194	2,990,221	86.77	1,857,642	53.90	2,126,321	1,392,093	65.47	859,183	40.41
MARCH	3,433,056	3,063,292	89.23	1,845,052	54.01	2,128,650	1,417,705	66.60	847,938	39.83
APRIL	3,449,460	2,957,052	85.73	1,906,021	55.26	2,123,543	1,445,133	68.05	832,842	39.22
MAY	3,430,800	2,946,331	85.88	2,015,830	58.76	2,088,287	1,414,657	67.74	831,016	39.79
JUNE	3,403,323	2,897,544	85.14	1,969,259	57.86	2,032,350	1,373,347	67.57	866,518	42.64
JULY	3,230,969	2,535,242	78.47	1,875,295	58.04	1,874,023	1,191,707	63.59	821,673	43.85
AUGUST	3,163,070	2,641,714	83.52	1,919,135	60.67	1,858,696	1,274,888	68.59	824,828	44.38
SEPTEMBER	3,344,841	2,909,859	87.00	1,805,262	53.97	2,018,562	1,364,870	67.62	828,453	41.04
OCTOBER	3,362,741	2,938,018	87.37	1,928,769	57.36	2,041,501	1,359,707	66.60	765,601	37.50

NOTE: Averages include Surface, Rapid Transit, and Chicago Motor Coach operations.

Schedule- Traffic Department
November 10, 1954

There has been prepared an analysis which compared Saturday and Sunday riding in October 1929, with that of the same type of riding in October 1954. In the earlier period, Saturday riding was 102.1% of average weekday patronage. On Sundays and holidays the passengers were 58.1% of those of the average weekday. In October 1954, the percentages had dropped as shown on the next foregoing table to 66.6% and 37.5%, respectively, for Saturday and Sunday riding. There is then shown on the calculation which follows what the passenger figures would have been in October 1954, if the relative percentages had been the same as in October 1929.

Then the last figures are projected to the entire year 1954, indicating that if the relative riding on Saturdays and Sundays, respectively, to weekday riding had been the same in 1954 as in 1929, there would have been additional passengers in 1954 of approximately 62 million. At the average fare in effect in 1954, the money difference exceeds 11.7 million dollars. Stated another way, if the Saturdays, Sundays and holidays in 1954 had been as good percentagewise as those in October 1929, there would have been that many dollars additional income in 1954, which represent roughly a difference of about 2¢ in the fare.

The analysis follows:

Comparative Passenger and Revenue Statistics

	Weekdays	Saturdays	Sundays & Holidays
Avg. passengers per day - C. S. L. only, October 1929	2,654,110	2,710,775	1,541,370
Per Cent of weekday		102.1%	58.1%
October 1954 C.T.A.)	2,041,501	1,359,707	765,601
		66.6%	37.5%
Average Daily C. T. A. passengers at 1929 ratios of weekend riding	2,041,501	2,084,373	1,186,112
Annual gain in passengers in 1954, if the 1929 ratios had prevailed		37,682,632	24,389,638
October 1954, average fare			18.798¢
Approximate annual loss in revenue		$7,138,975	$4,584,764
Combined annual loss in weekend revenues		$11,723,700	

It is apparent from these analyses that the five-day week, resulting in a disproportionate fall-off on Saturday, with a similar or even greater drop on Sunday, has been of significant importance in the general traffic decline, and that the financial results coming from this greater falling off over the weekend have had serious implications.

The drop in patronage on Saturdays is easy to explain. The growing popularity of the five-day week is the most obvious reason for the sharp decline. However, closely related to the shorter work week in the adverse effect on local transit is the enormous increase in automobile use. The employee who formerly traveled to and from work by streetcar or bus on Saturday now may drive his car for a pleasure trip or for a shopping tour with his family. The principal reason for the Sunday fall off is manifest in the terrific congestion in automobile traffic on the city's boulevards and in the parks on a Sunday afternoon. A substantial proportion of churchgoers who formerly rode transit vehicles now use their personal automobiles. In addition, large numbers of people now spend their weekends out of the city.

Note: Additional studies supplementing this discussion of weekend riding are contained in these tables:

Comparing Volume of Saturday Riding to Weekday Riding

The records of Surface riding (former Surface Lines) for the years 1926, 1927, 1928 and 1929 show that the Saturday riding exceeded the weekday riding by substantial margins. The ratio of Saturday to weekday riding expressed percentage-wise was:

Surface Lines Only

Average for 1926 thru 1929	% Saturday to Weekday Riding
February	104.0
March	105.5
April	105.0
May	104.5
June	104.5
July	101.8
August	103.0
September	103.0
October	104.5
November	105.0
December	104.5

Surface Lines Only

Average for 1926 thru 1929	% Saturday to Weekday Riding
January 1930	99.5
February 1930	101.2
March 1930	100.0
April 1930	102.5
May 1930	100.6
June 1930	99.0

It may be noted that starting in June 1930, approximately eight months after the start of the great depression the Saturday volume dropped below the weekday volume. The pattern continued in this manner:

October	1930	99.0
"	1931	94.5
"	1932	93.0
"	1933	87.5
"	1934	89.2
"	1935	91.2
"	1936	91.5
"	1937	91.5
"	1938	89.5
"	1939	87.0
"	1940	88.6
"	1941	86.0

On the Boulevard System, Saturday volume of riding exceeded that of the weekdays by substantial amounts in the boom years preceding the depression. As examples, the ratio of Saturday to weekday riding expressed percentagewise for the Boulevard System was:

For October 1929	114.5
For November 1929	108.0

The ratio of Saturday to weekday riding on the Surface and Rapid Transit Systems in the years 1942 thru 1945 followed this pattern:

	Surface System	Rapid Transit System
October 1942	94.0	94.4
" 1943	97.8	97.8
" 1944	98.5	98.7
November 1944	99.7	98.8
December 1944	98.4	96.5
January 1945	98.4	98.4
February 1945	99.5	99.3
March 1945	101.1	100.8
April 1945	97.6	95.9
May 1945	102.2	102.0
June 1945	98.9	97.0
July 1945	94.9	93.4
August 1945	97.4	95.7
September 1945	93.2	92.6
October 1945	95.6	95.5
November 1945	97.3	96.7
December 1945	96.6	97.5

It is obvious that the percentage of Saturday to weekday riding on these two systems reached its peak in March and May of 1945, and declined thereafter.

The same situation did not prevail on the Boulevard System in early 1945. The percentage of Saturday to weekday riding in January thru June 1945, followed this pattern:

	% Saturday to Weekday Riding
January 1945	93.5
February 1945	95.5
March 1945	96.0
April 1945	88.5
May 1945	98.5
June 1945	91.0

Rediscovering the American Home

Another phenomenon contributing to the decline in streetcar and bus riding has been the rediscovery of the American home.

An important social reason has been the television. This development has taken place since the war, beginning in 1946 and becoming significant in 1948.

A special study of television development in the Chicago metropolitan area and in the city itself has been made by the Comptroller's Office of CTA and by the writer. The results of this study are summarized in the following:

ESTIMATED TELEVISON SETS IN THE CITY OF CHICAGO, ILLINOIS,
AND RELATED STATISTICS
FROM START OF BROADCASTING IN 1946 TO SEPTEMBER 30, 1954

Year End	Sets Sold in Chicago Metropolitan Area	Sets Traded in or Sold Out of Area	Balance of Sets in Use at Year End	Sets in Use in the City of Chicago, Illinois (Note C)	Population of City of Chicago	Estimated Households Based on 1950 Census (Note D)	Percent of Households Having Sets	Population Per Set
1946	9,162 (A)	-	9,162	6,325	3,594,889	1,061,730	0.6%	568
1947	15,000 (A)	-	24,162	16,680	3,594,889	1,061,730	1.6	216
1948	125,000 (A)	-	149,162	102,980	3,661,024	1,081,265	9.5	36
1949	264,743	-	413,905	285,760	3,694,051	1,091,020	26.2	13
1950	401,576	89,915	725,566	500,930	3,727,078	1,100,770	45.5	7.4
1951	262,346	58,740	929,172	641,500	3,620,962	1,069,430	60.0	5.6
1952	238,664	53,438	1,114,398	769,380	3,665,792	1,082,670	71.1	4.8
1953	255,629	57,237	1,312,790	906,350	3,665,792	1,082,670	83.7	4.0
9-30-54	168,085	37,635	1,443,240	996,410	3,685,000	1,113,115	89.5	3.7
*	1,740,205	296,965 (B)						

Notes:

(A) Estimated by C. B. North, Assistant Comptroller of CTA; no data available from industry.
(B) Estimated total, prorated evenly over years at 22. 3+% of sets sold.
(C) Prorated on basis of 1950 census; Chicago had 69. 04% of all sets in the area.
(D) Based on 1950 census, indicating 3. 3+ persons per household.
* (This note appears on following page.)

* The manner of the development and derivation of the data is summarized in the report by the Assistant Comptroller, Mr. C. B. North, as follows:

We have made an exhaustive search for information as to the number of television sets presently in use in the City of Chicago and have contacted these sources:

U.S. Chamber of Commerce (Census data)
Chicago Association of Commerce and Industry
The Electric Association of Chicago
Radio Corporation of America
Admiral Corporation
State Street Council
Television-Electronics Fund, Inc.

None of the informants has data on the current number of television sets in use nor can any person suggest where such information can be obtained; however, bits of information pertinent to the subject were gleaned from each party contacted and what may be considered the most specific and reliable has been summarized on the following data sheet.

Historically, station WBKB was the pioneer in the Chicago area- - started experimental broadcasts in August 1940, as station W9XBK and and is officially credited as having commenced regular broadcasting on September 6, 1946, as station WBKB, fo1lowed by station WGN on April 5, 1948; WENR, September 17, 1948, and WNBQ, January 7, 1949. Due to a reorganization in the industry and reallocation of channels, effective February 9, 1953, station WBKB relinquished its right to Channel 4 and sold its facilities to station WBBM which commenced operation on Channel 2; Channel 4 was assigned to Milwaukee, Wisconsin; and station WBKB acquired the facilities of station WENR on Channel 7 and continued broadcasting under its original call letters.

The first sets were sold in 1946, principally to taverns and other public gathering places, and due to the high cost and limited selection of programs, sales through 1947 and 1948 were relatively few. By late 1948 three stations were on the air, and mass production and competition brought prices down to where the general public could afford them, with the result that 666,300 sets were sold during the years 1949 and 1950, equivalent to 38.3% of the total of 1,740,205 sets sold in the Chicago area from 1946 to September 30, 1954.

Since no one in the industry has data (or perhaps may be unwilling to divulge it) on the number of sets presently in use, we have estimated that 65%, or 296,965 of the 456,870 sets in use in 1950 (see census data), were 7" or 10" screens, and have since been traded in on larger sets and have either been junked or sold out of the area. On that basis we arrive at the following conclusion:

* (Continued)

Total sets sold up to Sept. 30, 1954	1,740,205
Deduct - Sets junked or sold out of the area	296,965
Balance - Sets in use in the area	1,443,240

The above sets, pro-rated on the same basis as the 1950 census ratio of sets to population, would then be distributed as follows:

	Chicago Metropolitan Area	City of Chicago
Television sets	1,443,240	996,410
Population (revised to 1-1-54)	5,760,600	3,685,000
Households (1950 projected on basis of population increase)	1,686,560	1,113,115
Percent of Households having sets	85.6%	89.5%
Average viewing audience per set	4.0	3.7

The above conclusions appear to be in line with the general belief of persons close to the industry, approached from two different angles. A spokesman for the Admiral Corporation estimates that 80% of all sets sold in the Chicago area are still in use in the area. On that basis there would be 1,392,165 sets in the area as against our estimate of 1,443,240, a difference of 51,075 sets or 3.5%. Mr. Walker of Radio Corporation of America advises that the sales potential in the City of Chicago is estimated to be at 90% of saturation point, and our estimate shows 89.5%.

Data Sheet

Television Sets Sold in the Chicago Metropolitan Area and Related Statistics

1. SOURCE - - U.S. Department of Commerce, (Miss McDonald, Librarian) from 1950 Census Taken April 1 st.

	Chicago Metropolitan Area	City of Chicago	% of Chicago to Metro. Area
Population	5,495,364	3,602,962	65.56%
Population, revised estimate at 1-1-54	5,760,600	3,685,000	63.97%
Households	1,608,914	1,088,345	67.64%
Television sets in use	456,870	315,415	69.04%

It will be seen that the number of television sets in the homes in the City of Chicago has increased from 6, 325 in 1946 to almost a million in 1954. These are in the homes. When they are in use, the family is likely to stay there.

Formerly there was travel to places of entertainment, such as theatres, movie houses and other amusement spots. Also, there was travel in visiting friends and acquaintances. That all travel to such places has materially declined due to the installation of television in the home cannot be doubted. The people who own these million sets did not buy them as a piece of furniture. They were acquired to furnish entertainment to the householder and his family. And this keeps people at home. Americans are rediscovering their homes.

The effect of television on another segment of the economy has been studied. In the City of Chicago a movie theatre must be licensed in order to operate. This licensing is done by the City Collector of the City of Chicago.

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* (Continued)

2. SOURCE - - Chicago Tribune Public Information Bureau, (Mr. Jardine)
Television sets sold in the Chicago Metropolitan Area

Year	No. of Sets Sold	Predominant Screen Sizes
1949	264,743	7'' & 10"
1950	401,576	10", 12'' & 17"
1951	262,346)	
1952	238,664)	17", 19'', 21" & 24"
1953	255,629)	
1954 - 9 months	168,085	24", 27" & larger
Total	1,591,043	

3. SOURCE -- The Electric Association of Chicago, a trade organization that promotes the use and sale of electrical appliances and publishes a bi-monthly trade magazine - "Electric Association News, " reports that 1,740,205 television sets have been sold in the Chicago metropolitan area up to September 30, 1954.

The figures showing the licensing of movie theatres in Chicago during the period from 1941 to 1954 appear in the following table:*

Year	Number of Movie Picture Theatre Licenses
1941 - 1949	305
1950	269
1951	236
1952	228
1953	205
1954	193

Even without these statistics the average Chicagoan knows of the many local movie theatres that have closed their doors during this period. A principal reason for this has been the decline of patronage to such an extent as to make continued operation unprofitable.

It cannot be assumed that everybody going to a movie theatre would use public transportation facilities, but that there are many people who do is clear to the most casual observer.

Another item in the decline of local transit riding among theatre-goers is the significant increase in drive-in theatres, which are accessible only by private automobile.

The movies are only one segment of American city life, but if there has been a fall-off of 36.72% in the number of those houses, it may reasonably be inferred that there has been at least as large a falling off in other activities which take people from their homes. Some of these people, in all lines of interest, used public transportation.

This use of mass carriers is important and the incident revenue is realized at little cost because it occurs in the nonpeak hours. The lack of profit in mass transportation operation is not in the rush hours, when the cars are filled, sometimes to overflowing, but in the non-peak service during which the vehicle carries too many empty seats. The development of television causing people to stay at home has caused additional empty seats in the non-peak hours.

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* Supplied through the cooperation of the Office of the City Collector, City of Chicago.

Certain Miscellaneous Factors

Other causes have operated in the continued decline in public transportation vehicle riders. Two of these factors have been referred to in the prior chapter. They are the decentralization of industries accompanied to a degree by the decentralization of shopping districts, and secondly, the exodus of people and industry to peripheral and suburban areas.* This movement has continued at a greatly accelerated rate since the end of the war.

Another cause of the decline since the maximum riding in the middle '40's has been the abolition of three shifts and later the abolition of two shifts. During the time of the high demand for products during the war, many manufacturing establishments, and to a lesser extent, other establishments, operated with three shifts. The movement of workers on this third shift and overtime on other shifts helped create a rider demand in the non-peak periods of the day. With the abolition of extra shifts and overtime, this non-peak riding has drastically declined. What riding remains has been shifted quite generally to the periods of the day which are the peak periods.

Like the five-day week, this was one of the important contributing factors--although to a lesser degree- -to the decline in riding.

Effect of Fare Increases on Traffic

It is assumed by many who do not make a close analysis that the increase in fares is the primary cause of traffic decline.

This assumption may well be questioned. That there is a temporary effect on riding due to increases of fares seems probable, but whether this effect is of great importance over a longer period appears to be subject to doubt. The most frequent increases have been necessary since the war. There follows a graph showing the average daily originating rides by months on the Surface and Rapid Transit divisions from 1940 through 1953. This graph refers to weekday travel only.

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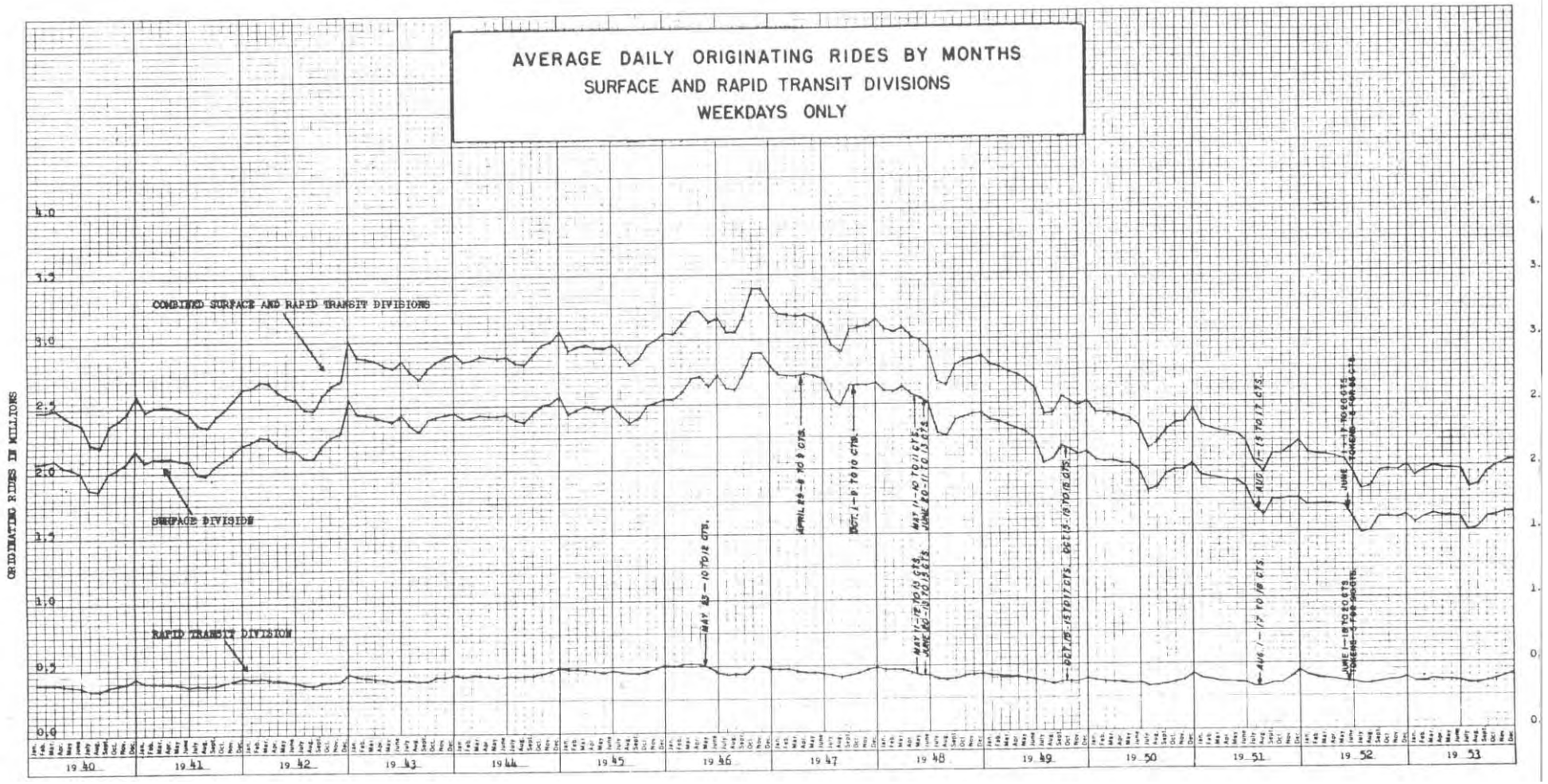
* A Fortune Magazine survey asserts that between 1947 and 1953 the number of people living in suburbs in the United States increased by 9 million, making a total, it is said, of 30 million.

The 1954 automotive survey of The Crowell-Collier Publishing Co. gives the following as the distribution of automobile ownership by community size:

Community Size	Per Cent of All Cars Owned	Per Cent of Families Owning Cars
500,000 or more	15%	57%
100,000 to 500,000	14%	74%
10,000 to 100,000	20%	73%
Under 10,000	38%	80%
Farm	13%	78%

From this graph it is apparent that riding increased as heretofore noted through the war period and up to the latter part of 1946. From that time there has been a steady decline. The fare increases are noted on the graph.



This graph suggests the following interesting observations:

(1) A fare increase has usually, but not always, been followed by a dip in traffic which appears as a "valley" on the chart.

(2) Invariably there is a rebound from the "valley, " so that at the end of a short period, the traffic while not as high as before the dip, appears to be a continuation of the previously established declining line.

(3) In 1947 there was a second increase in the autumn which was not followed by a decline. In 1949 the decline and reaction from it occurred before a fare increase; and in 1950 there was a decline without any fare change either before or after the dip.

There is a reason for that lack of uniform pattern. It is that even without a fare increase, there occurs a seasonal dip in riding in the summer time. The regularity of such a decline and reaction from it in the summer months appears from a close examination of the chart.

Even in the banner year of 1946, when people were riding streetcars and buses because there was a shortage of automobiles, tires and gasoline, there was this seasonal dip.

In most cases the fare increase has taken place at the point which would naturally be the beginning of the seasonal decline. In no case has the existence of a fare increase inhibited a substantial recovery from the low point of the summer doldrums.

Years such as 1949, when the dip and recovery preceded the fare increase, and 1950 when there was no fare increase at all, but the decline and recovery took place, are illustrations of the potency of this seasonal influence. If one were to eliminate the seasonal influence from the calculations, it would appear quite probable that the fare increase itself has caused an almost negligible decrease in traffic.

That the fare increases have, however, contributed to the continuation of the downward line, of which the other reasons previously discussed are the main causes, appears probable. But in and of itself, the fare increase is comparatively unimportant.

On the other hand, there may well be a point of diminishing returns beyond which fare increases would not bring more gross income due to decline in traffic. Such a point can be supposed to be one at which taxicab riding, group riding and other competitive means would become more reasonable than payment of the streetcar or bus fare. What that point of diminishing returns would be is pure speculation. It is to be hoped that it will never need to be discovered by actual practice.

Why Do Fare Increases Have Little Influence?

Analysis discloses why fare increases are of relative unimportance in the traffic decline.

(1) If an automobile driver, the principal competitor (by reason of the great number of such drivers) is willing to pay an average of $2.50 a day to drive his car when he could get substantially the same result for 40¢, it does not seem probable that he would be lured from his automobile into the streetcar or bus by a reduction of round-trip fares amounting to 10¢ or even 20¢ a day.

(2) The person who stays home from work on Saturday because of the five-day week will not be inclined to take a local transit ride on Saturday just because the fare was reduced by 5¢ or 10¢ each way. In his circumstance, the rate of fare is irrelevant.

(3) Would the person interested in video turn off the set and try to amuse himself by a bus or streetcar ride because the rate is reduced?

It is probable that there are limited situations in which the fare increase is influential. This was mentioned in Chapter I. Doubtless there are some people who will walk short distances rather than pay the higher fare. There the increased cost is of importance. It would appear on analysis that this is, at least at the present state of the charges, the only situation in which the fare level is of any importance in the traffic decline.

Will Lower Fares Bring Profitable Operation?

Tests have been made to determine whether a reduction of fare would increase rider patronage to an extent that would make operation more profitable.

One of the most important tests was conducted by CTA on four Tuesdays in November of 1953. At that time the cash fare was 20¢ with a token fare of 17¢ on the Surface Lines and 18¢ on the Elevated. A bargain fare of 10¢ was put into operation on the four Tuesdays of that month between the hours of 9:30 A.M. and 1:30 P.M. The results of this experiment were reported by Mr. F. A. Forty of the Schedule - Traffic Department of the Authority. His report in part reads:

> "On October 20, 1953, we checked the volume of passengers for the heaviest direction of travel at the heaviest load points on 22 Surface and 11 Boulevard routes which normally bring in 82% of the Surface revenue. We made a similar type check at the

same location for the same period of time on the first 'Bargain Day' Tuesday, November 3.

"We realized that with the 'Bargain Fare' being offered on Tuesday, that there is some likelihood that riders who might normally shop on Monday or Thursday may select Tuesday as the shopping period. Again, we recognize that many riders in the later part of the morning rush might delay their travel time up to at least 9:30 A.M. to get the advantage of the cut rate, and similarly others might start on their way home before 1:30 P.M. rather than a later time to take advantage of the cut rate. For these two reasons it is apparent that any increase in volume of travel that might develop between 9:30 A.M. and 1:30 P.M. may not necessarily be new travel, but shifted. However, we have assumed on the most optimistic side, that whatever increase we might find at the heavy load points in this mid-day period was new business. Our check data comparing Tuesday, October 20, and Tuesday, November 3, showed an average of 10% increase system-wide.

"On these bases, we have set up our estimate on the three sources of information which I have outlined. We have estimated that the net loss for Tuesday, November 3, was $13,531.00 and that is on the most optimistic side. That was a decrease of 4.6% of revenue for that day."

He further estimated that the loss on the Rapid Transit Division by this test was approximately $3,000.00 per day. For the four Tuesdays, the estimated loss was well in excess of $50,000.00 - - it may have been as high as $65,000.00- -even without considering the rides which were shifted from earlier or later time into the test period. The detailed calculation of November 3rd compared to October 20th on the Surface Division is shown in Addendum A of this chapter.

Similar tests were made in Minneapolis, Covington, Kentucky, Monroe, Michigan, Evanston, Illinois, and Detroit. The results in all those five tests were unsatisfactory. For example, in Minneapolis, where a 50% reduction in fares for college and university students was attempted, it brought

no noticeable increase. Reports on these experiments and their failures may be found in the publication cited in the footnote.*

These experiments serve to verify the conclusion which has been drawn from the graph of Chicago riding that a decrease in rates of fare is not the answer to stopping the fall-off in traffic.

Service

Service and its quality have been referred to by some as having an effect on riding habits. The service in the Chicago area will be analyzed in a subsequent chapter of this study. Actually there has been an enormous improvement in the rolling stock on the CTA in the seven years of its operation. There have been improvements in time and in comfort on the Elevated, which will be referred to in that chapter. The vehicles on the Surface Division have been modernized to the maximum point possible on most of the routes. However, the travel time has not been improved on the Surface, on account of the congested traffic conditions that prevail by reason of growth in the number of automobiles that use the highways.

This also will receive more detailed treatment later in the study.

Should Auto Owners Contribute?

This analysis has shown that the competition of the private automobile has thrown a tremendous burden on public mass transportation- -has been one of the potent factors that make necessary increasing rates of fare.

The daily transportation of the people, who are the instruments of the commercial, industrial and social life of the community, is indispensable to continued progress. Should automobile owners make a contribution?

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* Minneapolis Experiment reported in Passenger Transport issue of January 1, 1954.
Covington, Kentucky, Experiment reported in Passenger Transport issue of March 26, 1954.
Monroe, Michigan, Experiment reported in Passenger Transport issue of April 23, 1954.
Evanston, Illinois, Experiment reported in Passenger Transport issue of September 3, 1954.
Detroit Experiment reported in Passenger Transport issue of September 10, 1954.

One purpose of these studies is to seek solutions. A partial solution is now presented for thought rather than as a matured conclusion:

(a) If every automobile owner would ride the public transportation system twice a week (or better yet, if he or a member of his family would ride it twice a week in the non-peak hours), the aid to public transportation would be very great. (These rides must be in addition to any rides that the auto owner and his family are not taking.) It would mean an increase of CTA gross income of approximately $306,000. per week, or almost 16 million dollars per year. This is almost 15% of the 1954 gross. This would be a helpful factor in meeting increased costs which threaten. It would be a great help in stopping further fare increases. It might even make possible a reduction in fares--just two rides a week by every automobile owner or by a member of his family.

This is not a selfish suggestion offered by management as a means to help overcome its dilemma. Labor union leaders in the transit industry also recognize the threat of competition from the private automobile and its adverse effect on the job security of its members, and certain locals have taken direct and forceful action to present the problem to their membership in an understandable manner, as shown by an article that appeared in the November 12, 1954, issue of Passenger Transport.*

(b) In the alternative, should public officials consider an addition of $20. (that is about 40¢ per week) to the City License to be used exclusively to assist transit operation?

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* Passenger Transport, November 12, 1954.

"Connecticut Ry. & Lighting Co. Union Asks Other Labor Groups To Use Transit

"BRIDGEPORT. - - An appeal to all union members to ride buses once or twice a week, in order to stabilize conditions in the transit business and reduce traffic congestion, was sounded this month by Amalgamated Locals representing employees of the Connecticut Rail - way & Lighting Co.

"A letter signed by Frank J. McGee, president of the C. R. & L. Conference Board of Amalgamated, went out to headquarters of all labor unions located in the area served by the company.

"The text of the letter follows:

"As chairman of the C. R. & L. Employee's Conference Board of the Amalgamated Association of Street, Electric Railway and Motor Coach Employees of America, I would like to call to the attention of the members of your union the desperate situation with which we are faced in the constant and continuing drop in bus riders and the slowly declining employment in our industry.

These two alternatives- -one voluntary and the other involuntary- -are suggested for thought by public-minded citizens who must begin to realize that getting a million people a day to and from work is and will long remain a primary problem and responsibility of the community.

Public reaction to these alternatives is invited. They will then be discussed at greater length in later chapters of this study.

Some Pros and Some Cons

To stimulate thought, some reasons for and against the latter suggestion are made:

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* (Continued)

" 'Since the end of World War II bus riding on the system of the Connecticut Railway and Lighting Co. has dropped almost 42 per cent and it seems to be getting worse instead of better. This has resulted, of course, in curtailment of service on many of our lines and the company has had to lay off a number of union employees for lack of work.

" 'The reason for the decline in business is evident in the number of private cars which have been put on the road since 1945. It is estimated that 235,000 automobiles will be in use on the highway in our territory alone at the end of this year, an increase of over 85 per cent since the end of the war. Car pools as well have taken away a large number of bus riders.

" 'A copy of this letter is going to all of the union organizations in the area serviced by the C. R. & L. system in the hope that an appeal to your members will help to protect the jobs of the operators, mechanics and office workers who rely on the transit industry for a livelihood.

" 'We know that most of your members use private cars to travel back and forth to work and we would like to ask that they use the transit system once or twice a week at least. This would help our problem quite a lot, as well as help to alleviate some of the traffic which is choking downtown areas.

" 'We appreciate your help in this important matter, and would ask that this letter be read to your membership or posted on your bulletin board.' "

Pros

(a) Transportation is a community problem. It should be a unit in itself. The elements which make for the deterioration of public transportation income should contribute toward the maintaining of at least part of the income which they help destroy.

(b) The habitual automobile driver expects to have public transportation available on days when the battery gives out or another member of the family wants the use of the car or when the weather is too bad for automobile driving.*

Mass transportation facilities are a stand-by service to every automobile user. In other utilities, such as telephone, gas and electricity, there is a stand-by charge which must be paid even though no use is actually made of the facility, but in public mass transportation there has historically been no

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* A concrete example of this expectation is best illustrated by the following report of a survey conducted by the United Transit Company of Providence, R. I., that appeared in the November 5, 1954, issue of "Passenger Transport, " a weekly publication by the American Transit Association.

"Residents Ask Bus Line, But Few Would Use It

"Providence, R. I. - - Even though people have petitioned for an extension of bus service, few of them actually intend to use such service regularly after it is established, according to a survey conducted recently by the United Transit Co.

"In response to a request for UTC service in a certain part of the Pawtucket area, the transit company conducted a poll among a cross section of the population that would be served by the requested line.

"The study revealed the prevailing direction of travel to work by head of family, present method of travel to work by head of family, number of garage units in area, preferred shopping locations, number of people now using transit, etc.

"During the survey, 292 families who had signed the petition were interviewed. When these 292 families were questioned 234 or 81 per cent definitely stated they would not be regular riders of the service they were demanding. "

such stand-by charge. Would it not be reasonable to assess a nominal charge of that kind on those who want the transportation available in case of need? *

Contra

(a) The alternative plan throws part of the cost of transportation an those who do not use it. This gets away from a fare which pays for the cost of service.

(b) While the suggested charge is not a general property tax, it is a form of tax, and the plan may be the first step toward a subsidy of public transportation. It is the fervent hope of this writer that subsidy of public transportation through taxation may never become necessary, and in this hope, undoubtedly, many citizens participate.

(c) The wages of those who ride have (in varying ratios) kept pace with the increased cost of transportation. This will be shown in subsequent divisions of the discussion.

As already indicated, these ideas are not a conclusion but are thrown out for consideration and discussion.

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* The Milwaukee Sentinel, on July 29, 1954, reported that Mr. Shepard A. Magidson of the city comptroller's office of that City had reported to the Municipal Public Transportation Study Committee that the City suffers a deficit of $90. for each motor vehicle in the city. If these figures are accurate and apply to Chicago, it could be argued that since the city makes such a contribution to each motorist, it would not be unjust to require him to make a contribution to the general transportation picture.

The Milwaukee calculations will be analyzed to determine their validity. Thereafter, similar calculations may possibly be made with reference to the City of Chicago.

ADDENDUM A

Re: Effect of "Bargain Fare" Tuesday, November 3, 1953, on Net Revenue

ACTUAL RECORDED INCOME AND FARES FOR NOVEMBER 3:

1.	Total Revenue	$ 296,451
2.	Number of 17¢ Tokens	1,034,805
2a.	Revenue from 17¢ Tokens	$ 175,917
3.	10¢ Fares collected 9:30 A. M. to 1:30 P. M.	209,364

DISTRIBUTION OF 10¢ FARE ON NORMAL WEEKDAY AS DETERMINED WEDNESDAY, OCTOBER 14TH:

1.	For Period 9:30 A. M. to 1:30 P. M.	13,821
2.	For balance of day	202,752
3.	Grand Total	216,573

1. INCREASE IN VOLUME OF RIDING BETWEEN 9:30 A.M. and 1:30 P.M.:

System-wide traffic counts at maximum load points covering 82.0% of the operation in the period 9:30 A.M. to 1:30 P.M. on normal days, Tuesday, October 20, and Tuesday, November 3, showed a 10% increase.

2. NEW INCOME ASSUMING NOBODY SHIFTED THEIR TIME OF RIDING:

The 209,364 represents a 10% increase in riding or 110% of normal. The normal riding would be 190,331 and the increase would be 19,033. The new income is 19, 033 x 10¢ - $ 1,903

3. The distribution of riders other than the new 19,033 new riders would be:

(a)	17¢ Token Riders	1,034,805
(b)	10¢ Fare Riders in all periods excepting 9:30 A.M. to 1:30 P.M. on a normal day	202,752
(bb)	10¢ from Riders 9:30 A.M. to 1:30 P.M. on Tuesday, Nov. 3	190,331

		Income from:		
	(c)	20¢ Riders = ($296,451 - 1,903) - (1,034,805 x 17¢ plus) (393,083 x 10¢) =	$	79,323
	(cc)	Number of 20¢ Riders derived from the $79,232 is		396,610
	(d)	Total Riders (excluding increase)		1,824,498
4.	(a)	Income from all riders excepting new riding - (296,451 - 1,903)	$	294,548
	(b)	Riders from income in Item (d) above		1,824,498
	(c)	Average rate of fare for these riders		16.14¢
	(d)	Normal rate of fare on a Wednesday		16.99¢
	(e)	Normal income which could be derived from the 1,824,498 rides at 16.99¢	$	309,982
	(ee)	Actual income derived from this group	$	294,548
	(f)	Loss from these groups =	$	15,434
	(g)	Gain from new rides	$	1,903
	(h)	Net Loss for Day	$	13, 531

Schedule-Traffic Dept.
11-17-53

ADDENDUM B

Re: Number of passengers Entering and Leaving the Central Business District on Cordon Count Check Days Compared with the Number of Total Rides Carried Throughout the Day for Such Check Days on the Boulevard, Other Surface Routes and Rapid Transit Systems for Cordon Count Check Days in May, 1950, 1951, 1952, 1953 and 1954.

The Cordon Counts made in 1950, 1951, 1952, 1953 and 1954 covered the period 7:00 A.M. to 7:00 P.M. In 1944 we made one for the Surface System wherein we covered the period 7:00 A.M. to 11:00 P.M. From spot checks and other information we have been able to estimate the travel between 11:00 P.M. and 7:00 A.M. We have therefore been able to arrive at a ratio of the total number of passengers entering and leaving the Central Business District for the 24 hour period in relationship to the number within the 12 hour check period from 7:00 A.M. to 7:00 P.M. In this manner we have been able to expand the number of passengers entering and leaving the Central Business District for the 12 hour period to a 24 hour basis for each of the five checks for the three systems, Surface, Boulevard and Rapid Transit.

Again, we have been able to estimate the total daily rides on the three systems. Periodic special transfer checks on the Surface System over many years, and even more recently since the take-over of the Boulevard System (October, 1952) together with record of transfer rides on the Boulevard routes previous to October, 1952, have enabled us to estimate total system daily rides on all Surface routes. Actual transfer ride records on the Rapid Transit System have enabled us to estimate total daily rides thereon.

We have then related the expanded total daily rides crossing our loop boundaries on the three systems and have related these figures for the total daily travel, in percentage and have expressed such relationship. It is possible in developing such relationship, especially on the Rapid Transit System, to show as many rides crossing the loop boundaries throughout the day as are carried throughout the whole Rapid Transit System, which situation might lead one to believe that all Rapid Transit riders enter and leave the loop. However, our loop Cordon Counts, for the through riders, show two crossings or rides for each through rider across the loop.

The tabulations (appearing in text of Chapter II) cover the loop Cordon Counts for the years 1950, 1951, 1952, 1953 and 1954. It may be noted that the trend has been for a reduction in proportion of our riders crossing the loop on Surface vehicles and a corresponding increase on the Rapid Transit System.

CHAPTER II - - ADDENDUM B

TOTAL NUMBER OF PASSENGERS ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT COMPARED WITH THE NUMBER OF TOTAL RIDES CARRIED THRU OUT THE DAY

YEARS 1950 THRU 1954

YEAR	SYSTEM	CHECK DATES	Actual Count of Passengers Crossing the Central Business District Boundaries Between 7:00 AM to 7:00 PM Pass. Entering	Pass. Leaving	Estimated Passengers Crossing the Central Business District Boundaries for 24 Hours	Estimated Total Revenue and Transfer Passengers for a Typical day during the Check Period	Percentage of Total Revenue and Transfer Passengers who cross the Central Business District Boundaries Between 7:00 AM To 7:00 PM	Percentage of Total Revenue and Transfer Passengers who cross the Central Business District Boundaries For 24 Hours
1950	Surface	Wed. May 24, Thrus. May 25	177,375	169,947	409,500	3,594,700		
	Boulevard	Tues. May 16, Thurs. May 18, Fri. May 19, Tues. May 23, Wed. May 24, Thurs. May 25, Fri. May 26	76,939	71,276	159,200	341,900		
	Combined Surface and Boulevard Systems		254,314	241,223	568,700	3,936,600	12.59	14.45
	Rapid Transit	Tues. May 23	199,351	188,499	457,200	487,500	79.56	93.78
	Grand Total of all Systems		453,665	429,722	1,025,900	4,424,100	19.97	23.19
1951	Surface	Wed. May 16, Thurs. May 17	156,021	153,888	365,600	3,393,600		
	Boulevard	Tues. May 15, Wed. May 16, Thurs. May 17, Fri. May 18, Tues. May 22, Wed. May 23, Thurs. May 24, Fri. May 25	70,942	63,002	143,800	340,900		
	Combined Surface and Boulevard Systems		226,963	216,890	509,400	3,734,500	11.89	13.64
	Rapid Transit	Tues. May 15	216,288	204,877	496,500	516,300	81.57	96.17
	Grand Total of all Systems		443,251	421,767	1,005,900	4,250,800	20.35	23.66
1952	Surface	Wed. May 14, Thurs. May 15	135,098	128,681	311,000	2,995,200		
	Boulevard	Mon. May 12, Tues. May 13, Wed. May 14, Thurs. May 15	73,211	60,329	143,200	352,400		
	Combined Surface and Boulevard Systems		208,309	189,010	454,200	3,347,600	11.87	13.57
	Rapid Transit		222,743	205,532	504,700	530,300	80.76	95.17
	Grand Total of all Systems		431,052	394,542	958,900	3,877,900	21.29	24.73
1953	Surface	Wed. May 13, Thurs. May 14	125,570	124,014	294,500	2,879,800		
	Boulevard	Tues. May 12, Wed. May 13, Thurs. May 14, Fri May 15	62,796	54,584	126,000	332,600		
	Combined Surface and Boulevard Systems		188,366	178,598	420,500	3,212,400	11.42	13.09
	Rapid Transit	Tues. May 12, Wed May 13	228,853	219,080	528,200	526,000	85.16	100.42
	Grand Total of all Systems		417,219	397,678	948,700	3,738,400	21.80	25.38
1954	Surface	Tues. May 18, Wed. May 19, Fri. May 21	114,425	116,212	272,200	2,666,800		
	Boulevard	Tues. May 18, Wed. May 19, Fri. May 21	61,830	52,651	122,800	329,200		
	Combined Surface and Boulevard Systems		176,255	168,863	395,000	2,996,000	11.52	13.18
	Rapid Transit	Wed. May 19, Thurs. May 20 Fri. May 21	235,877	211,413	526,800	530,900	84.25	99.23
	Grand Total of all Systems		412,132	380,276	921,800	3,526,900	22.47	26.14

Schedule-Traffic Dept.
November 16, 1954

DAILY NUMBERS OF VEHICLES
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO

7: 00 A. M. to 7: 00 P. M.
Comparison by Years – 1926 to Date
(Surveys generally made during the month of May)

Year	Street cars		C.T.A. Buses (1)		Private Autos		Service Vehicles		Taxicabs (2)		Out of Town Buses (3)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	8432	8469			92425	88421	30224	20750					132913	129441
1928	8380	8312			109374	104752	29948	31784					150189	147289
1929	8660	8607			113331	102269	28959	27556					153629	141002
1931	7963	7954			119951	111247	23124	22975					153278	144341
1935	7705	7720			120452	112266	22931	20764					153325	142864
1936	7436	7419			126970	121038	25339	25633					162023	156285
1937	7547	7536			133352	124500	24843	25516					168251	159970
1938	6615	6685			140832	137598	24596	24665			267	186	174636	172226
1939 (4)	6761	6769			144106	137259	25485	25910			262	206	178712	172226
1940	6193	6192			150676	140889	24826	25015			316	262	184062	174434
1941	6171	6163			148213	142540	25591	24892			453	353	182674	176171
1942	6673	6663			126537	116674	21426	21421			442	377	157547	147513
1943	6672	6677			97110	86549	19540	19274			430	386	125946	115027
1944	6209	6216			96574	90166	19079	19445			458	448	124485	118416
1945	5639	5642			100248	94126	11035	11576			481	348	119614	113864
1946 (5)	5845	5861			136001	126392	22525	22434			715	560	167396	157469
1947	6324	6315			140096	129432	21303	20403			1150	1080	171335	159681
1948	6147	6106			153775	144399	23155	23354			939	762	186698	177309
1949	6061	6053			161232	148632	22228	22432			925	825	193139	180626
1950	4363	4361	1220	1194	166272	155188	20790	20982			919	852	196030	185047
1951	3401	3426	1716	1670	171772	160531	22145	21949			931	810	202273	190706
1952 (6)	2190	2209	4850	4825	143577	134808	20204	21925	23321	23288	854	796	194996	187851
1953	1952	1960	4945	4778	147777	134219	21505	21399	25939	25220	1018	1074	203136	188650
1954	1343	1436	5284	5282	156682	140889	22091	20887	28985	27098	730	697	215115	196289

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined totals C. T. A. and C. M. C. buses.
(2) Taxicabs included with private autos prior to 1952.
(3) Includes all buses except Chicago Transit Authority.
(4) Count made in January. Weather - Cloudy - Mean Temp. 22°.
(5) Count made in June due to coal strike and railroad strike.
(6) Count made during period of gasoline refinery strike.

TABLE 2

DAILY NUMBER OF PASSENGERS
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO

7: 00 A. M. to 7: 00 P. M.
Comparison By Years – 1926 to Date
(Surveys generally made during the month of May)

Year	Streetcars		C.T.A. Buses (1)		Subway and Elevated (2)		Railroad		Out of Town Buses (3)		Private Autos (4)		Service Vehicles (5)		Taxicabs (6)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	294958	283967			256286	231230	118857	103225	44391	44878	166367	159157					880859	822547
1928	282013	261041			243594	216241	124107	109310	47472	50234	196873	188554					894059	825380
1929	296690	290592			236575	196988	132723	115996	55161	62264	203996	189084					925145	849924
1931	281312	271007			191540	159469	119742	108290	46500	44187	203916	189120					843010	772073
1935	254258	246048			169690	137223	84251	72595	42465	36449	204760	190852					775694	683167
1936	246781	235391			200212	164845	92144	75367	46812	41171	215849	205765					801798	722539
1937	248946	239388			209590	169111	103505	86885	57106	47996	226868	211651					846015	755031
1938	228236	222754			193005	166855	94208	81311	57270	52235	239414	233917					812133	757031
1939 (7)	235182	228172			205142	174840	99970	87291	54100	48711	244980	233340					839374	757072
1940	213043	201377			191875	169995	100246	87230	63052	53710	256150	239512					824366	772354
1941	208927	201156			191851	158972	103405	90394	67728	57639	251962	242318					823873	750479
1942	200168	186860			192623	179208	116946	102340	78671	67581	215113	198346					803521	734335
1943	219418	209492			212825	187666	139966	119182	77529	64434	165087	147133					814825	727907
1944	201786	193626			206613	189912	146334	122278	77107	64422	164175	153282					796015	723520
1945	209079	199942			212215	193245	148964	127973	77112	68747	170422	160014					817792	749921
1946 (8)	238865	231500			229430	199782	158001	139580	92512	83879	231201	214866					950009	869607
1947	231893	223899			229164	204085	152082	135465	88679	77333	238163	220034					939981	860816
1948	219936	214657			238830	216706	156205	136798	94583	87947	261418	245478					970972	901586
1949	202240	193830			224932	197757	142521	126876	84361	75644	274094	252674					928148	846781
1950	147949	141330	29420	28617	199351	189499	138741	122781	82113	76125	282659	263819					880233	822171
1951	119364	119554	36657	34334	216288	204877	139188	127240	75131	67216	292014	272902	22145	21949			900787	848072
1952 (9)	86538	81628	121771	107382	222753	205532	137191	125683	13372	12073	244081	229174	20204	21925	39649	39590	885559	822987
1953	76141	75264	112225	103550	228853	219080	132678	119303	18871	17472	221665	201329	21505	21399	38909	37830	850847	795227
1954	56294	53776	119961	115087	235877	211413	133022	119849	9802	11132	235023	211333	22091	20887	43477	40647	855547	784124

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined totals C.T.A. and C.M.C. buses.
(2) Includes Chicago Aurora & Elgin Railroad and the Chicago, North Shore & Milwaukee Railroad.
(3) Includes all buses except Chicago Transit Authority.
(4) Passengers per auto and per taxicab considered as 1.8 from 1926 to 1929, 1.7 from 1929 to 1952, and 1.5 in 1953 and 1954.
(5) Service vehicles not included priot to 1951.
(6) Taxicabs included with private autos prior to 1952.
(7) Count made in January. Weather - Cloudy - Mean Temp. 22°.
(8) Count made in June due to coal strike and railroad strike.
(9) Count made during period of gasoline refinery strike.

Cordon Count Data for 1954
Amplified to Include Elevated Cars and Estimated Number of Railroad Cars

	Vehicles In		% of Surface Vehicles	% of All Vehicles	Passengers In	% of Surface Passengers	% of All Passengers	Passengers per Vehicle
Street Cars	1,343		0.62%	0.60%	56,294	11.57%	6.58%	41.91
C. T. A. Buses	5,284		2.46	2.37	119,961	24.65	14.02	22.70
Total Surface Sys.	6,627		3.08	2.97	176,255	36.22	20.60	26.60
Out of Town Buses	730		0.34	0.33	9,802	2.01	1.15	13.43
Private Autos	156,682		72.84	70.21	235,023	48.30	27.47	1.50
Service Vehicles	22,091		10.27	9.90	22,091	4.54	2.58	1.00
Taxicabs	28,985		13.47	12.99	43,477	8.93	5.08	1.50
Total All Surface	215,115		100.00%	96.40	486,648	100.00%	56.88	
Elevated Cars	5,474			2.45	235,877		27.57	43.09
Railroad	2,575	(a)		1.15	133,022		15.55	51.65
Grand Totals	223,164			100.00%	855,547		100.00%	

(a) Estimated at an average of 51.65 passengers per vehicle.

NOTE: Railroad cars are considered to be non-surface operation because they enter the central business district on their own right-of-way by either elevated or under-cut roadbeds and do not contribute to the surface traffic congestion.

Accounting Department,

CHAPTER III

WAGES, FARES AND INFLATION

For Release to Morning Papers of Friday, February 11, 1955 and

All Papers Thereafter

Chicago, February 10 - - - On Chicago Transit Authority Properties, the wage cost per platform hour, including such employe benefits as vacations with pay, premium time, insurance and pensions, is now eight times what it was in 1918 when Chicago last had a five cent fare.

This finding was reported today by Werner W. Schroeder, Vice-Chairman and Member of Chicago Transit Board, in the third chapter of his Transit Research Study, entitled "Wages, Fares and Inflation, " which he released for publication.

During the period reviewed, Mr. Schroeder said, markedly similar increases in the wage cost per platform hour have been experienced by local transit companies throughout the nation.

Today's transit fares, Mr. Schroeder said, reflect not only increased transit wage costs, both direct wages and indirect wages in the form of employe benefits and allowances, but the inflationary economic trend of recent years as well as the harmful and costly effects of unrestricted and unregulated competition from the private automobile.

In 1918, Mr. Schroeder said, the average operator's wage on the old Surface Lines was 35 cents per hour, and 34 cents per hour on the Elevated. Today, he continued, the wage rate is $1.90 per hour on two-man cars, and $2.00 per hour on one-man cars and buses.

While basic rates of pay were increasing during this thirty-seven year period, Mr. Schroeder continued, the additional benefits and allowances to employes were expanding, rising to approximately 94-3/4 cents of the total cost per platform hour. A platform hour, Mr. Schroeder explained, is a revenue producing hour in the operation of a transit vehicle.

Most of the increase in the cost of benefits and allowances, Mr. Schroeder said, has occurred since 1936, when benefits and allowances were costing only 11-1/4 cents per platform hour as against 94-3/4 cents per hour now.

Throughout the 37 years, Mr. Schroeder continued, non-operating employes generally received increases parallel to those granted trainmen, as well as all social benefits.

Mr. Schroeder's study of the cost of benefits and allowances is believed to be the most extensive ever made on the CTA properties.

It disclosed, Mr. Schroeder continued, that the various wage or benefit increases from 1937 to January 1, 1955, computed on the basis of employes working at the time the increase became effective, would have increased operating costs of CTA's properties- -the Surface Lines, the Elevated and the Boulevard System- -by a total of $79,399, 400, had not a substantial part of this total been offset by efficiencies and economies.

In contrast to the sharp increases in wage and benefit costs, Mr. Schroeder continued, the consumer price index for Chicago, prepared by the Bureau of Labor Statistics, only tripled in the forty year period preceding October 31, 1954. It rose from 42.7 in 1914 to 117.7 for October 1954.

In a startling section of the chapter, Mr. Schroeder pointed out that today's fare would be 40 cents or more, not 20 cents, if fares in Chicago had risen by the same 8 to 1 ratio as platform hour operating costs.

Using the average hourly wage paid in all manufacturing industries, Mr. Schroeder calculated that in 1914 a worker's annual local transportation cost, at the rate of 5 cents per ride and two rides per work-day, represented 112 hours of labor.

Today with the fare at 20 cents, Mr. Schroeder continued, only 57-1/2 hours of factory work (at the average hourly rate for all manufacturing industries) is required to purchase a year's local transportation. If the same number of hours had been required in 1954 as were required in 1914, the fare in this calculation would also be 40¢ now instead of 20¢.

Operating economies, plus the fact that other items of operating cost, such as materials and supplies, injuries and damages, and general costs have not increased to the ratio of 8 to 1 account for the fare not being more than 20 cents, Mr. Schroeder said. One item, the cost of borrowed money, he said, is actually lower, since interest rates are lower than they were 40 years ago.

Mr. Schroeder listed the following operational changes as having produced substantial savings:

(a) Change-over to a 40-hour week, making a saving in overtime.

(b) Substitution of one-man vehicles for two-man vehicles in much of the Surface system, reducing operating manpower approximately 37 per cent, and achieving a major reduction in right-of-way maintenance costs.

(c) Use of one-man vehicles on week-ends on routes where two-man vehicles are operated the other five days a week.

(d) Rearrangement of Elevated service, including alternate stop express service. This saving, however, has been in part offset by the necessity of operating the Garfield Branch at ground level on Van Buren Street due to the construction of the Congress Street Highway.

(e) Service adjustments to conform to riding requirements.

(f) Economies effected by modernization, such as new equipment with lower maintenance costs, remote control doors on rapid transit cars, improved shop and garage tools and facilities, and standardization of maintenance procedures.

(g) Economies obtained through consolidation of operating and administrative departments.

Part of the economies are illustrated by the reduction of personnel since the CTA has taken over. The total employes on the CTA at the dates of the respective acquisitions of properties in 1947 and 1952 were 23,368. As of October 1954, the total had been reduced to 16,180 - - a reduction of approximately 30 per cent in the total number of employes. Some of this reduction resulted from service adjustments to meet riding requirements.

This decrease in the number of employes, Mr. Schroeder said, has taken place gradually over the years. Many have resigned to take other employment; a number have retired on pension. The total has been affected to a lesser degree by employe deaths.

Mr. Schroeder pointed out orally that this is probably the biggest orderly reduction in employes that has taken place in any municipal corporation in the State of Illinois, and possibly in the entire United States.

* * * *

CHAPTER III

WAGES, FARES AND INFLATION

The second important phenomenon that has taken place in mass transportation operation has been the increase in wage rates. This, together with other factors such as the fall-off in traffic, has necessitated increases in fares.

Up to November 20, 1918, there was a 5¢ adult fare on both the Surface Lines and the Elevated. During part of that period, namely, from February 1, 1914 to August 1, 1918, the scale of trainmen's wages on two-man cars on the Surface Lines ranged from 23¢ to 39¢ per hour, the average wage during the last year of that period being 35¢ per hour, and on the Elevated the average trainmen's wage ranged from 26¢ to 34¢ per hour, the latter figure being the average during the last year of that period. At the present time, as of January 1,1955, the trainmen's basic wages on two-man cars is $1.90 per hour and on one-man cars and buses, $2.00 per hour.

But in the years intervening since the 5¢ fare other benefits have been won by or granted to those employes amounting to approximately 94-3/4¢ per hour of platform time, as defined on Page 104. Such additional benefits were, with one or two insignificant exceptions, entirely unknown during the 5¢ fare period.

The wage cost per platform hour now is eight times what it was when Chicago last had a 5¢ fare.

The fares have not risen in the same proportion of eight-to-one. This is due to changes in operation, the most important of which is the substitution of one-man for two-man vehicles. The total number of employes of the Authority has declined since the dates of acquisition of the properties by approximately 30%. The economy resulting from that decline in personnel as well as from other changes and economies has prevented the fares from increasing in the same ratio as the wage rate.

Increases in wages have, of course, not been peculiar to the transit industry.

This chapter will deal first with the increases in the basic rate of trainmen's wages, then with the coming of the additional benefits and their cost to the transit rider, and then with a study of the increased cost of living, as indicated by official governmental figures. Also will be included the total dollar cost of various increases in wages and in benefits that have been won or granted during the years.

In passing, it should be stated that on the whole the relations between the labor unions on the one side and the former operating companies and the Transit Authority on the other have been free from rancor and bitterness. Strikes have been a rare occurrence. In fact, there has been no general strike on the surface lines or elevated properties since 1922.

The trend of basic hourly wages on the Surface Lines in the last forty years has been as follows:

RATE SCALE FROM FEBRUARY 1, 1914 - TRAINMEN'S WAGES

SURFACE SYSTEM - TWO MAN CARS

	First Year			Second Year					6th Yr. and	
From	1st 3 Mos.	2nd 3 Mos.	2nd 6 Mos.	1st 6 Mos.	2nd 6 Mos.	3rd Year	4th Year	5th Year	There-after	Night Cars
2- 1-14	$ .23	$ .25	$ .26	$ .27	$ .28	$ .29	$ .30	$ .31	$ .32	Same Rate
6- 1-15	.26	.28	.29	.31	.31	.32	.33	.35		$3.00*
6- 1-16	.27	.29	.30	.32	.32	.33	.34	.36		3.00
6- 1-17	.30	.32	.33	.35	.35	.36	.37	.39		3.25

* (8 hours from 1-1-16)

	First Year				
From	1st 3 Mos.	Next 9 Mos.	2nd Year & Thereafter	Night Cars	
8- 1-18	$ .43	$ .46	$ .48	$4.00	(8 Hrs.)
8- 6-19	.60	.63	.65	.67	
6- 1-20	.75	.78	.80	.82	
8- 6-22	.65	.68	.70	.72	
6- 1-23	.68	.71	.73	.75	
6- 1-24	.70	.73	.75	.77	
6- 1-28	.71	.74	.76	.78	
6- 1-29	.72	.75	.77	.79	
6- 1-32	.65	.68	.70	.72	
6- 1-34	.68	.71	.73	.75	
6- 1-36	.70	.73	.75	.77	
1- 1-37	.72	.75	.77	.79	
6- 1-37	.75	.78	.80	.82	
6- 1-41	.80	.83	.85	.87	
6- 1-42	.89	.92	.94	.96	
6-1- 43	.89	.92	.94	.96	
6- 1-44	.89	.92	.94	.96	
	(.89	.92	.94	Day	Runs
6 -1-45	(.92	.95	.97	P.M.	"
	(.94	.97	.99	Night	"
	(1.09	1.12	1.14	Day	"
3-17-46	(1.12	1.15	1.17	P.M.	"
	(1.14	1.17	1.19	Night	"

	First Year				
	1st	Next	2nd Year &		Night
From	3 Mos.	9 Mos.	Thereafter		Cars
	($1.27	$1.30	$1.32	Day	Runs
5-25-47	(1.30	1.33	1.35	P.M.	"
	(1.32	1.35	1.37	Night	"
	(1.38	1.41	1.43	Day	"
6-1-48	(1.41	1.44	1.46	P.M.	"
	(1.43	1.46	1.48	Night	"
	(1.40	1.43	1.45	Day	"
12- 1-48	(1.43	1.46	1.48	P.M.	"
	(1.45	1.48	1.50	Night	"
	(1.45	1.48	1.50	Day	"
6- 1-49	(1.48	1.51	1.53	P.M.	"
	(1.50	1.53	1.55	Night	"
	(1.50	1.53	1.55	Day	"
12- 1-49	(1.53	1.56	1.58	P.M.	"
	(1.55	1.58	1.60	Night	"
	(1.55	1.58	1.60	Day	"
6-1-50	(1.58	1.61	1.63	P.M.	"
	(1.60	1.63	1.65	Night	"
	(1.63	1.66	1.68	Day	"
8- 1-51	(1.66	1.69	1.71	P.M.	"
	(1.68	1.71	1.73	Night	"
	(1.69	1.72	1.74	Day	"
1- 1-52	(1.72	1.75	1.77	P.M.	"
	(1.74	1.77	1.79	Night	"
	(1.67	1.70	1.72	Day	"
4- 1-52	(1.70	1.73	1.75	P.M.	"
	(1.72	1.75	1.77	Night	"
	(1.71	1.74	1.76	Day	"
6- 1-52	(1.74	1.77	1.79	P.M.	"
	(1.76	1.79	1.81	Night	"
	(1.74	1.77	1.79	Day	"
7- 1-52	(1.77	1.80	1.82	P.M.	"
	(1.79	1.82	1.84	Night	"

	First Year				
	1st	Next	2nd Year &		Night
From	3 Mos.	9 Mos.	Thereafter		Cars
	($1.76	$1.79	$1.81	Day	Runs
10- 1-52	(1.79	1.82	1.85	P.M.	"
	(1.81	1.84	1.86	Night	"
	(1.75	1.78	1.80	Day	"
1- 1-53	(1.78	1.81	1.83	P.M.	"
	(1.80	1.83	1.85	Night	"
	(1.73	1.76	1.78	Day	"
4- 1-53	(1.76	1.79	1.81	P.M.	"
	(1.78	1.81	1.83	Night	"
	(1.77	1.80	1.82	Day	"
6- 1-53	(1.80	1.83	1.87	P.M.	"
	(1.82	1.85	1.87	Night	"
	(1.79	1.82	1.84	Day	"
1- 1-54	(1.82	1.85	1.87	P.M.	"
	(1.84	1.87	1.89	Night	"
6- 1-54	(1.83	1.86	1.88	Day	"
	(1.86	1.89	1.91	P.M.	"
	(1.88	1.91	1.93	Night	"
	(1.85	1.88	1.90	Day	"
1- 1-55	(1.88	1.91	1.93	P.M.	"
	(1.90	1.93	1.95	Night	"

The wage scale of one-man cars and on one-man buses has been higher, varying from 8¢ to 10¢ per hour additional on one-man operation whether on streetcar, motor bus or trolley coach.

The history of the one-man car operators' scale since 1921 is summarized as follows:

RATE SCALE - ONE MAN CAR OPERATORS

One Man Cars - Surface System

	First Year				
	1st	Next	2nd Year &		Night
From	3 Mos.	9 Mos.	Thereafter		Cars
3- 1-21	$.825	$.858	$.88		$ -
8- 6-22	.725	.758	.78		-
6- 1-23	.755	.788	.81		.83
6- 1-24	.775	.808	.83		.85
6- 1-25	.78	.81	.83		.85
6- 1-28	.79	.82	.84		.86
6- 1-29	.80	.83	.85		.87
6- 1-32	.73	.76	.78		.80
6- 1-34	.76	.79	.81		.83
6- 1-36	.78	.81	.83		.85
1- 1-37	.80	.83	.85		.87
6- 1-37	.83	.86	.88		.90
6- 1-41	.88	.91	.93		.95
6- 1-42	.97	1.00	1.02		1.04
	(.97	1.00	1.02	Day	Runs
6- 1-45	(1.00	1.03	1.05	P.M.	"
	(1.02	1.05	1.07	Night	"
	(1.19	1.22	1.24	Day	"
3-17-46	(1.22	1.25	1.27	P.M.	"
	(1.24	1.27	1.29	Night	"
	(1.37	1.40	1.42	Day	"
5-25-47	(1.40	1.43	1.45	P.M.	"
	(1.42	1.45	1.47	Night	"
	(1.48	1.51	1.53	Day	"
6- 1-48	(1.51	1.54	1.56	P.M.	"
	(1.53	1.56	1.58	Night	"
	(1.50	1.53	1.55	Day	"
12-1-48	(1.53	1.56	1.58	P.M.	"
	(1.55	1.58	1.60	Night	"

	First Year				
	1st	Next	2nd Year &		
From	3 Mos.	9 Mos.	Thereafter		
	($1.55	$1.58	$1.60	Day	Runs
6-1-49	(1.58	1.61	1.63	P.M.	"
	(1.60	1.63	1.65	Night	"
	(1.60	1.63	1.65	Day	"
12-1-49	(1.63	1.66	1.68	P.M.	"
	(1.65	1.68	1.70	Night	"
	(1.65	1.68	1.70	Day	"
6-1-50	(1.68	1.71	1.73	P.M.	"
	(1.70	1.73	1.75	Night	"
	(1.73	1.76	1.78	Day	"
8-1-51	(1.76	1.79	1.81	P.M.	"
	(1.78	1.81	1.83	Night	"
	(1.79	1.82	1.84	Day	"
1-1-52	(1.86	1.85	1.87	P.M.	"
	(1.88	1.87	1.89	Night	"
	(1.77	1.80	1.82	Day	"
4-1-52	(1.80	1.83	1.85	P.M.	"
	(1.82	1.85	1.87	Night	"
	(1.81	1.84	1.86	Day	"
6-1-52	(1.84	1.87	1.89	P.M.	"
	(1.86	1.89	1.91	Night	"
	(1.84	1.87	1.89	Day	"
7-1-52	(1.87	1.90	1.92	P.M.	"
	(1.89	1.92	1.94	Night	"
	(1.86	1.89	1.91	Day	"
10-1-52	(1.89	1.92	1.94	P.M.	"
	(1.91	1.94	1.96	Night	"
	(1.85	1.88	1.90	Day	"
1-1-53	(1.88	1.91	1.93	P.M.	"
	(1.90	1.93	1.95	Night	"
	(1.83	1.86	1.88	Day	"
4-1-53	(1.86	1.89	1.91	P.M.	"
	(1.88	1.91	1.93	Night	"

	First Year				
	1st	Next	2nd Year &		
From	3 Mos.	9 Mos.	Thereafter		
	($1.87	$1.90	$1.92	Day	Runs
6-1-53	(1.90	1.93	1.95	P.M.	"
	(1.92	1.95	1.97	Night	"
	(1.89	1.92	1.94	Day	"
1-1-54	(1.92	1.95	1.97	P.M.	"
	(1.94	1.97	1.99	Night	"
	(1.93	1.96	1.98	Day	"
6-1-54	(1.96	1.99	2.01	P.M.	"
	(1.98	2.01	2.03	Night	"
	(1.95	1.98	2.00	Day	"
1-1-55	(1.98	2.01	2.03	P.M.	"
	(2.00	2.03	2.05	Night	"

A somewhat similar though not identical wage scale on trolley coaches and on motor buses has been in effect for approximately the same periods as shown in the foregoing one-man car operators' scale.*

* Further details as to the wages of two-man and one-man operation, together with historical data regarding the origin of the increases, whether by strike, arbitration or agreement, as well as similar data concerning the Elevated wage scales and the wage scales on the Chicago Motor Coach appear in a volume entitled Research Data. (Volume III)

But the basic wage is only part of the story. In addition the operator receives allowances and benefits which increase the cost substantially. In 1936 such allowances and benefits cost the rider approximately 11-1/4¢ per platform hour. By October 1954, this hourly cost had risen to approximately 94-3/4¢.

In approaching this part of the study, it is well to bear in mind the definition of "Platform Hour." The platform hours are the productive hours, representing that part of the time during which the motorman or driver is actually at the controls and operating a vehicle, plus terminal time when the operator is still responsible for the safekeeping of the vehicle. In other words, platform hours are in the main the revenue producing hours. A further amplification appears in the footnote.*

* Scheduled pay hours fall into two general classifications, viz., productive hours and non-productive hours.

Platform hours are the productive hours, representing that portion of scheduled hours during which the motorman or driver is actually at the controls and operating a vehicle, plus terminal time when the operator is still responsible for the safekeeping of the vehicle assigned to him.

Other scheduled hours are non-productive hours that must be paid in conformity with union contractual agreements which provide payment for report and turn-in time, travel time to relief points, fall-back time (usually used for meal time), meal relief, overtime penalty for scheduled hours in excess of 8 hours per day, spread penalty for scheduled hours in excess of a prescribed maximum overall time required to complete a day's work, currently 10-1/2 hours, bonus time to make 8 hours per day if a full day's work cannot be scheduled.

Some transportation companies consider fall-back time to be terminal time, a part of platform hours, because the vehicle is parked and in custody of the operator, but the CTA annual reports for the years 1949 to date show fall-back time to be a part of non-productive hours and will be so considered in these data.

The detailed table about to be presented covers the time from the beginning of 1936 to October 1, 1954, inclusive. The term "platform time" and the figures opposite those words indicate the mean average wage paid to trainmen (motormen, conductors and operators).

The total cost to the Authority (and the predecessor companies) for allowances, benefits and other duties is then spread over the actual platform hours to determine the cost of these items per platform hour.

It will be noted that since 1936, the total cost of wages and supplements per platform hour has increased by something in excess of $2.01. Percentagewise this is an increase of 233% during that period of time.

At the end of the period, on October 1, 1954, the total cost per platform hour was $2.87- 3/4 per hour. On January 1, 1955, there was an increase of 2¢ per hour in the basic wage, so that as of that date, the cost per platform hour was about $2.90.

The basic wage, as well as the cost of allowances, benefits and pay for other duties is summarized and analyzed in the following table:*

* Prepared by Mr. C. B. North, Assistant Comptroller, CTA.

CHICAGO TRANSIT AUTHORITY (SURFACE SYSTEM) AND CHICAGO SURFACE LINES

COST PER PLATFORM HOUR OF TRAINMEN'S WAGES, ALLOWANCES, BENEFITS AND OTHER DUTIES
(BASED ON CERTAIN DIRECT CHARGES, MONTHLY PERCENTAGES OF SCHEDULE "ALLOWANCES" AND APPLICABLE BENEFITS)

YEARS 1936 THRU 1953 AND FIRST 9 MONTHS OF 1954

	1st 9 Months of 1954	1953	1952	1951	1950	1949	1948	1947	1946	1945	1944	1943	1942	1941	1940	1939	1938	1937	1936	1954 Increase over 1936 Cost per Hour	1954 Increase over 1936 Percent
PLATFORM TIME	$1.9300	$1.8745	$1.8191	$1.6688	$1.6111	$1.5081	$1.3981	$1.2391	$1.0934	$ .9549	$ .9466	$ .9439	$ .8536	$ .8384	$ .8058	$ .8062	$ .8068	$ .7955	$ .7507	$1.1793	157%
ALLOWANCES:																					
REPORT AND TURN IN	.1213	.0913	.0935	.0723	.0620	.0509	.0701	.0600	.0523	.0442	.0443	.0435	.0387	.0372	.0354	.0354	.0356	.0346	.0322	.0891	277
FALLBACK	.0083	.0083	.0099	.0093	.0093	.0085	.0145	.0149	.0142	.0144	.0137	.0113	.0099	.0094	.0095	.0095	.0097	.0099	.0095	(.0012)	(13)
MEAL RELIEF	.0195	.0145	.0151	.0130	.0108	.0077	.0119	.0103	.0080	.0051	-	-	-	-	-	-	-	-	-	.0195	*
TRAVELING	.0410	.0246	.0250	.0194	.0178	.0163	.0211	.0158	.0113	.0091	.0087	.0082	.0070	.0068	.0065	.0066	.0066	.0061	.0057	.0353	619
BONUS TO MAKE 8 HOUR DAILY GUARANTEE	.0589	.0715	.0698	.0639	.0716	.0660	.0633	.0529	.0510	.0375	.0367	.0438	.0366	.0235	.0194	.0202	.0209	.0164	.0119	.0470	395
WEEKLY MINIMUM GUARANTEE	.0001	-	-	-	.0001	.0007	-	-	-	-	-	-	-	-	-	-	-	-	-	.0001	*
PREMIUM AFTER 10-1/2 OR MORE HOURS	.0739	.0654	.0632	.0619	.0582	.0527	.0517	.0463	.0431	.0187	-	-	-	-	-	-	-	-	-	.0739	*
OVERTIME - SCHEDULED	.0509	.0356	.0319	.0278	.0229	.0196	.0190	.0181	.0166	.0176	.0137	.0087	.0073	.0087	.0085	.0080	.0076	.0075	.0020	.0489	2,445
OVERTIME - NOT SCHEDULED	.0019	.0032	.0024	.0056	.0042	.0022	.0116	.0137	.0034	.0077	.0078	.0042	.0069	.0057	.0047	.0055	.0061	.0044	.0040	(.0021)	(53)
NIGHT CAR EXTRA	.0159	.0148	.0156	.0159	.0158	.0157	.0161	.0158	.0158	.0049	.0012	.0011	.0012	.0012	.0012	.0013	.0013	.0012	.0012	.0147	1,225
SECOND RUNS PENALTY	.0079	.0164	.0060	.0060	.0043	.0015	.0026	.0040	.0029	.0094	.0092	-	-	-	-	-	-	-	-	.0079	*
40 Hour Week Premium	.0429	.0807	.0595	.0519	.0490	.0925	.1143	.0968	.0788	.0749	.0463	.0271	-	-	-	-	-	-	-	.0429	*
VACATIONS	.1204	.0936	.1074	.1244	.0947	.1095	.0872	.0646	.0631	.0453	.0438	.0475	.0311	.0307	.0192	.0193	.0212	.0156	-	.1204	*
ALLOWANCE FOR HOLIDAY NOT WORKED	.0135	.0145	.0180	.0151	.0111	-	-	-	-	-	-	-	-	-	-	-	-	-	-	.0135	*
HALF TIME FOR HOLIDAY WORKED	.0068	.0075	.0078	.0079	.0080	.0089	-	-	-	-	-	-	-	-	-	-	-	-	-	.0068	*
Seven Day Sick Pay	.0173	.0164	.0183	.0167	.0155	.0156	.0160	.0156	.0105	.0107	.0076	.0044	-	-	-	-	-	-	-	.0173	*
INSTRUCTING STUDENTS	.0009	.0005	.0005	.0009	.0005	.0005	.0006	.0007	.0013	.0011	.0005	.0015	.0007	.0001	.0001	-	-	.0001	.0001	.0008	800
TOTAL ALLOWANCES	.6014	.5588	.5439	.5120	.4558	.4688	.5000	.4295	.3723	.3006	.2335	.2013	.1394	.1233	.1045	.1058	.1090	.0958	.9666	.5348	803
OTHER DUTIES:																					
SNOW TIME	.0052	.0044	.0029	.0069	.0074	.0017	.0031	.0031	.0037	.0008	.0018	.0004	.0012	.0002	.0007	.0003	.0023	.0004	.0010	.0042	420
FLAGGING, SWITCHING, STARTING	.0061	.0158	.0099	.0139	.0172	.0140	.0190	.0200	.0201	.0185	.0186	.0125	.0064	.0045	.0035	.0032	.0022	.0027	.0027	.0034	126
STREET COLLECTORS	.0139	.0114	.0075	.0042	.0033	.0024	.0020	.0020	.0020	.0019	.0012	.0008	.0005	.0004	.0004	.0005	.0005	.0005	.0005	.0134	2,680
ACCIDENT REPORTS	.0020	.0018	.0020	.0022	.0020	.0018	.0019	.0019	.0017	.0013	.0012	.0014	.0015	.0015	.0014	.0013	.0013	.0014	.0013	.0007	54
WITNESS TIME	.0025	.0020	.0020	.0021	.0023	.0021	.0017	.0018	.0015	.0013	.0012	.0012	.0012	.0015	.0015	.0016	.0016	.0014	.0013	.0012	92
STUDENT COMPENSATION	.0191	.0119	.0080	.0109	.0047	.0036	.0081	.0080	.0132	.0115	.0025	.0024	.0012	-	-	-	-	-	-	.0191	*
TOTAL OTHER DUTIES	.0488	.0473	.0323	.0402	.0369	.0256	.0358	.0368	.0422	.0353	.0265	.0187	.0120	.0081	.0075	.0069	.0079	.0964	.0968	.0420	618
TOTAL PAID TRAINMEN	2.5802	2.4806	2.3953	2.2210	2.1038	2.0025	1.9339	1.7054	1.5079	1.2908	1.2066	1.1639	1.0050	.9698	.9178	.9189	.9237	.8977	.8241	1.7561	213
BENEFITS:																					
RETIREMENT PLAN	.1740	.1453	.1183	.1020	.0726	.0421	.0155	.0149	.0138	.0081	.0075	.0073	.0081	.0057	-	-	-	-	-	.1740	*
SOCIAL SECURITY	.0473	.0272	.0299	.0304	.0159	.0160	.0147	.0274	.0297	.0266	.0232	.0237	.0439	.0459	.0438	.0445	.0447	.0326	-	.0473	*
GROUP LIFE INSURANCE PREMIUM	.0044	.0080	.0073	.0096	.0083	.0072	.0098	.0107	.0116	.0082	.0088	.0065	.0076	.0099	.0121	.0112	.0111	.0096	.0095	(.0051)	(54)
GROUP HEALTH AND ACCIDENT INSURANCE PREMIUMS	.0084	.0068	.0073	.0054	.0098	.0087	.0092	.0095	.0095	.0090	.0095	.0074	.0086	.0089	.0106	.0075	.0081	.0086	.0087	(.0003)	(3)
GROUP HOSPITALIZATION INSURANCE PREMIUMS	.0045	.0042	.0046	.0030	.0056	.0048	.0043	.0051	.0052	.0047	.0042	.0053	-	-	-	-	-	-	-	.0045	*
FREE TRANSPORTATION	.0587	.0430	.0569	.0527	.0482	.0347	.0351	.0268	.0247	.0245	.0235	.0241	.0240	.0223	.0223	.0225	.0230	.0217	.0213	.0374	176
TOTAL BENEFITS	.2973	.2345	.2243	.2031	.1604	.1135	.0886	.0944	.0945	.0811	.0767	.0743	.0922	.0927	.0888	.0857	.0869	.0723	.0395	.2578	653
TOTAL OPERATORS' WAGES, ALLOWANCES, BENEFITS AND OTHER DUTIES	$2.8775	$2.7151	$2.6196	$2.4241	$2.2642	$2.1160	$2.0225	$1.7998	$1.6024	$1.3719	$1.2833	$1.2382	$1.0972	$1.0625	$1.0066	$1.0046	$1.0106	$.9700	$.8636	$2.0139	233%
INCREASE OVER PLATFORM BASE RATE	$.9475	$.8406	$.8005	$.7553	$.6531	$.6079	$.6244	$.5607	$.5090	$.4170	$.3367	$.2943	$.2436	$.2241	$.2008	$.1984	$.2038	$.1745	$.1129		
PERCENT OF INCREASE	49.1%	44.8%	44.0%	45.3%	40.5%	40.3%	44.7%	45.3%	48.8%	43.7%	35.6%	31.2%	28.5%	26.7%	24.9%	24.6%	25.3%	21.9%	15.0%		
PLATFORM HOURS	9,970,241	14,562,025	13,553,007	15,778,654	17,424,420	19,649,640	20,783,263	22,004,419	21,718,269	20,763,831	22,128,321	22,927,201	21,601,186	20,536,506	20,164,306	19,968,633	20,329,435	22,248,878	22,183,236		

* Benefits Gained since 1936

( ) Denotes Red Figures

The meaning of the various allowances, benefits and special duty pay enumerated in the foregoing statement can more readily be understood by the following glossary, which in laymen's language attempts to interpret the meaning of the various provisions of the labor contracts:

Report and Turn-in Time. This is pay time for work before and after operation of a vehicle. For example, before beginning his run, the operator must pick up his run plate, trip sheet, and transfers, and perform other prelimary duties. At the end of the run the operator must turn in the run plate, his unused transfers, the fares collected and his trip sheet which records these fares, and other pertinent data relating to his day's work. These allowances vary according to job classification of trainmen on various types of vehicles.

Fallback is a device for allowing an operator to have a meal period. The operator takes his vehicle out of service (falls back) for, say, 25 minutes, eats his meal on the vehicle and then goes back in service. The fallback period is counted as working time and paid for.

Meal Relief provides the operator with a meal period by having another operator relieve him on the vehicle at a specified relief point. After finishing his meal, the operator then relieves another operator and continues his run. The meal relief period is not paid for except on Sundays and holidays.

Travel Time is time paid for travel to and from another location and the man's regular home station. For example, an operator instead of reporting to his regular station may be required to relieve another operator at some point distant from the regular station. He is allowed travel time to that point.

Bonus to Make 8 Hour Guarantee. Runs cannot be scheduled to exactly 8 hours. Some exceed 8 hours and some are less, depending on service requirements. The man whose schedule comes to less than 8 hours must nevertheless be paid for 8 hours because of the minimum guarantee, and the amount thus paid to make up the 8 hours is called bonus.

Weekly Minimum Guarantee. This is concerned primarily with extra men who are guaranteed a 40 hour week. If there is not enough work for the extra men to make a 40 hour week, they must nevertheless be paid for the full 40 hours, provided they fulfull all other requirements.

Premium After 10-1/2 or More Hours. Some runs are spread in two parts with a break between. This permits an operator to work during both A. M. and P. M. rush periods when his services are most needed without working more than approximately 8 hours. Such a run is called a spread or swing run. If the total time from beginning to end is more than 10-1/2 hours, a "spread time" premium of one-half time is paid for the time over 10-1/2 hours, but in no case may the spread time exceed 13 hours.

Overtime - - Scheduled. Some runs, because of service requirements, are

scheduled to exceed 8 hours. The portion over 8 hours is paid at the rate of time and one-half.

Overtime--Not Scheduled. Overtime resulting from breakdowns, traffic or weather conditions and other delays is unscheduled overtime. Also included in this overtime is work performed by men who for some reason or other work more than five days a week.

Night Car Extra. This is a premium paid for working a night run; 3¢ per hour if the run is scheduled to finish between 8:00 P. M. and 2:00 A. M.; 5¢ per hour if the run is scheduled to finish after 2:00 A. M.

40 Hour Week Premium. Time and one-half is paid for all work done on days in excess of 5 days per week. This is the so-called weekly overtime and should not be confused with daily overtime, which is paid for the time worked in excess of 8 hours in any one day. Daily and weekly overtime are not duplicated.

Vacation Allowance. This is the amount actually paid an employe for the time he is on vacation. Since each operator must be replaced while he is on vacation, vacations result in additional cost.

Allowance for Holiday not Worked. Five holidays a year are "paid holidays. Those who would have been scheduled to work had it not been a holiday are paid 8 hours even though they do no work.

Premium Time for Holiday Worked. An employe who works on a "paid holiday" receives time and one-half for all time worked on that day. The one-half time is a premium.

7 Day Sick Pay. An employe absent due to sickness or accident is paid his regular wages for the first 7 working days. When an operator is sick he must be replaced on the vehicle and thus this is an additional cost.

Instructing Students. The wage agreement provides that operators shall be paid $1. per day additional while instructing students.

Snowtime. This is pay for work done in operating snow equipment which is work that has to be done so that the vehicles may be operated during and following a snow storm.

Flagging, Switching, Starting. This is time paid for these operations which also are necessary to the operation of the vehicles.

Street Collectors. This is pay for work done in collecting fares on the street at points of heavy concentrations of patrons and is chargeable to the operation of the vehicles since normally fare collection is made on the vehicles.

Accident Reports. An operator is paid for actual time spent in making out

reports of accidents or incidents occurring on his run.

Witness Time. Operators are paid for time which they spend in connection with the trial of a lawsuit in which the Authority is a party.

Student Compensation. A new employe is paid during a 15 day "break-in" period provided he qualifies. This rate is 10¢ less than the two-man rate established for the first three months of service.

Benefits. These are payments made by the Authority for the benefit of the employees with respect to (a) the Authority's retirement plan, and (b) the group, life, sickness and accident, and hospital and surgical insurance programs, and (c) Social Security. Free transportation is also included as a benefit, and its cost is measured.

The growth of so-called fringe benefits was studied by the Chamber of Commerce of the United States, and the results of the study are reported in a booklet issued in 1954 by the Economic Research Department of that organization. It is entitled "Fringe Benefits 1953". A copy is included in Research Data Volume III.

Overall Costs in Dollars

The tables given have referred to Surface System trainmen only. In general, the wages of all other employees have increased across the board with those of trainmen, i.e., the same number of cents per hour increase, and all allowances and benefits enjoyed by trainmen (except for those specifically peculiar to trainmen, such as report and turn-in, fallback, meal relief, travel time and premium after 10-1/2 or more hours) have been extended to them. While the situation is not always mathematically the same among various classes of employees, the general tendency has been in the same direction.

The dollar cost of each wage increase, plus the additional benefits, has been estimated for the period from 1937 to January 1, 1955. These estimates are based on the assumption that the wage or benefit increase applies to all employes working in the various classifications at the time the new rate or benefit became effective. The estimated annual cost of each wage settlement is summarized as follows:*

* The detailed analysis of this estimated cost is in Research Data. Volume III.

Estimated Annual Cost of Each Wage Settlement - - 1937
to January 1, 1955, Inclusive

(Surface System)

Date	Total Annual Cost
6/1/37	$ 1, 808,000
6/1/41	2,487,000
6/1/42	4,153,000
6/1/43	2,708,000
6/1/44	3,622,000
6/1/45	1,049,000
1/1/46)	
3/17/46)	8,501,000
6/1/46)	
2/1/47)	8,251,000
5/25/47)	
1/1/48)	
3/1/48)	6,405,000
6/1/48)	
12/1/48)	
6/1/49)	5,335,000
12/1/49)	
6/1/50	2,962,000
8/1/51	3,534,000
1/1/52)	
6/1/52)	4,085,000
7/1/52)	
10/1/52)	
1/1/53)	1,042,500
4/1/53)	
6/1/53)	
1/1/54)	
5/2/54)	2,511,800
6/1/54)	
1/1/55	604,600
Total Surface System	59,058,900

(Rapid Transit System)

Date	Total Annual Cost
6/1/37	$ 443,000
6/1/41	798,400
6/1/42	960,000
6/1/43	433,000
6/1/44	579,500
6/1/45	81,000
1/1/46) 3/17/46) 6/1/46)	2,444,000
2/1/47) 2/25/47)	2,741,700
1/1/48) 3/1/48) 6/1/48) 12/1/48)	2,314,500
6/1/49) 12/1/49)	1,504,200
6/1/50	831,500
8/1/51	963,500
1/1/52) 6/1/52) 7/1/52) 10/1/52)	1,245,000
1/1/53) 4/1/53) 6/1/53)	307,400
1/1/54) 3/29/54) 5/10/54) 6/1/54)	702,400
1/1/55	175,100
Total Rapid Transit System	16,524,200

(Chicago Motor Coach Company)

Date	Total Annual Cost
1/1/37)	$ 193,400
4/12/37)	
6/13/37)	
6/20/37)	
1/1/38	18,500
1/1/39	18,500
7/1/40)	
11/28/40)	25,500
1/1/41)	
3/31/41)	206,300
5/1/41)	
8/10/41)	
7/5/42)	
9/4/42)	306,600
9/27/42)	
11/29/42)	
1/1/43)	169,600
9/25/43)	
9/29/45	170,200
10/2/46)	684,800
12/1/46)	
2/23/47)	
7/1/47)	576,800
7/15/47)	
8/20/48)	382,600
12/1/48)	
1/1/49)	
1/18/49)	292,600
8/20/49)	
12/1/49)	
8/20/50	155,700
1/1/51)	
10/7/51)	305,200

(Chicago Motor Coach Company, Continued)

Date	Total Annual Cost
1/1/52 to 3/31/52)	
4/1/52 to 6/30/52)	
7/1/52 to 9/30/52)	$ 310,000
1/1/52)	
2/10/52)	
7/6/52)	
Total Chicago Motor Coach Co.	$ 3,816,300
System Grand Total	$79,399,400

While the increased cost on account of the various wage increases from 1937 to the present would have totaled over 79 million dollars, nevertheless, the actual cost did not increase this much because of changes in operations, service adjustments, personnel reductions and other economies put into effect by the Transit Authority and Predecessor Companies during these years. These will be referred to later in this chapter and developed more fully in a subsequent part of this study.

Wages on Other Properties

Metropolitan Chicago, with its stable, diversified and ever-expanding industrial activity, generally absorbs all available workers in the competitive labor market. Consequently wages in the area historically are among the highest in the nation. However, over the past fifteen years we have witnessed a most unusual expansion of industrial growth in all sections of the nation, creating jobs and bringing good wages to nearly every state, with the result that the competitive labor market has become national in scope rather than sectional, and we now find a fairly even pattern of wages for like work from coast to coast and from north to the industrialized south. As a result of this unprecedented demand for labor, we find that areas which formerly had an overabundance of labor and low prevailing wage rates have, in more recent years, experienced the same problem that Chicago transportation has had to meet, with the result that transit wages in some areas have skyrocketed as much as 60% within the past 7 years.

Supplemental Benefits in Other Cities.

The Accounting Department of CTA has made a study of the allowances and benefits on fourteen other properties. It is probable that CTA has a more generous setup in this respect than most of the cities and that it operates under

difficulties which are not generally present in other cities because of the larger area served in Chicago and the long possible ride for one fare in this city. The report covering these benefits in these other cities is summarized as follows:

"As a member of the Chicago Transit Board, the writer has had available to him a confidential summary of wage rates, allowances and benefits enjoyed by employes of a representative cross-section of the transit industry and related statistical data for the 15 companies under review, 5 of which are publicly owned and operated, which indicate these conclusions.

"This summary shows that the 25 kinds of allowances and benefits paid by C. T. A. in addition to platform time follow a pattern which is common to the industry. Ten of these 25 allowances are paid by all 15 companies under review; 20 or more (average of 22.4) are paid by 13 of the 15 companies; and C. T. A. pays no benefits or allowances that are not paid by at least 5 of the other companies.

"It must be understood that there are variations in rules and regulations and remuneration in the determination of specific benefits by the respective companies, but in the aggregate it appears that the annual benefits per employe, in relationship to wage rates, would be approximately the same for each of the companies.

"A study of the statistical data reveals several reasons why C. T. A. is faced with disadvantageous operational problems not common to the industry, viz.:

1. C. T. A. serves a city area of 209 square miles whereas next largest of the cities under review has an area of 173 square miles.

2. The longest possible ride, without transfer, for a basic single fare on C. T. A. is 25.25 miles, whereas the nearest approach to this unusual distance among the cities under review is 17.63 miles in a city of over two million population, while in another city of nearly one million population the longest distance is only 10.8 miles - - all three companies have a 20¢ fare.

3. Due to traffic congestion and operating conditions the scheduled speed (excluding layover) in Chicago is 11.43 M.P. H., the slowest of all companies under review with the exception of three, and these companies enjoy what might be termed short haul service as compared to C. T. A. - - their longest possible ride without transfer for a single fare being 6.63, 10.0 and 10.8 miles, respectively, as contrasted to C. T. A's 25.25 miles."

Consumer Price Index

Wages in the transit industry have increased since 1914 at a greater rate and at a greater percentage than has the consumer price index. The figures issued by the United States Department of Labor, Bureau of Labor Statistics, indicate that at the end of 1914 the consumer price index for Chicago stood at 42.7. By the end of 1918 when the 5¢ fare came to an end, the index had risen to 69.9. Since that time it has in general risen, although there have been periods of a declining index. At the end of October 1954, the index stood at 117.1. This is slightly less than twice its status at the end of 1918 and slightly less than three times the figure as it stood at the end of 1914.

The index for the United States as a whole issued by the same authority goes back to 1913. Roughly it is comparable to that of the index in Chicago. At the end of October 1954, the national index stood at 114.5.

Thus we find that between the period December 1914 to October 1954, the consumer price index for Chicago has risen to a ratio of approximately three-to-one while the cost per platform hour has risen to a ratio of eight-to-one.

These two indices for Chicago and the United States are attached to this Chapter as Exhibit A.

No - - Not a 40¢ Fare

It has been noted that the labor cost per platform hour has increased to an eight-to-one ratio since the time when Chicago last had a 5¢ fare. If the fare had increased in the same ratio as the labor costs per platform hour, the fare would now be 40¢, but as we all know, it is not.

Another interesting comparison is based upon the figures of the United States Department of Labor, Bureau of Labor Statistics, which reports that the average hourly wage rate of all production and non-supervisory workers in all manufacturing industries was 22.3¢ per hour in 1914. By August 1954, that average hourly wage had increased to $1.74. If we were to use the base of 250 working days, we arrive at the following annual cost of transportation to and from work in the years 1914 and 1954, respectively, expressed in hours of labor necessary to purchase this necessary service. This computation is as follows:

	1914	1954
Annual fares payable for one round trip per day	500	500
Adult fare in effect	5¢	20¢
Annual cost of transportation	$25.00	$100.00
Average hourly wage in all manufacturing industries	22.3¢	$ 1.74
Hours of labor required to purchase annual transportation	112	57-1/2

If the mass transportation system in Chicago were to adjust its fares so that the annual cost of transportation in terms of hours of work in the manufacturing industry were the same now as in 1914, the annual cost of local transportation would require 112 hours of labor at $1.74 per hour. This would produce an annual cost of $194.88 equivalent to slightly under 40¢.

So that either way it is figured, if the fares had increased in the same proportion as platform cost of labor or if the rider paid the same number of hours of labor per year for transportation as he did in 1914, the fare would come to 40¢ .

But it does not.

This is due to a number of factors, among which are the following:

Other costs of furnishing transportation have not increased to eight times what they were as have the costs of personal services. The percentage of labor costs is very high in a transportation system. Labor costs, including both the cost of service on the vehicles and all other personal services required in the transportation system, come to approximately 63.0% of the total cost of operating the system. The other items may be classified as material and supplies, cost of capital, and general costs, including injuries and damages.

Since the other costs have not increased to an eight-to-one ratio (and indeed, in the case of capital costs are less than they were forty years ago - -because the interest rates are lower), this is one of the reasons, being a lesser one, why the fares have not increased so sharply.

Other operational changes producing savings may be summarized as follows:

(a) Changeover to a 40-hour work week (making a saving in overtime).

(b) Substitution of 1-man for 2-man vehicles in Surface System, reducing man-power and right-of-way maintenance costs.

(c) Substitution of 1-man for 2-man vehicles during weekends on certain surface routes.

(d) Rearrangement of elevated service, including alternate stop express service on the North-South, Lake Street, Ravenswood and Douglas Park lines. This has been partially offset by the necessity of operating the Garfield Branch at ground level on Van Buren Street.

(e) Service adjustments to conform to riding requirements.

(f) Economies effected by modernization:

1. New equipment, reducing operating and maintenance costs.

2. Remote door control on rapid transit cars, reducing personnel requirements.

3. New and improved shop and garage tools, machinery and facilities, increasing efficiency.

4. Standardization of maintenance procedures, cutting costs.

(g) Consolidation of operating and administrative departments.*

In a subsequent chapter the dollar value of these various savings will be analyzed in greater detail.

* The changes mentioned and others have resulted in a decline in personnel of the Transit Authority as shown by the following table. Since the respective dates of acquisition and October 1954, the number of employes of the Authority has decreased from 23,368 to 16,180, being approximately a decrease of 30%. This appears in greater detail from the table that follows:

CHICAGO TRANSIT AUTHORITY

General Classification of Personnel by Departments
Comparing October 1954 and 1953 with Personnel at Date of Acquisition

	At Dates of Acquisition (Note 1)	October 1953	October 1954	Incr. Or (Decr.) From Dates of Acquisition to - October 1953	October 1954
Shops, Carhouses and Garages:					
Office	36	46	58	10	22
Surface	3,041	2,304	2,137	(737)	(904)
Rapid	581	674	634	93	53
	3,658	3,024	2,829	(634)	(829)
Track and Roadway, Building, Utility,					
Electrical and Sub-Station Depts.:					
Office	124	98	92	(26)	(32)
Surface	1,859	1,206	976	(653)	(883)
Rapid	428	415	471	(13)	43
	2,411	1,719	1,539	(692)	(872)
Transportation Department:					
Office	135	100	100	(35)	(35)
Misc. - Surface	573	544	540	(29)	(33)
Trainmen - Surface	11,648	7,251	7,483	(4,397)	(4,165)
Misc. - Rapid	1,793	1,400	1,399	(393)	(394)
Trainman - Rapid	1,999	1,350	1,182	(649)	(817)
	16,148	10,645	10,704	(5,503)	(5,444)
Material and Supplies:					
Office	24	24	19	-	(5)
Surface	168	174	165	6	(3)
	192	198	184	6	(8)
C.T.A. Department of Police	67	100	126	33	59
General Office Departments:					
Transit Board -					
Board Members	7	7	7	-	-
Secretaries	7	6	4	(1)	(3)
Transit Engineers	3	4	3	1	--
General Manager	15	10	12	(5)	(3)
Treasurer	32	29	29	(3)	(3)
Comptroller and Accounting	376	289	270	(87)	(106)
General Attorney and Law	18	27	29	9	11
Public Information	14	20	19	6	5
Chief Engineer	13	56	55	43	42
Staff Engineer	16	18	20	2	4
Purchasing	28	28	27	-	(1)
Schedule	86	91	86	5	-
Employment, Job Classification and					
Training	34	54	55	20	21
Insurance and Pensions and Medical	36	26	29	(10)	(7)
Claim Department	196	142	136	(54)	(60)
Miscellaneous	11	18	17	7	6
	892	825	798	(67)	(94)
Total Active Employes	23,368	16,511	16,180	(6,857)	(7,188)
	SUMMARY				
Trainmen	13,647	8,601	8,665	(5,046)	(4,982)
Maintenance Employes	5,909	4,599	4,218	(1,310)	(1,691)
Executive and Office Employes	1,211	1,093	1,067	(118)	(144)
All Others	2,601	2,218	2,230	(383)	(371)
	23,369	16,511	16,180	(6,857)	(7,188)
Note 1: Personnel at dates of acquisition					
Chicago Surface Lines and					
Chicago Rapid Transit Co. taken					
over 10-1-47	22,050				
Chicago Motor Coach Co. taken					
over 10-1-52	1,318				
	23,368				

( ) Denotes Red Figures

Fare Increases

There follows a statement of the rates of fare in effect on the Surface Lines, Rapid Transit Lines and Chicago Motor Coach during the period beginning in 1912 to the present time.

In considering these figures, one should be aware that prior to the Unification Ordinance (passed by the City Council of the City of Chicago on November 13, 1913, and made effective February 1, 1914), there were five separate transportation companies authorized to operate in the City of Chicago, namely, the Chicago Railways Company, Chicago City Railway Company, Calumet & South Chicago Railway Company, the Southern Street Railway Company and the Chicago Rapid Transit Company. Each had its own certificated streets or rights-of-way and charged a 5¢ fare on all its routes (Calumet & South Chicago Railway Co. charged a 10¢ fare on lines south of 79th St.) except for certain "through routes" on which there were free transfer arrangements between the four Surface companies. Thus, a passenger whose point of origin and destination required the combined use of certain surface routes, or elevated lines and surface lines, would have paid at least two fares and possibly more.* For many years after the unification in 1914, a double fare was still required to be paid if a passenger used a combination of Elevated Lines and Surface Line routes.

With the advent of Chicago Motor Bus Company into the Chicago Transit system in 1917, there were three separate companies, each charging its respective fare for use of its facilities, with no interchange of transfers until September 22, 1935, when inter-company transfer privileges between Chicago Surface Lines and Chicago Rapid Transit Company were inaugurated. On January 19, 1936, transfer privileges between Chicago Motor Coach Company and Chicago Rapid Transit Company were inaugurated; and on October 1, 1943, universal transfer privileges were inaugurated.

* The following excerpt is from a report made by the Street Railway Commision to the City Council on December 17, 1900 (See page 34 of "An Outline History of Chicago Traction" by Harry P. Weber):

"Chicago is commonly said to have the uniform fare system, but that statement is quite misleading. Fares are indeed uniform upon the lines of any given company. But a stranger coming to the city, knowing nothing of the separate companies and observing the street railway system of the city as an entirety, would say that Chicago has the zone system of fares. He would find one clearly marked zone in the inner south division of the city. He would find two other zones, not quite so clearly marked, in the inner west and north divisions of the city. Outside of these three zones, but still within the limits of the city, he would find still other zones. The rate of fare within any one zone such a stranger would find to be five cents, no matter what the distance. But if he desired to travel from one zone into another he would find two fares, or ten cents, required and that even though the entire distance traversed might be less than a mile."

These inter-company transfers were not free upon payment of a single fare, however, but were based upon the cost of the highest fare of the two or more systems used. For example, a passenger originating on Chicago Surface Lines on October 1, 1943, whose fare was then 8¢, was compelled to pay 2¢ for a transfer to either Chicago Motor Coach Company or Chicago Rapid Transit facilities, whose fares were then 10¢.

Fare differentials in varying degrees continued until October 1, 1952, when the Chicago Transit Authority purchased Chicago Motor Coach Company and the City of Chicago finally realized its more than fifty years of efforts to attain its objective - - "One City, One Fare" with unified ownership and management of all local transportation facilities with free and unrestricted transfer privileges.

Subject to that comment and explanation, the fare structure was as follows:

FULL FARE (CASH) WITHIN CITY LIMITS (1)

	Surface Division		Rapid Transit Division		Chgo. Motor Coach Co.(2)	
Effective Date	Full Fare	Ticket or Token	Full Fare	Ticket or Token	Full Fare	Ticket or Token
1912			5¢	-		
1914	5¢	5¢				
3-24-17					10¢	
11-21-18			6¢	-		
8-8-19	7¢	7¢	8¢	-		
12-1-19	7¢	50 for $3.00 10 for .65				
12-27-19	6¢	6¢				
2-1-20			8¢	2 for 15¢		
7-1-20	8¢	8¢				
8-4-20			10¢	4 for 35¢		
6-15-22	7¢	3 for 20¢				
9-18-22			10¢	3 for 25¢		
7-18-28			10¢	3 for 30¢		
8-3-36			10¢	3 for 25¢		
10-12-36			10¢	12 for $1.00		
5-3-37			10¢	(12 for $1.00 (Discontinued		
4-20-42	8¢	8¢				

Effective Date	Surface Division Full Fare	Surface Division Ticket or Token	Rapid Transit Division Full Fare	Rapid Transit Division Ticket or Token	Chgo. Motor Coach Co. (2) Full Fare	Chgo. Motor Coach Co. (2) Ticket or Token
5-24-46			12¢	-		
10-13-46			12¢	12¢		
4-29-47	9¢	-				
10- 1-47 (3)	10¢	-	12¢	12¢		
5-11-48	11¢	-	13¢	13¢		
6-20-48	13¢	-	15¢	15¢		
9-18-48					13¢	
10-15-49	15¢	-	17¢	17¢		
6-19-50	15¢	15¢				
8 -1-51	17¢	17¢	18¢	18¢		
11- 8-51					15¢	
6- 1-52	20¢	5 for 85¢	20¢			
10- 1-52 (4)					20¢	5 for 85¢
4-22-54	20¢	20¢	20¢	20¢	20¢	20¢

(1) Does not give recognition to special reduced full fares for Railroad Commuter, Central Business District, and Loop Parking Lot service within restricted areas, nor extra fares charged for Express Bus Service on Archer Avenue or South Chicago, in effect from time to time since 1935. Half fares (not necessarily 1/2 of full fare in all instances) have been in effect on Surface Lines since 1919; on Rapid Transit System since 1922; and on Chicago Motor Coach Lines since 1928.

(2) Including Predecessor Company.

(3) Date of C. T. A. takeover of Surface Lines and Rapid Transit Systems.

(4) Date of C. T. A. takeover of Chicago Motor Coach Company.

Roughly this increase in fares bears a relationship to wage increases, but sometimes the fare increase was considerably delayed, and from the studies made in Chapter I, it is quite apparent that the fare increases prior to October 1, 1947, were utterly inadequate to pay the necessary costs of operation and the capital requirements of the predecessor lines.

A comparison of the tables appearing earlier in this chapter on the basic wage rate and the supplemental benefits indicates they rose at a much faster rate than did the fares.

Some of the reasons which prevented the fare from rising at the same accelerated speed as the wages have already been referred to.

They will be dealt with more in detail in subsequent chapters of this study.

Inflation

The period under consideration in this chapter has been one of marked inflation not only in labor costs and other expenses but in many other facets of the industrial life of America. The existence of the inflationary trend is well known to every person and is illustrated by countless items in regular and daily use.

Of course, in a dynamic industrial society like that of this country, the effects of inflation are not uniform. There are some items, particularly those in which the percentage of labor to the total cost of production of the item is large, where the impact of inflationary forces has been very great. On the other hand, there are items in which inflation has been offset by technical improvements and labor-saving devices that have assisted in holding the dollar price to a more stable level.

There are some items, such as radio and television, which could not have been purchased for any amount of money at a point forty years ago which today are available at a comparatively reasonable price.

So the effects of inflation are not uniform, but they fall most heavily on the items in which labor is a large component and in which at the same time the effective production of labor has not been increased by technical advances.

As this study has pointed out, the wage increases have fallen heavily upon the local transportation industry. In part only have those increases been offset by technical changes such as the development of the one-man car or bus.

It would extend this study to many volumes to collect and list all of the facts pertaining to the inflationary trend of recent years. In order, however, to indicate the nature of the inflationary forces certain statistical data are given from the 1954 Edition of "National Income", published by the United States Department of Commerce. Such data include the following:

In 1929 governmental receipts- -federal, state and local- -were 11.25 billion dollars. In 1953 they had risen to 95.90 billion. In the same time, governmental expenditures had risen from 10.22 billion to 102.53 billion.

The national income in those years had come from 87.81 billion to 305.00 billion, and the disposable income after personal taxes, from 83.12 billion to 250.10 billion.

In the period from 1929 to 1950 a change had taken place in some industries in the percentage of compensation of employes to corporate sales. In mining, the percentage of such compensation to corporate sales remained constant and about 41.7%. In manufacturing the percentage rose from 23.1% to 24.2%. In wholesale and retail trades it dropped from 21.7% to 18.4%. In communications and public utilities it rose from 31% to 37.6%. In all transportation the percentage rose from 49.7% to 55.5%, but in local and highway passenger transportation, the rise was greater than in any of these other classifications, having come from 59.4% in 1929 to 76.4% in 1950. It is probable that the percentage in the latter has increased from the 1950 figure.

Another interesting phase of the inflationary tendency from 1929 to 1953 appears in the figures pertaining to personal consumption expenditures per capita. In that period of time the consumption expenditures for food, clothing and shelter have increased by 112% per capita. The expenditures for other needs considered essential in present-day living increased 94% per capita, and the expenditures for luxuries and non-essentials increased 190%. During that same time the expenditures for public transportation increased but 55% per capita. These figures are a brief summary of a thorough study that has been made and coordinated from the statistical data published by the United States Department of Commerce. The details of these studies will be included in the Research Data Volume III.

U.S. DEPARTMENT OF LABOR: BUREAU OF LABOR STATISTICS, WASHINGTON 25, D. C.

CONSUMER PRICE INDEX –
U.S.: ALL ITEMS, 1913 FORWARD – SERIES A–1
(1947–49 – 100) 1/

	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
ANNUAL AVERAGE	42.3	42.9	43.4	46.6	54.8	64.3	74.0	85.7	76.4	71.6	72.9
JANUARY	42.0	42.9	43.2	44.7	49.9	59.6	70.7	82.5	81.4	72.4	71.8
FEBRUARY	41.8	42.5	43.0	44.7	51.1	60.3	69.1	83.4	78.8	72.1	71.7
MARCH	41.8	42.3	42.6	45.0	51.4	60.0	69.9	84.3	78.1	*71.4	*71.9
APRIL	42.0	42.0	42.9	45.5	53.6	60.6	71.2	86.7	77.2	71.3	72.3
MAY	41.7	42.2	43.1	45.7	54.8	61.8	72.1	88.2	*75.7	71.3	72.4
JUNE	41.9	42.5	43.2	46.2	55.3	63.0	*72.4	*89.4	75.3	*71.5	*72.7
JULY	42.2	42.9	43.2	46.2	54.9	64.5	74.3	89.0	75.4	71.6	73.5
AUGUST	42.5	43.5	43.2	46.8	55.7	65.6	75.6	86.6	75.7	70.9	73.3
SEPTEMBER	42.7	43.7	43.4	47.6	56.7	67.3	76.1	85.7	*74.9	*71.0	*73.6
OCTOBER	42.9	43.4	43.8	48.2	57.7	68.4	77.3	85.2	74.7	71.5	73.8
NOVEMBER	43.1	43.5	44.1	49.1	57.8	69.4	79.1	84.7	74.3	71.8	74.0
DECEMBER	*43.0	*43.4	*44.3	*49.3	*58.5	*70.6	*80.9	*82.7	*73.9	*72.0	*73.9

	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934
ANNUAL AVERAGE	73.1	75.0	75.6	74.2	73.3	73.3	71.4	65.0	58.4	55.3	57.2
JANUARY	73.7	74.0	76.7	74.9	73.7	73.0	73.1	68.0	61.1	55.1	56.4
FEBRUARY	73.5	73.6	76.3	74.3	73.1	72.9	72.8	67.0	60.2	54.2	56.9
MARCH	*73.0	73.7	76.0	73.9	73.1	72.6	72.4	66.5	59.9	53.8	56.9
APRIL	72.7	73.6	76.6	73.9	73.3	72.4	72.7	66.0	59.5	53.6	56.8
MAY	72.7	73.9	76.2	74.5	73.6	72.8	72.4	65.4	58.7	53.9	56.9
JUNE	*72.8	*74.7	*75.6	*75.2	*73.0	*73.0	*71.9	*64.7	*58.3	*54.3	*57.0
JULY	72.9	75.7	74.8	73.8	73.0	73.7	70.9	64.5	58.1	56.0	57.1
AUGUST	72.8	75.7	74.5	73.4	73.2	74.1	70.6	64.4	57.5	56.4	57.2
SEPTEMBER	*73.1	75.4	75.0	73.8	73.8	74.0	70.9	64.1	57.2	56.5	58.0
OCTOBER	73.4	75.8	75.2	74.2	73.6	74.0	70.6	63.7	56.8	56.5	57.7
NOVEMBER	73.6	77.0	75.5	74.1	73.5	73.7	69.9	63.0	56.4	56.4	57.5
DECEMBER	*73.7	*76.7	*75.4	*74.0	*73.2	*73.4	*69.0	*62.3	*55.9	*56.2	57.4

1/ THE CPI,FORMERLY CALCULATED ON THE BASE PERIOD (1935-1939-100). HAS BEEN CONVERTED TO THE NEW BASE (1947–49–100) IN COMPLIANCE WITH RECOMMENDATIONS OF THE U.S. BUREAU OF THE BUDGET OFFICE OF STATISTICAL STANDARDS. FOR THE YEARS 1940 THROUGH 1952 TWO INDEX SERES WERE PUBLISHED. THE INDEX IDENTIFIED AS THE "OLD SERIES" IS DISCONTINUED AFTER DECEMBER 1952 INDEX NUMBERS SHOWN HERE WHICH FORM A CONTINUOUS SERIES FROM 1913 TO DATE, INCLUDE THE "ADJUSTED SERIES" ON THE 1947–49–100 BASE FROM 1940. BEGINNING JANUARY 1953 THE INDEX STRUCTURE HAS BEEN REVISED. (SEE FEBRUARY 1953 ISSUED OF THE MONTHLY LABOR REVIEW.)

EXHIBIT A -2

CONSUMER PRICE INDEX - U.S. ALL ITEMS , 1913 FORWARD – SERIES A -1

(1947–49 – 100) 1/

	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
ANNUAL AVERAGE	58.7	59.3	61.4	60.3	59.4	59.9	62.9	69.7	74.0	75.2	76.9
JANUARY	58.2	*59.1	60.2	60.9	59.6	59.5	60.3	67.0	72.2	74.4	76.1
FEBRUARY	58.6	58.8	60.4	60.3	59.4	59.9	60.3	67.5	72.4	74.2	76.0
MARCH	*58.5	58.5	*60.9	*60.3	*59.3	*59.7	60.5	68.4	73.5	74.2	76.0
APRIL	59.0	*58.5	61.1	60.5	59.2	59.7	61.1	68.8	74.3	74.6	76.1
MAY	58.8	58.5	*61.4	60.3	59.1	59.9	61.5	69.4	74.9	74.9	76.7
JUNE	58.6	59.2	*61.5	*60.3	*59.0	*60.1	62.6	69.6	74.7	75.1	77.3
JULY	*58.4	*59.4	61.7	60.4	59.2	60.0	63.0	70.0	74.2	75.5	77.5
AUGUST	58.4	59.8	62.0	60.2	59.0	59.8	63.5	70.3	73.9	75.7	77.5
SEPTEMBER	58.7	*60.0	*62.4	*60.2	*60.2	*60.0	64.7	70.5	74.2	75.8	77.2
OCTOBER	*58.6	59.8	62.2	60.0	60.0	59.9	65.4	71.2	74.5	75.8	77.2
NOVEMBER	58.9	59.7	61.8	59.8	59.9	59.9	65.9	71.7	74.4	75.8	77.5
DECEMBER	59.2	*59.7	*61.6	*59.9	*59.6	60.2	66.1	72.1	74.5	76.1	77.8

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
ANNUAL AVERAGE	83.4	95.5	102.8	101.8	102.8	111.0					
JANUARY	77.8	91.9	101.3	102.7	100.6	108.6	113.1	113.9	115.2		
FEBRUARY	77.6	91.8	100.5	101.6	100.4	109.9	112.4	113.4	115.0		
MARCH	78.0	93.7	100.2	101.9	100.7	110.3	112.4	113.6	114.8		
APRIL	78.5	93.7	101.6	102.1	100.8	110.4	112.9	113.7	114.6		
MAY	78.9	93.5	102.3	101.8	101.3	110.9	113.0	114.0	115.0		
JUNE	79.8	94.2	103.1	102.0	101.8	110.8	113.4	114.5	115.1		
JULY	84.6	95.0	104.3	101.4	102.9	110.9	114.1	114.7	115.2		
AUGUST	86.4	96.1	104.8	101.6	103.7	110.9	114.3	115.0	115.0		
SEPTEMBER	87.4	98.3	104.8	102.1	104.4	111.6	114.1	115.2	114.7		
OCTOBER	89.1	98.3	104.3	101.5	105.0	112.1	114.2	115.4	114.5		
NOVEMBER	91.2	98.9	103.5	101.6	105.5	112.8	114.3	115.0			
DECEMBER	91.9	100.2	103.0	101.0	106.9	113.1	114.1	114.9			

* / INDEXES MARKED WITH AN ASTERIAK (*) AND INDEXES FOR ALL MONTHS AFTER SEPTEMBER 1940, ARE BASED ON PRICES COLLECTED FOR ALL GROUPS OF ITEMS. INDEXES FOR OTHER MONTHS BEFORE SEPTEMBER 1940 ARE BASED ON FOOD PRICES AND ESTIMATES FOR OTHER GOODS AND SERVICES, ASSUMING AN EVEN RATE OF CHANGE BETWEEN PRICING DATES.

U.S. DEPARTMENT OF LABOR: BUREAU OF LABOR STATISTICS, WASHINGTON 25, D.C.

CONSUMER PRICE INDEX – CHICAGO, ILLINOIS:
ALL ITEMS, 1914 FORWARD – SERIES A –5
(1947–49 – 100) 1/

YEAR AND MONTH	INDEX	YEAR AND MONTH	INDEX	YEAR AND MONTH	INDEX	YEAR AND MONTH	INDEX	YEAR AND MONTH	INDEX
1914: DEC.	42.7	1924: YEAR	75.9	1933: YEAR	53.8	1939: YEAR	58.6	1942: YEAR	68.3
1915: YEAR	43.1	MAR.	75.2	JUNE	53.0	MAR.	58.4	JAN.	65.8
DEC.	43.8	JUNE	75.8	DEC.	54.1	JUNE	58.1	FEB.	66.0
1916: YEAR	46.6	SEPT.	76.2	1934: YEAR	54.7	SEPT.	59.1	MAR.	66.8
DEC.	49.7	DEC.	76.6	JUNE	54.4	DEC.	58.6	APR.	67.7
1917: YEAR	55.1	1925: YEAR	77.9	NOV.	54.9	1940: YEAR	59.1	MAY	68.4
DEC.	57.8	JUNE	77.9	1935: YEAR	57.1	MAR.	58.5	JUNE	68.3
1918: YEAR	63.9	DEC.	79.4	MAR.	57.0	JUNE	59.5	JULY	68.3
DEC.	69.9	1926: YEAR	78.3	JULY	57.1	SEPT.	59.2	AUG.	68.9
1919: YEAR	73.9	JUNE	78.4	OCT.	57.1	OCT.	59.2	SEPT.	68.9
JUNE	71.3	DEC.	78.3	1936: YEAR	57.8	NOV.	59.0	OCT.	69.8
DEC.	81.0	1927: YEAR	76.7	JAN.	57.4	DEC.	59.3	NOV.	70.2
1920: YEAR	85.0	JUNE	78.2	APR.	56.9	1941: YEAR	62.1	DEC.	70.2
JUNE	89.1	DEC.	76.3	JULY	58.0	JAN.	59.5	1943: YEAR	72.1
DEC.	80.8	1928: YEAR	75.6	SEPT.	59.0	FEB.	59.5	JAN.	70.3
1921: YEAR	76.9	JUNE	75.3	DEC.	58.4	MAR.	59.6	FEB.	70.8
MAY	76.7	DEC.	75.6	1937: YEAR	60.5	APR.	60.2	MAR.	71.8
SEPT.	76.0	1929: YEAR	75.5	MAR.	59.5	MAY	60.6	APR.	72.5
DEC.	74.9	JUNE	75.3	JUNE	60.8	JUNE	61.5	MAY	73.1
1922: YEAR	72.9	DEC.	75.9	SEPT.	61.7	JULY	62.3	JUNE	72.9
MAR.	72.4	1930: YEAR	73.6	DEC.	60.7	AUG.	62.7	JULY	71.9
JUNE	72.6	JUNE	74.4	1938: YEAR	59.6	SEPT.	64.3	AUG.	72.2
SEPT.	72.6	DEC.	71.0	MAR.	59.4	OCT.	64.7	SEPT.	72.6
DEC.	73.3	1931: YEAR	66.8	JUNE	60.0	NOV.	65.2	OCT.	72.7
1923: YEAR	74.6	JUNE	66.6	SEPT.	60.0	DEC.	64.9	NOV.	72.1
MAR.	73.5	DEC.	63.9	DEC.	59.2			DEC.	72.3
JUNE	74.2	1932: YEAR	58.5						
SEPT.	75.6	JUNE	58.1						
	75.6	DEC.	55.1						

1/ THE CPI, FORMERLY CALCULATED ON THE BASE PERIOD (1935 – 39 – 100), HAS BEEN CONVERTED TO THE NEW BASE (1947–49 – 100) IN COMPLIANCE WITH RECOMMENDATIONS OF THE U.S. BUREAU OF THE BUDGET, OFFICE OF STATISTICAL STANDARDS. FOR THE YEARS 1940 THROUGH 1952 TWO INDEX SERIES WERE PUBLISHED. THE INDEX IDENTIFIED AS THE "OLD SERIES " IS DISCONTINUED AFTER DECEMBER 1952. INDEX NUMBERS SHOWN HERE, WHICH FORM A CONTINUOUS SERIES FROM 1914 TO DATE, INCLUDE THE "ADJUSTED SERIES" ON THE 1947–49 – 100 BASE FROM 1940. BEGINNING JANUARY 1953 THE INDEX STRUCTURE HAS BEEN REVISED. (SEE FEBRUARY 1953 ISSUE OF THE MONTHLY LABOR REVIEW.)

(A–5–1)

CONSUMER PRICE INDEX – CHICAGO, ILLINOIS All Items, 1914 Forward – Series A–5

(1947 - 49 - 100) 1/

	1944	1945	1946	1947	1948	1949	1950	1951
YEAR	73.3	74.8	81.4	94.5	102.8	102.7	103.8	111.9
January	72.0	74.0	75.3	90.0	100.8	102.9	101.5	108.9
February	71.8	73.9	75.1	89.8	99.2	101.7	101.2	110.7
March	71.9	74.0	75.2	91.8	99.4	102.6	101.6	111.0
April	72.8	74.3	76.3	91.5	101.2	103.0	101.5	111.1
May	72.9	75.2	76.5	92.2	102.8	102.5	102.5	111.5
June	73.3	75.3	76.9	93.1	103.6	103.5	102.8	111.6
July	74.2	75.5	83.0	94.1	105.0	102.3	104.1	112.1
August	73.9	75.2	84.7	95.7	105.2	102.6	105.1	112.1
September	74.1	74.9	85.9	98.9	105.5	103.5	105.4	112.6
October	73.9	75.0	87.9	98.4	104.8	102.6	105.9	113.6
November	74.0	74.9	89.7	98.9	103.5	103.2	106.0	114.1
December	74.2	75.2	90.0	100.0	103.2	102.0	107.7	114.0

	1952	1953	1954	1955	1956	1957	1958	1959
YEAR								
January	114.0	114.2	116.7					
February	112.7	113.9	116.7					
March	113.2	113.8	116.7					
April	113.4	114.2	116.5					
May	114.3	114.6	117.3					
June	114.9	115.3	117.3					
July	115.0	115.7	118.0					
August	115.5	116.3	117.7					
September	115.0	116.6	117.4					
October	115.0	117.1	117.1					
November	115.1	116.4						
December	114.6	116.4						

CHAPTER IV

WHY A PUBLICLY-OWNED TRANSIT SYSTEM FOR CHICAGO?

For Release To Afternoon Papers Of Thursday, March 31, 1955

And All Papers Thereafter

Chicago, March 31 - - Why publicly owned local transit for Chicago? Was the purchase price of $87,162,500 for the Chicago Surface Lines and the Chicago Rapid Transit Company fair to car riders and investors?

These two basic questions, still occasionally being asked by skeptics, were answered in detail today by Werner W. Schroeder, Vice Chairman of Chicago Transit Board, in the fourth chapter of his extensive Transit Research Study.

Mr. Schroeder listed the following reasons, all supported by court decisions of the federal courts and by the Illinois Supreme Court, why publicly owned transit was the only remaining feasible solution of Chicago's long standing local transit problem:

1. At least five major attempts had failed to reorganize the two companies, the Chicago Surface Lines and the Chicago Rapid Transit Company, under private ownership.

2. These unsuccessful efforts, extending over a period of 20 years, conclusively demonstrated that "private ownership had shown no disposition to provide the capital necessary for the modernization program. "

3. Unification of the two properties was required by the Federal and City authorities as a condition precedent to the granting of a new franchise. Unification was also

considered essential to the ultimate success of mass transportation in Chicago.

4. Only public ownership could provide the two major financial requirements for success: (a) An assured earnings potential with a flexible method of fixing adequate fares, and (b) New capital in sufficient amount to insure much-needed modernization of a vast amount of old and obsolescent equipment as well as other facilities and service.

Discussing these reasons, point by point, from his comprehensive background knowledge of the subject, which he gained as CTA's former General Attorney by helping draft the Metropolitan Transit Authority Act, and then by defending the legislation and the Authority plan all the way to the U.S. Supreme Court, Mr. Schroeder said:

"The efforts to reorganize on the basis of private ownership had continued persistently until 1945. By that time, after five major failures, the situation seemed helpless. It was only then, after almost 20 years of trial and error, that it was concluded that something more drastic needed to be done to save metropolitan mass transportation for Chicago.

"It is probably safe to say, " Mr. Schroeder continued, "the overwhelming majority of the Chicago City Council and the members of Illinois Legislature, as well as the then Governor and Mayor, were in principle opposed to public ownership. They preferred private ownership, but were driven to public ownership by necessity and by the economic forces over which neither they nor anyone else had control. "

As proof that private capital could not be induced to reorganize the two companies, Mr. Schroeder cited, in addition to the five unsuccessful reorganization attempts, the 1945 ruling of the State Supreme Court upholding the validity of the Metropolitan Transit Authority Act which said, in part:

> "For more than fifty years various actions taken, both by private interests and by the City, in an effort to reorganize and procure an adequate transportation system, have all failed. It was found that the City was unable to take over these lines and that sufficient private funds could not be procured. . . It appears impossible to finance the rehabilitation of existing facilities either by the City or by private funds."

"The Supreme Court of Illinois, " Mr. Schroeder observed, "arrived at the same conclusion as did the Illinois Commerce Commission, the City of Chicago, and the State of Illinois, acting through their legislative and executive branches."

Commenting on the imperative financial requirements obtainable only through public ownership, Mr. Schroeder said:

"A method of fixing fares was required - - without the then prevalent lag between the need for an upward adjustment in fares and the granting of increases -- that would produce current revenues adequate to meet the cost of furnishing modern transportation. The fares obtained by the private companies were by no means adequate for this purpose.

"Private ownership had shown no disposition to provide the capital necessary for the modernization program; and finally, it could not have been granted the power to fix its own fares, a power which could be granted to a public body. The insistence on the part of the Federal and City authorities that there be unification of the Surface and Rapid Transit systems presented a further obstacle.

"It thus appeared clear that the only method of financing an adequate modern transportation system was either through revenue bonds or taxation, either method requiring ownership and operation by a public body. It was also recognized that the transit operator must be empowered to fix its own fares adequate to produce the necessary revenue. Again this could be done only if the ownership and operation were in a public body.

"If the revenue produced is not sufficient to meet the heavy cost of operating a transportation system as large as CTA's somebody must bear the loss -- either investors, as in the case of the Surface Lines and the Rapid Transit Company, or the taxpayers, as in the case of New York, prior to the adoption of an Authority there which now restricts the tax subsidy to capital replacements and improvements."

Discussing the fairness of the purchase price of $87,162,500 for which CTA obtained the physical properties of the Chicago Rapid Transit Company and the Chicago Surface Lines, including about $24,000,000 in cash reserves of the latter company, Mr. Schroeder said:

"There was no serious controversy over the price of $12,162,500 CTA proposed to pay for the Elevated property, although the last prior rate base valuation, fixed on it by the Illinois Commerce Commission was $36,000,000."

The serious controversy, Mr. Schroeder continued, concerned the price that should be paid by C.T.A. for the Surface Lines property.

Three valuations, Mr. Schroeder said, were proposed, as follows:

1. In excess of $170,000,000 - - a valuation urged by the Surface Lines security holders which was based upon the terms of the defunct Surface Lines' franchise ordinance.

2. A minimum of $138,000,000 - - a valuation advocated by in-

vectors whose securities were subordinate to the Surface Lines' first mortgage bonds.

3. $75,000,000 for the Surface Lines property, including a cash reserve of about $24, 000, 000 - - a valuation established by the City Council of Chicago and approved by the Federal Securities and Exchange Commission.

The purchase price of $75,000,000 for the Surface Lines was first upheld by the Federal District Court, then the United States Court of Appeals and in effect by the U.S. Supreme Court, Mr. Schroeder said.

Thus, Mr. Schroeder concluded, the prices paid for the properties were based upon (1) The determination of the Chicago City Council; (2) The concurrence of the Illinois Commerce Commission; (3) The approval of the Securities and Exchange Commission; (4) The judicial determination of the District Court of the United States affirmed by the U. S. Court of Appeals and, in effect, the approval of the Supreme Court of the United States.

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CHAPTER IV

WHY A PUBLICLY-OWNED TRANSIT SYSTEM FOR CHICAGO?

Previous chapters have demonstrated that the prior operators- -Chicago Surface Lines and Chicago Rapid Transit- -involved investors in losses exceeding 250 million dollars; that historically these transit companies had suffered endless financial difficulties and that this history goes back even prior to 1920; that the growth of automobile usage has constituted another setback to metropolitan mass transportation owners, and that although the cost of operating a private automobile is greater than the transit fare, the public has in vast numbers preferred the privacy, flexibility and speed of the private automobile to the mass transportation vehicle.

The third chapter of the study has shown that wages, which are a major factor in transit operation, have steadily increased for forty years, and that this increase has gone forward at a highly accelerated rate since World War II.

Why then should the public take over these lines in view of this discouraging history and the prospects which, ten years ago, should have been recognized as being not too bright?

Some ask, why not let private capital continue to run the lines, as it did?

Historical matter to be presented in this chapter will show that at least five major attempts were made to reorganize the transportation lines under private ownership; that all of them failed; that, as we have seen, the average age of the rolling stock was getting greater, the vehicles were steadily becoming more expensive to maintain and the rights-of-way were deteriorating; that for many years no new capital had been put into the transit set-up in Chicago; and that the only new vehicles were those relatively few that were bought out of a hopelessly inadequate depreciation fund.

The first of the lines went into receivership on December 15, 1926. Soon thereafter other lines followed, and all of them ended in bankruptcy- -both the Surface Lines and the Elevated System.

The efforts to reorganize on the basis of private ownership continued persistently until 1945. By that time, after five major failures, the situation seemed hopeless. It was only then, after almost twenty years of trial and error, that it was concluded that something more drastic needed to be done to save metropolitan mass transportation for Chicago. The solution was found in the creation of the Transit Authority.

From a strictly financial viewpoint an entire abandonment of public mass transportation might appear to have been dictated, but during the war and shortly

thereafter, there were over three million passengers per working day who used public transportation. Even now in 1955 there are still almost two million passengers per day on the average work day (that is a million people making one round trip per day), who still use these lines. These people are the workers in factories, in offices and in commercial and industrial enterprises. Without their presence at work, the business of the city would be most seriously- -possibly fatally- -impaired.

Something had to be done.

The City Council of Chicago and the then Mayor of the City approved the idea of creating an authority. They presented the proposition to the Legislature and to the Governor, who enacted it into law. It is probably safe to say that the overwhelming majority of the councilmen and the members of the Legislature, as well as the then Governor and Mayor, were in principle opposed to public ownership. They preferred private ownership, but were driven to public ownership by necessity and by economic forces over which neither they nor anyone else had control.

The first part of this chapter will be an historical review of the serious efforts made by city officials, investor groups and the Federal courts to work out the problem, ending in a note of desperation that left public ownership through an Authority the only remaining alternative.

This chapter will then also discuss the price that was paid, as well as the much higher prices that were demanded by certain investor groups.

Early Efforts at Reorganization

The United States Court of Appeals in its 1947 opinion in the traction case* described the early efforts to find a solution:

> "On December 15, 1926, a creditor's bill was filed against Chicago Railways and receivers were appointed. Thereafter the trustees of various mortgages filed foreclosure bills or counter-claims and orders were entered consolidating the causes and extending the receivership to the foreclosure case. In 1930 another creditor's bill was filed against the City Railway and the Calumet. Receivers were appointed and the trustees under the first mortgages of these two companies filed foreclosure proceedings. An intervening petition was filed by the trustee of the 'Collateral Trust' for foreclosure of the

* In re. Chicago Railways, 160 F. 2d. 59.

pledge securing its bonds, and the receivership of the two south side companies was extended to include Southern Railway. Thus the properties of all the companies and the 'Collateral Trust' were brought into the custody of the District Court. In 1928 and 1930 decrees were entered in these cases fixing the amount and priority of the liens of the various secured debts. The decree of 1928 adjudged that the Purchase Money mortgage was a lien superior to the Consolidated and Adjustment mortgages. In 1931 decrees of foreclosure sale were entered, the execution of which was postponed pending agreement on a plan of reorganization.

"In 1929 the General Assembly of Illinois enacted legislation permitting the granting of a terminable permit by a city (Ill. Laws 1929, p. 271). Acting under this Act, the City Council of the City of Chicago, on May 19, 1930, passed an ordinance granting a terminable permit to Chicago Local Transportation Company. The validity of this legislation and of the ordinance was sustained in People v. City of Chicago, 349 Ill. 304. While the validity of the legislation was being tested, several plans for the purpose of reorganization, based on the 1930 ordinance were formulated. These failed of consummation.

"In 1933 the District Court recognized the impossibility of consummating a reorganization under the 1930 plan and appointed special counsel* to assist all interested parties in amending the plan so as to make possible the acceptance of the 1930 ordinance. After extensive conferences, amendments to the 1930 plan were agreed upon by the security holders and were submitted by them to the court in March 1934. On March 21, 1934, the Mayor of Chicago advised the City Council that an analysis of the ordinance of 1930 had convinced him that the 1930 plan did not meet the needs of the City and recommended that the time for acceptance of the 1930 ordinance, which had been extended to expire on April 3, 1934, should not be further extended. The Mayor's recommendation was followed by the City Council and the 1930 ordinance lapsed."

The two attempts at solution described in that part of the opinion were only the beginning. Other plans followed, and a brief review of them shows the

*Walter L. Fisher, one of the foremost traction experts in the country.

difficulties and obstacles that were involved: **

The Abbott Plan and Its Failure

The 1929 legislation and both the 1930 plan and the Fisher plan contemplated unification of the Surface Lines and Rapid Transit. The Surface Lines interests now decided to attempt a reorganization of Surface Lines separately from the Rapid Transit. Accordingly on July 12, 1935, the court entered an order appointing a committee to prepare a plan for such a separate reorganization. This committee was known as the "Abbott Committee." In the fall of 1935 it filed a plan providing for the reorganization of the Surface Lines into one company and making no provision for the Rapid Transit. This plan was submitted to the participating Surface Lines security holders and approved by them. Sales were thereupon had under the foreclosure decrees previously entered in 1931. The proponents of the plan were the only bidders at these sales. Extensive hearings were thereupon held on the fairness of the plan. The City filed vigorous objections to the plan as being inadequate for obtaining new capital necessary for additions and extensions, and as making no provision for unified service, and requesting deferment of action. In December 1936, the court tentatively approved the plan and directed the proponents to negotiate with the City for an ordinance providing for separate operation of the Surface Lines and withheld final approval of the sales pending the outcome of those negotiations. Extensive negotiations were then carried on but the City refused to grant such a separate ordinance. Some months later the court filed a memorandum reviewing the proceedings, stating that the new plan must provide for unification of all local transportation systems and that the plan before the court could not be consummated without the consent of the City. The matter came to a head on December 18, 1939, in a memorandum opinion stating that "the plan for reorganization of the Surface Lines alone is so drawn that it cannot be consummated." The Abbott Plan therefore came to naught.

Another start toward reorganization was attempted through the making of amendments to the Abbott Committee's 1935 plan. Amendments were filed on April 11, 1939, and efforts to achieve some results were continued for over two years but nothing was ultimately accomplished.

The Shaw Report; 1941 Ordinance; April 3, 1942 Plan and Its Failure

When it became apparent in 1937 that the Abbott Plan was destined to

** The 30-volume record showing the details of these reorganization efforts is part of the permanent library of the Transportation Institute of Northwestern University. The briefs in the appeals referred to later in this chapter are also in that library.

fail, the City filed its detailed requirements for a franchise ordinance in a report known as "A Comprehensive Local Transportation Plan for the City of Chicago." Pursuant thereto the court, in December 1937, appointed Walter A. Shaw as an adviser to the court and directed him to prepare a plan for consolidating the properties of the Surface Lines and Rapid Transit into one ownership as suggested by the City. After long study and protracted negotiations, Shaw filed a report and suggested a basis for unification under private ownership through exchange of securities.

1941 Ordinance

During the time the Shaw report was being formulated, negotiations were in progress with the City for the purpose of securing an ordinance for a new unified company. Judge Igoe on February 5, 1941, filed a memorandum dealing with the report of the negotiating board, previously appointed by the court, and stating that negotiations for a new ordinance had been in progress for more than four years. At the end of April 1941, the Mayor of Chicago reported to the court that there seemed to be substantial agreement between the parties as to the provisions of an ordinance and advised the court that the amount of $23,130,000 granted by the United States to the City in aid of subway construction was "on condition that provision be made for unification of the local transportation facilities of the City." On June 19, 1941, an ordinance was passed authorizing the grant of a franchise to operate a transportation system to Chicago Transit Company, which was a new corporation that had been organized for the purpose of acquiring the transit properties. The ordinance was approved at a referendum on June 1, 1942.

During the 1941 ordinance negotiations a plan based on the Shaw report was filed. Commencing in the fall of 1941, hearings were held before the court on the fairness of this plan. A number of amendments were made which were incorporated into the amended plan, which was generally called the plan of April 3, 1942. On April 14, 1942, an opinion was filed by Judge Igoe approving it.

The plan was then referred to the Illinois Commerce Commission; the Court directed a committee headed by Mr. William P. Sidley to take the necessary steps to bring the plan before the Commission for its approval as to the public interest therein and the fairness thereof.

Plan Disapproved

Thereafter extended hearings were held before the Illinois Commerce Commission and on May 3, 1943, the Illinois Commerce Commission filed a report refusing to give its approval of the plan and of the issuance of securities under it. The order of the Illinois Commerce Commission as well as the report of its examiners contains a valuable historical review and valuation study. The Illinois Commerce Commission concluded that there existed no definite probability that the new company would possess the financial resources required to acquire and modernize facilities needed to serve the public adequately at a reason-

able fare. As bearing upon the value of the properties the examiners' report pointed out that it was proposed in the plan to issue securities at a fixed amount in excess of $179,000,000, yet the 1941 ordinance provided a basic purchase price (subject to arbitration) at which the City could buy the properties both of the Surface Lines and Rapid Transit at something in excess of $79,000,000, or a permittee of the City at something in excess of $87,000,000. It was concluded by the Illinois Commerce Commission that there was no reasonable prospect of a sound financial organization upon the basis of the proposed capitalization; that, indeed, there appeared to be no intention of paying interest except on the Series A bonds provided for in that plan and constituting about $72,000,000 out of the $179,000,000 proposed capitalization.

Various attempts were made to amend that plan so as to meet the objections of the Illinois Commerce Commission but these all failed. The Sidley Committee ultimately reported that in its opinion the plan could not be amended so as to secure the approval of the Illinois Commerce Commission and again a separate reorganization of the Surface Lines was suggested.

This proposal met with objections both from the City and the Administrator of the Federal Works Administration which had advanced a large part of the money for constructing the subways. Major General Philip B. Fleming, speaking on be - half of the latter agency, filed a statement upholding the necessity for unification, stating his opinion that separate reorganization would fail to gain the approval of the Illinois Commerce Commission or to obtain a sound company, and concluded that separate reorganization "is not consistent with the assurances of unification which induced the Government to make the grant for the subway project." Thus that plan failed- -failed because the Illinois Commerce Commission would not approve it because of its lack of financial soundness.

The Bankruptcy Trustees' Plan and Its Failure

Late in 1943 the City Council approved the principle of public ownership as the only remaining hope for unification and modernization and requested that the court appoint a committee to negotiate with the City on the subject of municipal purchase. The court designated the Sidley Committee for this purpose and negotiations commenced. At the request of that Committee the City submitted a purchase price which was $75,000,000 for Chicago Surface Lines, with the right in Surface Lines Companies to retain all cash in excess of $27,500.000.

While these negotiations were being carried on, the court directed the Sidley Committee to make a further attempt to prepare amendments to the 1942 plan which might meet the approval of the Illinois Commerce Commission. Such amendments were submitted to the court but were not approved either by the court or by the security holders and were never presented to the Illinois Commerce Commission. This ended all attempts to revive that plan.

Chapter X Petitions Approved

On September 18, 1944, the court filed an opinion reviewing the previous failures and finding that a new procedure was necessary ; it then entered orders approving as being properly filed and filed in good faith certain bankruptcy petitions under Chapter X of the Bankruptcy Act which had previously been filed against the Surface Lines companies and appointing trustees for the companies, who on November 28, 1944, filed a plan of reorganization. Simultaneously, the Trustees of Rapid Transit, who had been appointed in proceedings under section 77b of the Bankruptcy Act, filed a plan of reorganization for the Elevated Lines. The bondholders Committees, the Mortgage Trustees and others filed their intervening petitions, statements and proofs of debt, and the Bankruptcy Trustees listed the claims in the order of their priority in accordance with the decrees of June 18, 1928, and July 23, 1930, which had been entered in the Equity Causes No. 6839 and 9915.

Trustees' Plan Dissapproved

The Trustees' plan proposed a reorganization and consolidation of the Surface Lines and Rapid Transit under the ordinance of 1941, the time for the acceptance of which had been extended by the City from time to time. In February 1945, the court referred the Trustees' plan to the Illinois Commerce Commission and the SEC. On June 6, 1945, the Illinois Commerce Commission filed a report disapproving the Trustees' plan. This report contained the following statement:

> "In Summary, therefore, the Commission, with respect to the Trustees Plan, is of the opinion and finds:
>
> (1) that there is public interest in the Plan presented to this Commission in this proceeding;
>
> (2) that there is no likelihood that the present proposals will give to the company that is to acquire the properties of the existing companies in bankruptcy pursuant to the plans, a financial structure and financial resources sufficiently improved over those possessed by the Chicago Transit Company in Case 30937 to warrant the Commission granting the authorizations, consents and approvals that this Commission would be required to grant under the terms of the Illinois Public Utilities Act before the plans herein proposed can become effective; and
>
> (3) that the possibility of modifying the present proposals to a degree sufficient to justify this Commission in granting its authorizations, consents and approvals in the subsequent proceedings that must be brought under the provisions of the Illinois Public Utilities Act, is too remote

and unlikely to warrant a recommendation by this Commission to the Court that it proceed to obtain modifications of the instant proposals as against embarking upon the formulation of a new plan."

Thus it became impossible to consummate the Trustees' plan. On June 26, 1945, the court entered an order finding that the Illinois Commerce Commission had filed an adverse report and that thereupon the City had on June 11, 1945, permitted the 1941 ordinance to lapse, and directing that the SEC be relieved from reporting on the Trustees' plan. This concluded the fifth unsuccessful major attempt at reorganization.

At this point it appeared that the traction muddle would continue endlessly and that the old red streetcars and wooden elevated cars would have to serve as long as they held together. Three major obstacles stood in the way of prior attempts and continued to appear insurmountable:

(1) Valuation of Existing Properties. Any valuation of the Surface Lines and Elevated properties in bankruptcy had to be realistic enough to insure a financially sound system so as to obtain approval of the courts, the Illinois Commerce Commission and the Securities and Exchange Commission. Several of the earlier plans had been disapproved because they involved valuations that were too high. Furthermore, for sale purposes, an unrealistically high valuation and one not related to future earning capacity of a unified system would not attract any capital, either by way of loan or investment, and consequently sale would be impossible.

On the other hand, the lower the valuation, the more security holders there would be whose investment would be wiped out. This would not only militate against court approval of a plan, but as a practical matter, would increase the number of opponents seeking to block a plan. As it was, two groups of security holders bitterly fought the ultimate Plan at every stage. As a result of the opposition of one or the other or both of these groups, there were lengthly hearings in the District Court, three appeals to the United States Court of Appeals and two petitions for certiorari in the United States Supreme Court. One of these appeals, taken at the last minute, almost blocked the sale of the properties, and even after the properties were sold to CTA, one group continued its litigation, hoping to upset the sale.

(2) Unification. Unification of the Surface Lines and the Elevated was required by the City of Chicago as a condition precedent to the granting of a new franchise. Unification was also considered essential to the ultimate success of mass transportation in Chicago. This requirement, however, made it difficult to interest private capital, because the Elevated, while owning some valuable rights-of-way, had a consistently poor earnings record.

(3) Financing. Assuming unification and a fair sale price for the Surface Lines and Elevated properties, there were nevertheless further major financial problems to be solved. The first requirement was an earnings potential and new

capital sufficient to insure a much needed ten-year modernization program costing approximately $123,000,000.

The modernization program was needed because of the failure of the private companies to keep their equipment up to date. The SEC report stated that in January 1945, the average age of the 3,560 surface lines streetcars was approximately 28 years, only 2-1/2% being less than 15 years old. The elevated had approximately 1,600 cars of which 1,150 were primarily of wood construction and about 40 years old. 450 were steel and had been purchased between 22 and 27 years before.

The modernization program, as evolved in 1945, required to remedy this condition was 600 miles of bus substitutions for streetcar service; 220 miles of bus extensions; 175 miles of new express bus lines; the equivalent of 1,000 all-metal subway- elevated cars; 3,000 new buses; 1,000 new streetcars; transportation equipment for subways and modernization of rapid transit stations and facilities, including automatic signal and train control systems. The city estimated the cost of this program at about $123,000,000 as follows: $89,650,000 for 4,650 new cars and buses; $7,500,000 for an improved signal system for elevated lines; $26,442,000 for garages, shop equipment, track, paving, station improvements and other items*.

The second financial requirement was a method of fixing fares without the then prevalent lag between the need for an upward adjustment in fares and the granting of increased fares that would produce current revenues adequate to meet the cost of furnishing modern mass transportation. The fares obtained by the private companies were by no means adequate for this purpose, and capital investors could not be expected to risk their money in an enterprise where revenue was not allowed to keep up with costs. The costs of operation of a major mass transportation system are considerable. The wage and salary cost for employes needed to run a transportation system the size of the CTA runs into many millions of dollars. Purchasing, maintaining and renewing equipment adds many more millions; so does the cost of injuries and damages, fuel and other supplies and all the other cost items involved. If the revenue produced by the system is not sufficient to meet these costs, somebody must bear the loss- - either the investors, as in the case of the Surface Lines and Elevated Companies, or the taxpayers, as in the case of New York, prior to the adoption of an authority there which now restricts the tax subsidy to capital replacements and improvements.

If the loss is not met by either of those methods, then the system itself will run down, as did the Surface and Elevated companies, because new equipment cannot be purchased; or if adequate wages cannot be paid, the system will be unable to obtain employes.

* Brief of SEC in United States Court of Appeals, in re Chicago Rys, No. 9057 etc. See also 1945 Franchise Ordinance, Sec. 3 and Exhibit B.

A new private ownership might have been possible if the valuation of the Surface and Elevated properties had been the only problem.

But the insistence on the part of federal and city authorities that there be unification of the Surface and Rapid Transit systems presented a further obstacle.

Furthermore, private ownership had shown no disposition to provide the capital necessary for the modernization program; and finally, it could not have been granted the power to fix its own fares, a power which could be granted only to a public body.

It thus appeared clear that the only method of financing an adequate modern transportation system was either through revenue bonds or taxation, either method requiring ownership and operation by a public body. It was also recognized that the transit operator must be empowered to fix its own fares adequate to produce the necessary revenue. Again this could be done only if the ownership and operation were in a public body. As described in the opinion of the United States Court of Appeals*, public ownership was recognized as the only possible solution:

> "On January 19, 1945, the district judge stated that he had called upon the Governor of Illinois and the Mayor of Chicago to do all they could to agree on a solution of the traction problem. February 23, 1945, counsel for the City advised the court that the Governor and the Mayor had proposed a joint plan for the creation of a Metropolitan Transit Authority. This was the first time in twenty years of traction history that the City and State authorities were united on a plan of action for the solution of the traction problem."
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> * * * * * *
>
> "On April 12, 1945, the Governor of Illinois approved an Act of the General Assembly known as the 'Metropolitan Transit Authority Act' (Ill. Rev. Stat. 1945 c. Ill- 2/3, § 301 et seq.). Chicago Transit Authority, created by that Act, is a municipal corporation with power to acquire, own and operate for public service a transportation system in the metropolitan area of Cook County, Illinois. Broad powers for the acquisition of local transportation systems 'by purchase, condemnation, lease, gift or otherwise,' and for the issuance of revenue bonds are given by the Act. The Authority and all of its operations were expressly excluded from the jurisdiction of the Illinois Commerce Commission. April 23, 1945, the City Council of the City of Chicago passed

* In re. Chicago Railways, 160 F. 2d. 59.

> an ordinance authorizing exclusive local transit operation by the Chicago Transit Authority, effective after its approval by referendum. That ordinance and the Metropolitan Transit Authority Act were submitted to a vote of the people of Chicago. Both were approved and adopted, and appointments of members of the Chicago Transit Board, the governing body, were made by the Governor and the Mayor. Validity of both the Act and the ordinance was upheld. People v. Chicago Transit Authority, 392 Ill. 77."

The Supreme Court of Illinois in its decision sustaining the validity of the Transit Authority Act (People v. Chicago Transit Authority, 392 Ill. 77) stated that neither the City nor private funds were able to finance the rehabilitation of the Local Transit properties. The Court said: (pp. 88-89)

> "For more than fifty years various actions taken, both by private interests and by the city, in an effort to reorganize and procure an adequate transportation system, have all failed. It was found that the city was unable to take over these lines and that sufficient private funds could not be procured. * * *
>
> "* * * It appears impossible to finance the rehabilitation of existing facilities either by the city or by private funds. * * *"

The Supreme Court of Illinois arrived at the same conclusion as did the Illinois Commerce Commission, the City of Chicago and the State of Illinois, acting through its legislative and executive branches.

The Price Paid and the Price Asked

When the decision was finally reached that a municipal corporation was the only remaining alternative to keep public mass transportation operating in Chicago, the question inevitably arose, what price should be paid for the existing Surface Lines and Elevated System?

Many weeks of trial before Judge Igoe in the District Court of the United States were consumed in finding the answer to this question. There was no serious controversy over the price that the Authority proposed to pay for the Elevated properties. The price was fixed in the Plan at $12,162,500. This was not seriously controverted by the security holders, although the last prior rate base valuation fixed on the Elevated properties by the Illinois Commerce Commission was $36,000,000*.

* 21 Ill. Comm. Comm. 1150 at 1188 (order of June 15, 1942).

The serious controversy concerned the price that should be paid by the Authority for the Surface Lines properties. Three valuations were under discussion:

(1) The first one exceeded $170,000,000. This one naturally would have been preferred by the security holders of the Surface Lines.

(2) The second valuation, which investors whose securities were subordinate to the first mortgages insisted should be the minimum, was $138,000,000. This was based upon expert testimony, extending over many days, introduced before the District Court.

(3) The third valuation was that which had been submitted by the City, which was $75,000,000. In this was included the purchase not only of the physical properties but also funds which had been accumulated in the nature of a depreciation reserve amounting to approximately $24,000,000.

These three prices, the bases upon which they were built, and the disposition which the courts made of them will now be reviewed.

Some Investors Demanded 172 Million

In 1907, ordinances were granted to the Surface Lines operating companies. Section 23 of each of those ordinances provided that the City or its licensee should have the option, prior to February 1, 1927, to purchase the street railways property and rights of the companies at a price determined in accordance with a prescribed formula. The latter part of that Section then provided:

> "* * * and in case such reserved right of purchase be not exercised by the said City or its licensee and the City shall grant a right to another company to operate a street railway in the streets and parts of streets constituting the said street railway system of the Company, such new company shall be required to and shall purchase and take over the said street railways, property and rights of the Company at or after February first, 1927, upon the same terms upon which the said City might then purchase and take them over. " (Underscoring supplied.) *

The formula in the 1907 ordinance was imperfectly drawn in that it provided for the valuation of additions but had no adequate provision for the

* In the briefs in the United States Court of Appeals, Case No. 9057, the opinion of which is reported in 160 F. 2d. 59, there is contained a full analysis of that section and the arguments of both sides with reference to the point now under discussion.

charge-off and deduction of retirements. An accounting had been kept in accordance with that formula, which resulted, by the time of the trial of the reorganization case in the Federal Court, in a valuation of $172,000,000. Section 23, it was contended by certain security holders committees, was an immutable contract which prevented the City of Chicago from granting an ordinance to Chicago Transit Authority unless it would force the Authority to pay a price of $172,000,000. To do otherwise, they argued, would impair the obligations of a contract in controvention of Section 10, Article 1 of the federal constitution.

On its face there was seeming plausibility to this argument. Against it the Authority made certain replies. The first, that any rights under the ordinance were merely a property of the bankrupt companies and could be sold the same as physical assets. The summarization of this argument appears in the CTA's brief in these four short paragraphs:

> "Even if the rights under this clause attained a status as high as a chose in action, a court of bankruptcy could deal with them in Chapter X proceedings. The court in the administration of its powers may and often does sell or dispose of choses in action, even if the purchaser intends to absolve the obligor. Why should this highly tenuous 'right' be in a category different from or higher than property rights with which the court may indubitably deal?
>
> "It has been held that all contingent rights of a debtor become part of his estate in bankruptcy and may be dealt with by the court as are his other assets. (Pollack v. Meyers Bros. Drug Co., (1916) 233 F. 861, 867; In re Baudouine, (1899) 96 F. 536, 539, 540.)
>
> "If the companies now have any rights under the 1907 ordinances - -whatever they may be and however the terms of the ordinances may be construed- -such rights are assets of the companies' estates. If such rights have any value, they have no higher status than the street cars, trolley overhead distribution system, real estate and all other assets.
>
> "Whatever remote nuisance value there may be under that provision of Section 23 has been included in the enterprise valuation and will pass under the Plan with all other property." (pp. 138-39)

The next argument against the contention of security holders was that the clause quoted applies to an ordinance granted to a company but does not

apply to an ordinance granted to a municipal corporation like the Transit Authority.

The other arguments resolved about the point that this valuation, being so much higher than any value that could be established by evidence, would if enforced have the result that the existing companies could never be removed from the streets except after payment of the extortionate price. But since the Constitution and statutes of Illinois in effect at the time of the 1907 ordinances limited grants to twenty years, such a construction would be a violation of the Constitution. The arguments of the Transit Authority against the enforcement of that ordinance provision are summed up in its brief in these words:

> "We again submit that it is unnecessary for this Court to pass on the substantive validity of Section 23. It is enough that the court of bankruptcy had power to dispose of the highly dubious rights under that section together with the more substantial property rights of the debtor companies.
>
> "But if the question were necessary to be decided, it clearly appears that the section grants no permanent rights in the streets; that it has application only to a transaction with a 'new company' and not with a municipal corporation; and that, in any event, the part of Section 23 here involved is void as an attempt to alienate sovereign powers of state and city.
>
> "It is therefore respectfully submitted that the 1907 ordinances present no obstacle to the approval and confirmation of the Plan." (pp. 155-56)

The United States Court of Appeals summarized the situation with respect to the ordinances in these words:

> "Appellants assert that the plan deprives them of contractual rights contained in the 1907 ordinance and that the court was without jurisdiction to order the release of, or reduction of, the rights of the Series B bonds.
>
> "They argue that the City of Chicago induced investments of capital in the companies, now represented by the outstanding securities. They insist that the ordinance embodies covenants whereby the City reserved the right to purchase the properties and that the City agreed that if the City or its licensee did not purchase the properties on or before February 1, 1927, and if the City should thereafter grant a new ordinance

> to a licensee, then such licensee should be obligated to pay for the properties, a price computed under the terms of the 1907 ordinance; that the City has granted Transit Authority a new ordinance and is a licensee of the City and is obligated to pay the purchase price provided for by the ordinance. In other words, that the ordinance constituted a binding contract on the part of the City or its licensee to buy the properties at the price of $172,000,000, and Harris Trust & Savings Bank v. Chicago Railways Co., 39 F. 2d 958, and Superior Water, Light & Power Co. v. City of Superior, 263 U.S. 125, among other cases are cited.

The Court, after reviewing the cases cited, adopted the first of the legal theories advanced by the Authority and said:

> "Even so, that fact, under the circumstances in this case, is no reason why the plan should not be approved, since all contingent rights of a debtor pass to its trustee and become part of its estate, Pollack v. Meyer Bros. Drug Co., 233 F. 861, and may be dealt with in Chapter X proceedings."

In other words, the Court held that the rights to this kind of a valuation (based on the 1907 ordinances) were like any other property right of the debtor companies. And that property right could be sold by the bankruptcy court.

Minimum Price Demanded by Some Investor Groups was 138 Million Dollars

The objectors to the CTA Plan of acquisition not only advanced the 172 million dollar ordinance-formula-valuation as a contractual obligation; but also used it as evidence of value.

They insisted that the minimum price for the Surface Lines should be 138 million dollars.

When the Court fixed a fair upset price of 75 million dollars (which included the purchase of 24 million dollars of cash on hand), as will be shown in subsequent divisions of this chapter, the objectors took an appeal to the United States Court of Appeals for the 7th Circuit. In their briefs they set forth in detail their contentions respecting the 138 million dollar valuation. It would serve no purpose to analyze those contentions at length. However, under the rules of the Circuit Court of Appeals, a summary of argument is required. We now set forth that part of the summary dealing with the contention that the fair value of the Surface Lines for purchase and sale was 138 million dollars:

"This Plan is Unfair Because It Authorizes the Sale of the Plan Properties of Chicago Surface Lines for $75,000,000, a Grossly Inadequate Price.

> "The fair value of Surface Lines for purchase and sale is $138,000,000. The opinion testimony of the witness Peck supports such value. It is also demonstrated by the past record of Surface Lines, which shows great stability of gross and net earnings, and a high degree of stability in traffic. Surface Lines has always more than held its own with Motor Coach and Elevated competition. Recent earnings are not unfavorable, but still are not fairly representative, since the Company has been operating in receivership and without the benefit of modern equipment for which it has for many years had the funds in hand. New equipment would have decreased expenses $4,000,000 a year, and increased operating net $4,000,000 a year. The rate base for Surface Lines is $128,000,000. The City is under contract to purchase the lines for $172,213,975.27. New cost depreciated is $144,575,350. Reorganization value has been fixed by the Court at $179,348,467.57. All of this establishes $138,000,000 as the fair cash sale value of the properties. The SEC reports and the Judge's opinion, which hold otherwise, are unrealistic and incorrect."

The details of that argument are set forth in the briefs, which are on file at Northwestern University, as indicated by a previous footnote.

The principal argument against that contention of valuation was made by the Transit Authority itself. Here we set forth part of the summary of the argument of the CTA which appears at the beginning of its brief filed in that Court:

I.

> "The evidence, particularly that pertaining to earning capacity of Surface Lines properties, does not justify a higher valuation than the 75 million dollar fair upset price fixed by the District Court.
>
> "Valuation is a major issue, for if the District Court's finding is upheld, appellants have no further interest in these proceedings since their claims are without value.
>
> "A. The finding of the District Court should not be

disturbed unless clearly erroneous. This is particularly true as the Court has had first-hand knowledge of operating results for two decades.

"B. The approved basis of valuation is the probable earning capacity of the enterprise.

"C. The past earnings record of the Surface Lines indicates a declining industry. Between the late 1920's and the year preceding the war, the patronage of Surface Lines had declined by over 150 million passengers per year. While net earnings reached a high (after city compensation, but before interest and federal taxes) of 10 million dollars in 1929, they then declined steadily to 1938, 1940 and 1941. With the aid of a fare increase and under the impact of war-time travel (which restored patronage to the levels of the late 1920's) the net earnings increased, but only to a high of about 5-1/2 million in 1943. Since then, despite continued high traffic, they have declined to less than 4 million dollars in 1945. The average of the net earnings of 1940 to 1944, inclusive, capitalized at 5-1/2% results in a valuation substantially that fixed by the Court. If capitalized at 7%, the resulting valuation is 15 million dollars lower than the one approved by the Court.

"D. In 1946, after approval of the Plan, wage increases were allowed which increased the annual expenditures between 7-1/2 and 8 million dollars, per year, according to the estimate of the Trustees. The wage increases were retroactive to March 17, 1946. The trustees report additional increases in expenses amounting to $1,370,000 per year due to higher prices of materials and additional amounts necessary for damage claims. In addition, pending demands for more liberal pensions, if allowed, would cost 1-1/2 to 2 million dollars additional per year. According to the estimates presented by the Trustees to the Illinois Commerce Commission, Surface Lines are operating at a deficit. This deficit would appear to be somewhere between $5,390,000 and $7,390,000 per year at the present time. Surface Lines has been a declining industry.

"E. Detailed estimates of future earnings, giving effect to the savings to be attained through unification and modernization, and assuming the wage and price levels of 1944 and the rate of fares of those years, and assuming an ordinance substantially the same as the one

of 1941, result in a maximum valuation of $82,676,000 for the combined Surface Lines and Rapid Transit systems at the end of the modernization period.

"F. The thorough and analytical reports of the SEC, which made certain assumptions more favorable to the companies than those made by proponents' witnesses, results in a valuation which also sustains the Court's findings. The Plan now before this Court has, after thorough study, been pronounced fair by the SEC. Other analyses of prospective earnings establish valuations no higher than, and in the main, substantially lower than the one fixed by the Court.

II.

"The testimony of Appellants' principal witness Peck, which was premised largely on a misconception of certain orders of the Illinois Commerce Commission, when adjusted to conform to the facts and when revised by the application of a number of factors which were disregarded by that witness, such as new capital necessary for modernization, improvement of service to alleviate over-crowding, wage increases (which have since taken place), the uncertainties in the franchise situation as to what operations will be granted the Surface Lines if a separate operating ordinance were obtained, the difficulties inherent in increasing the rates of fare due to automobile competition and other factors, and when brought to reality by the use of a rational rate of capitalization, points to a valuation of less than 75 million dollars.

III.

"Objective tests of value, such as rates of capitalization of earnings employed in sales of other properties, the total market value of all outstanding securities of Surface Lines over the period of the last 15 years, the failure of the investment community of the United States to indicate a willingness to pay more for the properties, and the basic City purchase price outlined in the 1941 ordinance, fully sustain the Court's conclusion.

IV.

"Appellants' arguments on value are based on

erroneous principles of law and on misconception and misinterpretation of the evidence.

"A. The 1942 Plan valuation did not contemplate a sale but was the basis for a proposed distribution of new securities. It was held by the SEC to be defective. The Illinois Commerce Commission stated that it ignored sound financial principles. The District Court in its opinion found that changed conditions since 1942 have made those valuation findings completely inapplicable.

"B. The rate found by the Illinois Commerce Commission is, under all authorities, unacceptable as a legal criterion of value.

"C. The so-called 'purchase price' under the 1907 ordinances is based on an arbitrary formula for price fixing which applies a principle of inflated original cost, with no provision for obsolescence or retirements. It is no test of value. Even appellants' witnesses have stated that 'purchase price' is 28 million dollars more than cost less depreciation. It is 34 million dollars more than the highest value assigned to the properties by appellants' witnesses.

"D. Appellants' arguments, insofar as they are based on the 1907 ordinance price, are completely unsound in that they assume the validity of that price. The figures in appellants' exhibits (when the 1907 ordinance price is disregarded) establish a valuation that supports the one fixed by the Court."

The Circuit Court of Appeals in its opinion made the following observations:

"We now consider appellants' major contention that the plan is unfair and contrary to the applicable law, in that the properties were insufficiently valued, and that the finding of a value of $75,000,000 is without support in the record."

After holding that the District Court had applied the correct legal principles of evaluation, the Court continued:

"With these observations in mind, we pass to (B), the question of evidentiary support to sustain the findings. Appellants point to the fact that in 1941 when the court had before it a proposed plan of unification of the

companies with those of the Rapid Transit system, the court found the value of all of the assets of the Surface Lines at $136,329,674. In addition, they say that they offered evidence embracing factors on which to base valuations. This evidence, they claim, tended to prove that the earnings of the Surface Lines over the years demonstrate stability as to the probable earnings of the system, and that the fair value of the properties is $138,000,000. This evidence the court considered, but was not convinced that the properties had a value greater than $75,000,000.

"It would unduly lengthen this opinion to relate in detail the evidence of appellees. We need only to say that it showed the condition of the industry as a whole (the court in Market Street Ry. v. Railroad Commission of California, 324 U.S. 548, 554, said it was 'a generally sick industry.'); the past earnings of the Surface Lines, declining over a period of twenty years; estimates of future earnings, together with a series of elements likely to increase costs and to decrease revenue. It revealed that the present plight of Surface Lines was largely the result of increased expenses, bus competition, and the use of the private automobile, and the court had before it exhibits and testimony which translated this declining trend into capitalized value by capitalizing the average net earnings for 15-year, 10-year, and 5-year periods before and including 1944. The net of the five years through 1944 capitalized at 5.5% brought a value of $77,428,000 and if capitalized at 7%, a value of $60,836,000. It is clear that the court considered every proper factor suggested by the parties, and having in mind that an estimate, as distinguished from mathematical certitude, was all that could be made, Group of Investors v. Chicago, M., St. P.& P.R.R., supra, 542, it bottomed its finding of value upon all the evidence before the court. In addition it had the benefit of expert and disinterested advice, rendered in conformity with a report of the SEC under § 172 of Chapter X. True, the report was not evidence. It was but advisory, intended to aid the court in the solution of the many complicated financial and business problems involved.

"Under these circumstances we think the court applied the correct juridical concepts of value relevant in reorganization cases, and since the court's finding of value was made on disputed evidence, we cannot say that the finding of a value of $75,000,000 was without support in the record; consequently, the orders must be affirmed. It is so ordered."

The 75 Million Dollar Valuation

The Surface Lines valuation fixed by the Federal courts after protracted hearings was 75 million dollars, which included the purchase by CTA of approximately 24 million dollars in cash on hand which had been accumulated in a depreciation fund.

What was the origin and basis of this valuation?

When the CTA came into existence on April 12, 1945, the City of Chicago already had a plan of reorganization on file in the United States District Court. This plan, filed under authority of the City Council of that City, suggested a purchase price of 75 million dollars. On April 23, 1945, the City Council adopted an ordinance granting to Chicago Transit Authority, which was then just eleven days old, the right to acquire, construct and operate facilities for local transportation for a term of fifty years.

In Section 2-A of that Ordinance, the rights of the City under the Plan, which had been filed in the District Court, were assigned to CTA "to consummate the purchase at the prices respectively, of seventy five million dollars ($75,000,000) for Surface Lines properties and twelve million one hundred sixty two thousand five hundred dollars ($12,162,500) for Rapid Transit Lines properties, all as described in and subject to all the terms, provisions and conditions contained in said Proposal and Plan, and subject to such reasonable modifications thereof as may be made by said Court and as may be acceptable to the Grantee (CTA), and to take all steps required to be taken in connection therewith. "

Thus, the City Council again in effect stated the purchase price for the Surface Lines (as well as for the Elevated) which was eventually approved by the Federal courts and paid by the CTA. This is the first basis for and approval of the purchase prices that were paid.

Under the Federal statutes, the District Court was required to submit to the Securities and Exchange Commission (herein referred to as SEC), for an advisory report, the Plan of Reorganization that had been filed by the City- - being the Plan which was later in substance adopted by CTA.

The SEC made a most thorough analysis of the Plan and of the prices that were proposed to be paid, in its report filed on August 11, 1945.* It was the conclusion of SEC that the price proposed to be paid for the Elevated was fair, notwithstanding a rate base valuation fixed by the Illinois Commerce Commission on those properties about three years previously which was almost three times as great as the proposed price.

As to the properties of Surface Lines, the SEC arrived at a valuation of approximately 81 million dollars. It recommended, however, that with

* 20 SEC Decisions and Reports, page 244.

certain changes in the Plan whereby the City would surrender some claims that it was making against the Surface Lines, the Plan would be fair. Those claims were subsequently surrendered, and the Plan was amended accordingly.

Later, after the Plan was amended in accordance with its recommendations, the SEC filed a supplemental report holding the 75 million dollar purchase price to be fair.**

This Supplemental Report recognized that on October 8, 1945, CTA had become substituted for the City of Chicago in the Reorganization Plan and that the Authority had filed an Amended Plan in accordance with the prior recommendation of the SEC. It concluded:

> "In view of the adoption by the Authority in its amended plan of the recommendations contained in our report on the City's plan with respect to the fairness of the proposed upset price, we are of the opinion that the amount of the proposed upset price for the plan properties of Surface Lines is fair."

This then was the second basis for the price paid for the Surface Lines properties by CTA.

The third basis was in the legal proceedings in the District Court of the United States and in the United States Court of Appeals, which have been referred to earlier in this chapter.

The hearings in the District Court presented a bitterly contested issue as to the fairness and adequacy of the price. After the decision by the District Court, appeals were taken as previously noted, and the arguments which are summarized above were made and presented to the Court of Appeals.

Again the conclusion was reached that the price of 75 million dollars was fair and adequate.

Later the objectors to the Plan filed a petition in the Supreme Court of the United States in an effort to have reviewed and set aside the findings and orders of the District Court and the Court of Appeals. The highest Court of the land, however, refused to reconsider the record and the decisions of the two lower courts.

The prices paid for the properties therefore were based upon:

(A) The determination of the City Council;
(B) The concurrence of the Illinois Commerce Commission;
(C) The approval of the SEC; and
(D) The judicial determination of the District Court

of the United States affirmed by the U. S. Court of Appeals and in effect approved by the Supreme Court of the United States.

**SEC Corporate Reorganization Release No. 66, Feb. 8, 1946; copy of this Supplemental Report is in Research Data, Chapter IV.

CHAPTER V

MODERNIZATION - ITS COSTS, RESULTS AND DISAPPOINTMENTS

For Release To Morning Papers of Tuesday, May 24, 1955
and All Papers Thereafter

Chicago, May 23 - - - Chicago Transit Authority's current modernization program, involving expenditures to date in excess of $98,500,000, is perhaps the most outstanding and successful transit modernization program in the nation, Werner W. Schroeder, Vice Chairman of Chicago Transit Board, declared today in the fifth chapter of a transit research study he is conducting.

More has been done in the 9-1/2 years of CTA's existence (only seven years and seven months as an operating agency) than had been accomplished in physical improvements of Chicago's local transit during the preceding 38 years, Mr. Schroeder said.

Credit for this accomplishment, Mr. Schroeder said, goes to the three men who have served as chairman of Chicago Transit Board - - the late Philip Harrington, first chairman of the board; Ralph Budd, former chairman; V. E. Gunlock, present chairman; to their associates and staff members, and to Walter J. McCarter, who has served as CTA's general manager from the beginning of its operations.

For the expenditure of more than $98,500,000, Mr. Schroeder continued, CTA has obtained 3,586 cars and buses (exclusive of former Chicago Motor Coach Company equipment), has modernized its garages and shops, shop tools and other facilities, and has modernized its services, both surface and rapid transit.

The new equipment purchases, Mr. Schroeder added, consist of 600 streamlined "Green Hornet" streetcars, 561 trolley buses, 900 gasoline and diesel motor buses, 1, 051 L-P gas (propane) buses, and 474 all-metal "L"-Subway Cars. Among the latter, Mr. Schroeder explained, are 270 units being fabricated from the components of an equivalent number of Green Hornet streetcars.

The $98,500,000 expenditure has been financed, Mr. Schroeder explained, by approximately $30,000,000 in renewal fund cash obtained in the purchase of

the Chicago Surface Lines; by about $61,000,000 cash from depreciation reserves; by cash from the 1947 and 1952 bond issues, and by miscellaneous and operating income.

Additional modernization expenditures contemplated, Mr. Schroeder continued, will increase the modernization program outlay to slightly in excess of $106,000,000.

Of this $l06,000,000 spent or about to be spent on modernization, Mr. Schroeder continued, all but about $25,000,000 has been paid. Of the unpaid balance, Mr. Schroeder continued, a total of $14,144,000, represented by equipment trust certificates, will be paid from currently accruing depreciation reserves. The remaining $11,000,000, obtained from the Series of 1947 and Series of 1952 revenue bonds, will be paid in due course, Mr. Schroeder said, by CTA's debt service program.

Although the modernization program has been outstandingly successful in its physical aspects, Mr. Schroeder continued, it has not been as successful as anticipated in increasing the speed of transit, in holding a large part of the war-time record-breaking passenger traffic volume, or in financial results.

The high speed potentials of the modern surface equipment (buses and streetcars) has been almost completely off-set by street traffic conditions resulting from the record-breaking ownership and use of private automobiles, Mr. Schroeder continued. However, on the rapid transit system, where the speed potential of the new equipment could be translated without hindrance into actual operation, the rate of decline in passenger traffic volume has been substantially less, Mr. Schroeder said.

In fact, Mr. Schroeder continued, there has been a reversal in the sharp downward trend of rapid transit passenger traffic volume, which started in 1950, coinciding closely with speed-ups of service made possible by the new equipment and modernization operating procedures.

Although the modernization program has enabled CTA to make very substantial economies, Mr. Schroeder continued, the financial results of modernization have been disappointing because of spiraling cost of conducting transportation including the expense imposed upon CTA and its riders by street congestion caused by competing traffic.

The heaviest losses, Mr. Schroeder said, have resulted from streetcar and rapid transit operations. The losses from these operations, he said, have been offset by the financial benefits obtained from motor and trolley bus operations.

"The loss in streetcar operation is a heavy burden on the system as a whole and leaves no room for doubt as to the foresight of CTA in concentrating its efforts on replacing streetcars with buses as rapidly as its finances permitted, " Mr. Schroeder said.

"As to the subway and elevated," Mr. Schroeder continued, "the argument (that rapidity of service attracts patrons) is good, but as to financial operating results, it does not show up as well as one would expect.

"It should be noted, however," Mr. Schroeder continued, "that the elevated-subway cost of operation is only 60 cents per mile, approximately 4-1/2 cents less than for bus operation, for vehicles having as great, or greater, load capacity. It is not unrealistic to believe that rapid transit revenues could approximate those of motor buses, that is, 72 cents per mile.

"Today, Chicago has the fastest rapid transit service in its history and further improvements in rapid transit service are in progress, " Mr. Schroeder continued." Not later than 1957, perhaps, the Garfield Park route, which serves the West Side of Chicago, Oak Park and Forest Park, will be operating on a high-speed right-of-way in the median strip of the Congress Street superhighway. The type of cars planned for use in this service may be high speed units rated at a maximum of 70 to 75 miles per hour. Development work, in co-operation with General Electric and Westinghouse, has been underway for some time and four experimental units are expected to be ready for road tests in late 1955. Certain of these high speed features are going to be incorporated in 40 cars which are to be ordered in the near future.

"This fast express right-of-way will extend as far west as the present terminal at DesPlaines Avenue, Forest Park, where there has already been provided facilities for the interchange of passengers with CTA feeder buses serving Maywood, Bellwood and Westchester, and with the Chicago, Aurora and Elgin suburban electric railway."

Mr. Schroeder then listed other innovations in rapid transit service, such as co-ordination of surface transit with rapid transit by the establishment of convenient transfer interchange locations and off-street passenger inter-change terminals jointly serving rapid transit trains and feeder buses; and the establishment of parking lots for CTA patrons who use automobiles for parts of their daily trips.

"These are examples of changes in the character of mass transit now being made in Chicago to achieve greater and more effective use of the 'traffic-free' "L"-Subway system, " Mr. Schroeder said.

"It is hoped that motorists will become more cognizant of the advantages offered by CTA's excellent rapid transit "L"-Subway service and by their patronage put this service on a paying basis, " Mr. Schroeder concluded.

* * * * * * *

CHAPTER V

MODERNIZATION - ITS COSTS, RESULTS AND DISAPPOINTMENTS

The preceding four chapters are in a sense historical. They have attempted to show the basic facts in Chicago's transit system and to delineate the principal problems that have arisen and that now face the people of this city.

We now begin a consideration of various ideas for the solution of these problems. This will be a critical examination of thinking on metropolitan transit.

The "Solution" of 10 Years Ago

Ten years ago - - that is in 1945 - - the hearings were begun which eventually led to the Federal Court reorganization of the transit situation in Chicago. These hearings began early in that year and continued intermittently for more than a year. In that time CTA was created by the Legislature; a City ordinance authorizing CTA use of the streets was passed by the Council; both were adopted by a vote of the people; the CTA Board was appointed and organized; the reorganization plans of the City which had been filed in the Federal Court were adopted by the CTA; and protracted hearings were conducted before the Honorable Michael L. Igoe, Judge of the District Court.

In those hearings a number of experts testified. They had before them the situation as it then appeared. They also were, in the main, acquainted with the City's plans for modernization of equipment and other facilities.

While they disagreed on many points, both major and minor, they were all of one mind on the effectiveness of a modernization program. They were hopeful that modernization would be an effective answer to transit problems; that it would stop the decline in traffic; that it would attract automobile owners from their cars to the publicly operated vehicles; and that as a result, patronage and income would improve with its progress.

This chapter will deal with modernization - - an objective that has been largely accomplished despite obstacles which at times seemed insurmountable.

And yet, in itself, modernization has not turned out to be the answer to transit difficulties.

Modernization of Vehicles

The most dramatic and noticeable phase of the modernization program has been the acquisition of new vehicles.

Although CTA did not take over operation of the properties until October 1, 1947, it did, by the referendum election of June 4, 1945, become an entity

authorized to exercise all of the powers granted to it by the Metropolitan Transit Authority Act and, by agreement between the Federal District Court and the CTA, initiated the modernization program in 1945 under a plan for the Surface Lines to purchase modern streetcars and buses with cash from that company's renewal funds.

On January 1, 1945, before the Surface Lines' renewal funds were made available to CTA, the Surface System had on hand 3,560 streetcars, 152 trolley coaches and 259 motor buses, or a total of 3,971 vehicles. The average age of these has been referred to in prior chapters of this study.

Under the modernization program, 3,586 cars and buses have been purchased (exclusive of the former Chicago Motor Coach Company equipment) and all except 1 Propane motor bus and 20 "L"-Subway cars had been received and assigned to regular, daily service by April 17, 1955. This equipment consists of 600 streamlined PCC streetcars, 561 trolley coaches, 900 gasoline and diesel powered motor buses, 1,051 propane-fueled motor buses, and 474 all-metal "L"-Subway cars. Included among the 474 "L"-Subway cars are 270 cars that are being fabricated using certain components of an equivalent number of PCC streetcars. This procedure results in a saving of about $20,000 per car, which is equivalent to the cost of a modern motor bus.

On April 17, 1955, the score stood as follows: There were on hand 439 streetcars, 625 trolley coaches, and 2,565 motor buses (including the former Chicago Motor Coach Company equipment), a total of 3,629 surface vehicles, of which 3,412 or 94% were new in the sense of having been acquired by CTA since 1945.

On the Elevated the changes are, if not quite as wide percentagewise, nevertheless of significant importance. On October 1, 1947, the Authority acquired 1,623 vehicles of which 1,028 were motor cars and 595 trail cars. (There had been only 2 elevated cars acquired in the interim between 1/1/45 and 10/1/47.) Since that time the total number has been reduced somewhat to 1,297 as of April 17, 1955, of which 1,232 are motor cars and only 65 are trail cars. Of this total, 454 are new vehicles, which include 250 PCC cars converted for "L "-Subway operation.

A recent report on the modernization program shows the modernization program somewhat more comprehensively. The figures in that report include the years 1945 and 1946. This more comprehensive survey shows the following with reference to equipment purchases and prices during this period ended December 31, 1954.

SURFACE SYSTEM

Passenger Equipment Purchased

(Does not include 585 Diesel and 10 Gas Motor Buses acquired from Chicago Motor Coach Company)

PCC Street Cars Purchased				
Year 1946	103	Cars	$2,538,675.23	
Year 1947	199	Cars	4,984,300.22	
Year 1948	298	Cars	7,610,938.51	
	600	Total		$15,133,913.96
Trolley Coaches Purchased				
Year 1948	210	Coaches	3,775,060.14	
Year 1951	190	Coaches	3,300,566.00	
Year 1952	159	Coaches	2,762,475.47	
Year 1954	2	Demonstrators	13,597.71	
	561	Total		9,851,699.32
Gas Motor Buses Purchased				
Year 1945	55	Gas Buses	513,134.62	
Year 1946	172	Gas Buses	2,322,503.18	
Year 1947	271	Gas Buses	4,136,888.90	
Year 1948	272	Gas Buses	4,328,216.26	
	770	Total		11,300,742.96
Diesel Motor Buses Purchased				
Year 1946	20	Diesel Motor Buses	305,273.00	
Year 1947	10	Diesel Motor Buses	177,353.81	
Year 1948	100	Diesel Motor Buses	1,613,559.51	
	130	Total		2,096,186.32
Propane Motor Buses Purchased				
Year 1950	31	Propane Motor Buses	$515,303.08	
Year 1951	520	Propane Motor Buses	8,699,229.04	
Year 1953	105	Propane Motor Buses	2,000,304.20	
*Year 1954	295	Propane Motor Buses	5,832,051.28	
	951	Total		$17,046,887.60
	3, 012	Total Surface System	$55,429,430.16	

* Of an additional order for 100 Propane Buses, 22 had been received to December 31, 1954, but not paid for until January 1955.

The same report includes expenditures that have been made for advance payments on new cars which in part have not yet been delivered. This part of the report reads:

RAPID TRANSIT SYSTEM

Rapid Transit Elevated and Subway Cars

Year 1947	2	Articulated Cars	$ 260,006.23	
Year 1948	2	Articulated Cars	259,173.28	
Year 1950	100	PCC Cars	3,874,802.62	
Year 1951	100	PCC Cars	3,977,184.48	
Year 1953		Advance Payments on 250 Cars	3,184,370.60	
Year 1954		Additional Payments on 250 Cars	9,323,449.55	
		Total		$20,878,986.76

The Comprehensive Overall Program

The purchase of rolling stock is undoubtedly the most important as well as expensive part of modernization, but there are many other facets to a program of bringing a transportation system up to date.

The report of the Property Accounting Department dated March 10, 1955, contains the following introductory statement which gives a brief summarization of what was comprised in the CTA modernization procedures:

> "This report on expenditures by the Chicago Transit Authority for modernization up to and including December 31, 1954, covers the cost to provide terminal facilities for the gas bus, trolley coach, and streetcar loops; to construct new and additional bus garages and to improve existing bus garages; to convert street carhouses for bus storage and service; to improve storeroom buildings and convert street carhouses into storeroom facilities; to change electrical distribution equipment of streetcar lines to trolley bus operation; to rearrange electrical distribution for P. C. C. car operation; to provide tokens for improved fare collection; to install new bus stop signs; to acquire new passenger equipment and improve existing rolling stock; to extend and improve elevated station platforms to accommodate longer trains with remote control door operation; to improve the signal and interlocking system; to modernize the shops and yards; to install equipment and appurtenances in the subways; to improve and expand supervisory control system; to provide modern office machine devices and furniture; and to acquire modern machinery and tools to service the various new types of equipment. It does not include the purchase price of the Chicago Motor Coach or improvements thereto. Also not included is the purchase price of the portion of the Evanston Branch of the Milwaukee

Road and the purchase price of fixed transportation facilities from the Chicago, Aurora and Elgin Railway.

"The Chicago Transit Authority has paid the City of Chicago monies for paving of streets where street car operation has been abandoned."

According to this Report, the overall expenditures for the modernization program exceeded 98 million dollars. These, according to the Report, are broken down as follows:

MODERNIZATION PROGRAM

Expenditures by CTA for Modernization Up to and Including December 31, 1954

Summary

Surface System	$69,811,914.93
Rapid Transit System	25,661,879.52
General Office Furniture and Office Devices	436,606.60
Administrative Costs Applicable to Construction	2,592,000.00
Total	$98,502,401.05

A further breakdown is extremely enlightening. The itemization, which appears on Pages 2 and 3 of the March 10, 1955 Report, is in these figures:

SURFACE SYSTEM

Gas Bus Loops and Terminals	$ 513,574.44
Trolley Coach Loops and Terminals	737,585.49
Street Car Loops and Terminals	317,115.50
New and Additional Gas Bus Garages	3,899,024.52
Carhouse Conversions and Bus Garage Improvements	2,873,602.84
South Shops Buildings and Contents	729,506.64
West Shops Buildings and Contents	625,949.82
Improvements to Storeroom Buildings	308,645.28
New and Additional Floating Tools and Machinery	154,196.67
Trolley Coach Line Extensions	18,889.64
Trolley Coach Line Conversions from Street Car Operation	2,308,642.45
Trolley Coach Pull-Out Routes	33,678.77
Electrical Line Work A/c Street Paving	126,266.31
Electrical Line Work A/c P.C. C. Car Operation	76,771.60
Electrical Line Work A/c Changing Downtown Streets to One-Way Traffic	25,499.50
Tokens	93,035.64
Signs for "Bus Stop" and "No Parking"	43,185.11
Work A/c Congress St. Superhighway	150,355.83

Passenger Equipment Purchased			$ 55,429,430.16
600	P.C.C. Street Cars	$15,133,913.96	
561	Trolley Coaches	9,851,699.32	
770	Gas Motor Buses	11,300,742.96	
130	Diesel Motor Buses	2,096,186.32	
951	Propane Motor Buses	17,046,887.60	
3,012	Units Purchased	$55,429,430.16	
Improvements & Auxiliary Equipment added to Passenger Equipment			814,342.62
Automotive & Miscellaneous Equipment			532,616.10
	Total Surface System		69,811,914.93

RAPID TRANSIT SYSTEM

Platform Extensions and Station Improvements			517,344.36
Signals, Interlockers, Track Drains and Footwalk			223,068.58
Yards and Shops			2,178,991.98
Subway Equipment and Appurtenances			506,520.16
	Dearborn-Milwaukee Subway	$448,521.06	
	State Street Subway	57,999.10	
		$506,520.16	
Supervisory Control Equipment			223,609.90
Electrical Distribution & Power Conversion Improvements			354,664.45
Curve Rail Lubricators			27,567.34
Tokens			22,030.00
204 Rapid Transit Elevated & Subway Cars & Payments to date on 250 Cars			20,878,986.76
Improvements and Auxiliary Equipment added to Passenger Equipment			654,020.22
Automotive and Miscellaneous Equipment			14,406.15
Service Equipment			60,669.62
	Total Rapid Transit System		25,661,879.52
General Office Furniture and Office Machine Devices			
	Furniture	$161,036.73	
	Office Machines & Devices	275,569.87	
	Total General Office Furniture, etc.		$ 436,606.60

General and Administrative Costs Applicable to Construction		
From 10-1-47 to 12-31-53	$2,232,000.00	
Current Year to 12-31-54	360,000.00	
Total Administrative Costs		2,592,000.00
These constitute a total of		$98,502,401.05

Other Aspects of Modernization

The reader will have noticed that there is lack of uniformity in the figures respecting vehicles. This is because the motor buses acquired from C. M. C. Co. are not included in the cost data on passenger equipment purchased, and also because certain PCC Cars were converted to "L "-Subway cars and other vehicles acquired since 1945 have been retired.

A third report on modernization is the March 22, 1955 report of W. C. Gilman & Company, Engineers, of New York, made in accordance with the provisions of the Trust Agreement securing the 1947 Revenue Bonds. With respect to the progress on modernization, that Report, which covers 1954, states:

> "During the year, the CTA continued its program of converting street car lines to motor bus operation and of providing "L"-Subway cars of the modern all metal type to make up an existing shortage in equipment and to replace wood and steel combination cars now in use on the Rapid Transit System.
>
> "With the conversion of two routes on February 15, and five routes on May 30, 1954, all the old red street cars disappeared from regular service. These conversions placed into service 334 propane buses in lieu of 275 street cars. Street car operation is limited to four routes of which three - Broadway-State, Clark-Wentworth and Western Avenue - are operated weekdays with two-man, "Green Hornet", PCC cars and on week-ends and holidays with buses. The fourth - Cottage Grove - is operated with one-man PCC cars at all times.
>
> "During the year, CTA ordered an additional 100 propane buses, at a cost $19, 860 each, and 20 additional "L " -Subway cars to be constructed from the component parts of 20 "Green Hornet" street cars sold to St. Louis Car Company. The net base price of these new cars will be $32, 332 each. As of December 31, 1954, there remained to be delivered 78 propane buses and 94 "L"-Subway cars out of a total of 3, 314 passenger vehicles ordered for modernization of the entire system since the Authority's existence. Upon completion of these orders, the modernization of the Surface System fleet will be 95% complete and the Rapid Transit approximately 75% complete.

"In addition to purchases of new passenger equipment, modernization progress in 1954 included the building of additional off-the-street bus terminals, remodeling of "L" stations, installation of an automatic train routing device at a Rapid Transit junction point, improving shop and garage facilities, and installation of fare boxes on Surface System vehicles. The latter improvement, long delayed, was finally completed on February 7, 1955, so that now all of the approximately 3,650 vehicles on the Surface System are equipped with fare collection boxes."

Undoubtedly it can be said that in no property in America has a program of modernization such as this been carried forward as successfully as this.

When one considers that the financial history of transit operation in Chicago has been on the whole unfortunate to investors, and when it is added that there has been a steady fall-off in traffic, due principally to the competition of the private automobile, and an astronomical rise in wages, going back over 35 to 40 years, these accomplishments are a triumph for those who have held the chairmanship of Chicago Transit Authority since the board was organized on June 28, 1945: First of all, Mr. Philip Harrington - - the first Chairman - - the engineer-lawyer, who conceived the idea of the CTA as being the only force that could save public transportation in Chicago; then, Mr. Ralph Budd, a man with a lifetime of experience as an engineer and executive of transcontinental railway systems, who, upon his retirement from the presidency of the Burlington Railroad, spent five years in advancing the modernization and improvement of the CTA; and finally, since July 1, 1954, Mr. V. E. Gunlock, formerly Commissioner of Public Works and Commissioner of Subways and Superhighways of the City of Chicago, who is bringing to the CTA a know how and experience which is rare among transit operators. From the beginning of CTA the continuity of the modernization program has been directed and supervised by the General Manager, Mr. Walter J. McCarter. To these men, and those whom they gathered around them, is due great credit for an accomplishment which is probably without parallel in American Transit operation.

The Payment of Costs

The question naturally arises, how this modernization was financed; particularly, how it was possible to do so in view of the rather discouraging financial history of the 40 years from 1907 to 1947. The expenditures for modernization, which includes the total shown in a prior paragraph, are actually these:

Expenditures:

Cost of Land, Buildings, Rolling Stock, Etc.	$ 98,502,401
Payments to the City of Chicago for paving of abandoned streetcar rights-of-way	1,524,584

Payments on account of purchase of fixed transportation facilities from the Chicago, Aurora and Elgin Railway	290,000
Total Expenditures for Modernization	$100,316,985

Where then did the CTA obtain the money to do this ? The source of the funds and the balance on hand as of December 31, 1954, follows:

Source of Cash Available for Modernization:	
Special Modernization Funds from C. S. L. Renewal Funds, expenditures from 1945 to date	$ 30,088,947
Series of 1947 Revenue Bonds (Allocated Residue)	6,003,135
Series of 1952 Revenue Bonds (Allocated Residue)	5,502,448
Miscellaneous income from sale of capital assets, insurance recoveries, interest on investments of funds controlled by Revenue bond Trustee, etc.	2,716,511
Income from operation, excess after City Compensation	412,016
Depreciation Cash:	
For Construction	29,216,446
Payments on Equipment Trust Certificates	17,940,000
Equipment Trust Certificates (Unpaid at December 31, 1954)	14,144,400
Total Cash Available	$106,023,903
Unexpended Funds at December 31, 1954:	
Funds under control of Equipment Trustee for purchase of equipment	$3,053,095
Unexpended balance in Modernization Fund	1,998,240

Comments on This Financing

The first item of cash exceeding 30 million was the amount received from the prior Surface Lines operation. In previous chapters we have referred to this as being 24 million dollars. Actually the expenditure for modernization had begun in 1945, but at one point during the reorganization litigation, the purchases had brought this fund to approximately 24 million dollars; so that in the discussions and the evidence, the 24 million dollar figure was taken as being approximately correct. By October 1, 1947, the takeover date, this fund had been brought down to approximately 19 million dollars by reason of

additional purchases. In any event, the figure of slightly more than 30 million dollars represents the funds that were made available from prior operations even though some of those funds were spent in the 2-3/4 years prior to the CTA takeover.

The $11,505,583 of 1947 and 1952 revenue bonds used for modernization has been retired in part. The 1947 bonds are retired to the extent of 4.06% of the principal. The 1952 bonds are retired to the extent of 1.27% of the principal, so that there remain unpaid in those two issues approximately 11 million dollars which has gone into modernization and has not yet been retired. The other unpaid item is that of outstanding equipment trust certificates which on December 31, 1954, totaled $14,144,400. Thus, out of the 106 million dollars of funds available, everything with the exception of approximately 25 million dollars has been financed from renewal funds or earnings. Against this 25 million dollars of revenue bonds and equipment trust certificates used in the modernization program, there is on hand something in excess of 5 million dollars in available cash, which is earmarked either for payment of additional equipment or for the modernization fund in general. In total it may be said that of 106 million dollars spent or about to be spent on modernization, the unpaid portion is only about 25 million dollars. Against that, the currently accruing depreciation will be used to repay the $14,144,400 of outstanding equipment trust certificates and the approximately $11,000,000 obtained from revenue bonds will be discharged in due course under the debt service requirement program.

Age of Vehicles - Then and Now

It will be recalled that in the first chapter it was stated that the Securites and Exchange Commission had reported on the average age of Surface Lines and Rapid Transit cars in 1945.

The following table shows the result of the modernization program on the average age of equipment on the Surface Lines and the Elevated System, taking revenue equipment owned by Chicago Surface Lines and Chicago Rapid Transit Company at January 1, 1945, and by C. T. A. at December 31, 1954; acquisitions and retirements during the interim; and average age of vehicles at the respective dates.

It is interesting to note there has been almost a complete replacement of all Surface System vehicles during this ten year period and the average age of the fleet has been reduced from 28.88 years to 6.15 years, an achievement unprecedented in the history of Chicago transportation and perhaps in the nation.

Great progress has also been made in the modernization of the Rapid Transit System and this program will be accelerated now that the Surface System program is nearing completion. At December 31, 1954, 380 new all-metal "L "-Subway cars had been delivered and 94 more were under construction. Studies are presently being conducted to determine the advisability

of converting 80 additional P.C.C. street cars to "L"-Subway cars, but in any event the ultimate goal is the acquisition of 305 all-steel cars in addition to the 94 on order, and the retirement of the last of the wood and steel cars by the end of 1958.

This table is as follows:

REVENUE EQUIPMENT OWNED BY CHICAGO SURFACE LINES AND CHICAGO RAPID TRANSIT COMPANY
AT JANUARY 1, 1945, AND BY CHICAGO TRANSIT AUTHORITY AT DECEMBER 31, 1954
SHOWING RESULTS OF THE EQUIPMENT MODERNIZATION PROGRAM

	On Hand Jan. 1, 1945	Average Age (In Years) at 1-1-45 (1)	January 1, 1945 to December 31, 1954		On Hand Dec. 31, 1945		Average Age (In Years) of Active Equipment at 12-31-54 (1)
			Acquired	Retired	Owned	Active	
Surface System:							
Street Cars -							
P.C.C. Cars	83	8.50	600	273(2)	410	410	9.33
Other Street Cars	3,388	32.00	-	3,303	85	- (3)	-
Motorless Trail Cars	89	23.11	-	89	-	-	-
Total Street Cars	3,560	31.23	600	3,665	495	410 (3)	9.33
Trolley Coaches -	152	12.66	561	64	649	618 (3)	5.85
Motor Buses -							
Gas, Mechanical	243	6.35	258	212	289	275 (3)	8.69
Gas, Hydraulic	10	0.50	522	3	529	529	7.16
Diesel, Hydraulic	6	2.50	715	5	716	710 (3)	8.05
Propane , Hydraulic	-	-	973	1	972	972	2.36
Total Motor Buses	259	6.03	2,468	221	2,506	2,486 (3)	5.70
Total Surface Equipment	3,971	28.88	3,629	3,950	3,650	3,514 (3)	6.15
Rapid Transit System:							
Elevated Cars - Wood & Steel	1,167	44.13	-	660	507	418(3)	50.14
Elevated-subway Cars -							
Steel - Conventional Type	456	26.15	-	2	454(4)	454(4)	36.09
Metal - Articulated	-	-	4	-	4	4	7.00
Metal - P.C.C.	-	-	376	-	376	376	2.36
Total Rapid Transit Cars	1,623	39.08	380	662	1,341	1,252(3)	30.56
Total Revenue Equipment	5,594		4,009	4,612	4,991 (3)	4,766 (3)	

(1) Average age in years calculated on the basis that a vehicle is 6 months old at close of year of acquisition regardless of month of purchase.

(2) To be converted to "L"-Subway Cars, 176 completed to December 31, 1954. 3 Retired.

(3) Difference of 225 represents vehicles authorized to be scrapped (175 at 12-31-54) and others held in dead storage pending approval for retirement.

(4) Steel Cars modernized by CTA, useful life extended 20 years but not reflected in average age.

The same progress is shown in another way by the following table which is a chronological summarization of the average age of revenue equipment over the 10-year period:

It is particularly significant to note that the average age of each type of Surface System equipment is below the standard average age that must be maintained to keep a fleet modern under a well regulated replacement cycle program, and the status of the Rapid Transit cars will soon show a decided improvement as a result of present planning referred to in a preceding paragraph, and the retirement of the 50-year old wood-steel cars.

Date	Street Cars Years	Trolley Coaches Years	Motor Buses Years	Rapid Transit Cars Years
January 1, 1945	31.23	12.66	6.03	39.08
October 1, 1947	30.78	15.41	3.86	41.76
December 31, 1947	30.04	15.66	3.68	42.01
December 31, 1948	26.25	7.29	3.34	42.44
December 31, 1949	26.58	8.26	3.47	43.44
December 31, 1950	25.55	9.26	4.27	40.85
December 31, 1951	22.07	6.89	3.63	38.12
December 31, 1952	19.82	5.56	4.96 (1)	38.36
December 31, 1953	21.42	6.47	5.62	37.94
December 31, 1954	9.33	5.85	5.70	30.56
Normal Life Expectancy	20 Years	18 Years	12 Years	30 Years
Standard Average Age (2)	10 Years	9 Years	6 Years	15 Years

(1) Includes 595 motor buses acquired from Chicago Motor Coach Company (Average age of 6.16 years at date of acquisition).

(2) Average age standard that must be maintained to keep a fleet modern under a well regulated replacement cycle program.

These tables, of course, do not show the age situation with respect to other operating parts of the system, such as new shops and storage facilities. Nor does it reflect the entirely new developments such as off-street parking areas and turn-arounds. Details of such other modernization features have been given in itemized form earlier in this chapter.

Modernization Adjustments

Nor do these tables show in themselves the enormous adjustments that became necessary in personnel and planning. Not only was there a great problem presented by the change from two-man operation of obsolete equip-

ment to one-man operation of modern equipment an the Surface System and the resulting training program that became necessary when streetcar men had to learn to operate a gasoline, diesel or propane motor bus, but the maintenance department was also required to perform the herculean task of educating electric railway personnel to the intricacies of motor bus maintenance and the use of specialized machinery and tools to service the ever expanding motor bus fleet. The re-education of personnel, reconstruction and retooling of shop and garage facilities, expansion of service, and scheduling of vehicles during this ten year period were among the serious and difficult features of modernization.

The Results of Modernization

What has been the result of this extensive and costly modernization progress? Has it solved the difficulties of local mass transportation? Has it reattracted to public transit those who were or are driving their automobiles? Has it rehabilitated the financial status of this system of transportation lines?

We shall now appraise the modernization results from three standpoints: (a) What change has been obtained with reference to speed? (b) What have been the results on traffic? (c) What have been the comparative financial results of the various methods of operation that are reflected in the modernization?

Speed

The new vehicles embody the highest development in the thinking and planning of the engineers and executives who have specialized in this line of work. The motor vehicles are the finest products of the manufacturers of buses. The speed of which the new vehicles are capable is very great - - a large improvement over the older type of vehicles.

But the overall speed of surface operations has not been improved. The reason is that while CTA has acquired new vehicles with a fast pickup, and capable of attaining a relatively high speed, it has not been able to avail itself of this improved speed factor because of traffic conditions.

The studies about to be presented demonstrate the speeds of which these vehicles are capable in actual operation, when they are not impeded by interfering traffic. They also show that when these vehicles must thread their way through many automobiles and make repeated and lengthy stops because of other traffic, the results from terminal to terminal show no improvement.

In that sense, the full benefits of modernization have not been realized - - but, of course, if there had not been any modernization, the speed would be much less. There is attached, immediately following, a summary of a study of actual weekday operating conditions, covering three groups of routes, showing the distance between the terminals of each route, the average miles

per hour between such terminals, including standing time, the average miles per hour excluding standing time, and the percentage of standing time to total trip time. These periods cover both directions for the morning and evening rush and for the mid-day period. They show an astonishing, portion of standing time to total trip time. For rush hours this proportion is well over 30%. Even in the base or mid-day period, proportions of 30% are frequently attained. Where the proportions are over 30% on the following tables, the figure has been underlined for easy detection.

In similar studies made before the war period with reference to rail car operation, it was shown that the proportion of standing time to total trip time ranged over 20%, but always definitely less than 25%.

Again, in the speed performance for each of the routes, it will be noted that there is a great difference in the "average speed between terminals excluding standing time" and the "average speed between terminals" (including standing time). This is an indication that vehicles move rapidly when they have the opportunity, but otherwise are slowed down when standing time is taken into consideration.

The detailed speed tables are shown on Pages 178, 179, and 180.

SURFACE ROUTES

WEEKDAY OPERATION – YEARS 1954-1955

SPEED IN MILES PER HOUR AND PERCENTAGE OF STANDING TIME TO TOTAL TRIP TIME

		NORTHBOUND									SOUTHBOUND								
		A. M. RUSH			BASE			P. M. RUSH			A. M. RUSH			BASE			P. M. RUSH		
		Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing
	Distance Between	Between Term. Incld.	Time to Term. Excld.	Time to Total	Between Term. Incld.	Time to Term. Excld.	Time to Total	Between Term. Incld.	Time to Term. Excld.	Time to Total	Between Term. Incld.	Time to Term. Excld.	Time to Total	Between Term. Incld.	Time to Term. Excld.	Time to Total	Between Term. Incld.	Time to Term. Excld.	Time to Total
	Outer	Stand.	Stand.	Trip	Stand.	Stand.	Trip	Stand.	Stand.	Trip	Stand.	Stand.	Trip	Stand.	Stand.	Trip	Stand.	Stand.	Trip
Route	Terminal	Time (A)	Time(B)	Time	Time(A)	Time (B)	Time	Time (A)	Time(B)	Time	Time (A)	Time(B)	Time	Time(A)	Time(B)	Time	Time(A)	Time(B)	Time
#Austin Avenue	9.72	13.60	19.43	30.22	14.84	18.47	19.82	11.37	15.61	27.41	11.82	16.94	29.99	14.17	17.91	21.04	12.21	16.72	26.91
*Central Avenue Tr.	7.32	12.73	18.42	30.90	13.94	18.75	25.65	10.71	15.26	29.80	11.41	15.95	28.40	12.72	17.47	27.14	11.26	15.33	26.08
#Laramie Avenue	3.89	15.31	21.08	32.97	16.13	23.28	30.82	12.62	21.88	42.38	11.15	18.88	36.40	15.31	19.60	28.09	11.67	20.07	41.83
*Cicero Avenue Tr.	7.83	10.31	15.09	31.40	11.44	16.79	31.72	8.78	13.82	36.49	9.89	14.07	29.61	11.88	16.91	29.82	9.40	13.81	33.37
*Cicero–South	7.07	12.13	16.39	25.98	13.43	16.88	20.37	12.26	17.10	28.11	11.79	15.45	23.91	13.66	17.19	19.79	11.03	15.86	23.67
*Pulaski Road Tr.	10.63	10.98	16.77	34.48	12.38	17.47	29.12	10.13	15.70	34.50	10.52	15.48	31.98	11.27	15.82	28.75	10.36	15.52	33.19
*Pulaski–South	7.22	13.10	18.48	29.12	15.45	19.61	20.83	14.16	17.90	20.86	16.95	20.58	17.57	16.17	21.62	25.49	14.97	17.62	20.70
*Kedzie–Homan	11.69	10.22	16.43	38.01	11.92	15.94	25.15	9.21	13.64	33.40	10.30	15.71	34.32	11.12	15.07	26.13	9.57	15.23	37.25
*Kedzie Avenue	11.88	10.10	14.69	31.15	10.79	16.46	34.17	9.09	14.05	35.31	10 21	14.98	31.62	11.05	15.25	27.57	9.04	13.71	34.18
*California–South	9.44	11.32	15.91	28.72	13.38	18.40	24.99	10.79	15.44	28.29	12.31	17.65	30.41	14.11	18.89	25.13	10.81	14.90	27.47
*Western Avenue PCC Car	15.80	11.82	17.42	32.01	13.42	18.31	26.50	10.37	14.77	29.75	12.17	17.54	30.71	13.42	18.42	27.12	10.51	15.19	30.31
&Damen–North	9.88	10.16	15.01	32.40	11.31	16.80	32.72	8.61	13.81	37.80	9.66	14.52	35.00	10.99	16.20	32.07	9.41	15.19	37.90
*Ashland Avenue	16.46	9.59	13.75	28.76	9.62	13.57	27.58	9.32	14.32	31.99	9.80	14.05	29.09	11.10	14.91	25.65	8.94	13.39	33.19
#Morgan–Racine	5.52	9.36	14.60	31.12	10.37	14.08	26.37	9.26	12.89	24.08	10.14	13.73	25.01	11.50	14.94	23.09	10.61	14.49	26.74
*Halsted Street	13.90	10.01	14.39	30.33	10.38	15.19	31.41	9.08	14.55	37.60	10.31	14.61	29.40	10.13	14.18	29.42	8.59	13.19	34.61

*Taylor–Sedgwick–Sheffield	8.93	9.30	14.26	34.70	10.27	15.62	34.31	9.56	13.80	30.63	10.08	14.98	32.40	10.59	15.05	29.68	9.47	14.22	31.78
#Clark–Wentworth PCC Car	20.04	12.20	16.78	27.30	12.25	15.79	22.59	10.99	15.30	28.46	12.25	16.59	25.99	12.20	16.27	24.96	11.26	15.71	28.80
#Broadway–State PCC Car																			
119th to Lake	15.64	13.24	16.95	23.36	14.17	17.87	20.73	13.24	16.80	21.24	13.50	17.72	23.78	13.70	17.61	22.22	11.59	16.34	29.10
#Broadway–State																			
Lake to Schreiber	8.99	10.29	14.18	27.48	10.20	13.31	23.37	8.44	12.82	34.17	10.79	15.72	31.36	11.48	15.50	25.96	10.27	16.21	36.61
#Stony Island	7.54	9.92	14.39	30.96	10.02	15.47	35.05	9.92	15.57	36.08	10.01	16.05	31.44	10.74	15.33	30.76	9.03	15.49	41.59

& Indicates Winter 1953–1954

* Indicates Spring 1954

¢ Indicates Summer 1954

# Indicates Fall 1954

NOTES

1. Standing Time includes total time at any type of stop made by vehicle and of course includes the time of

   Passenger interchange and that time lost on account of traffic interference, traffic lights, etc.

2. Average Speed in Miles per Hour Between Terminals –

   (A) This includes all standing time.

   (B) This excludes all standing time but assumes that vehicle made stops but promptly proceeded

   with "0" second standing time.

3. Percentage of Standing Time to Trip Time is equal to total standing time at all stops divided by the

   overall elapsed time between terminals.

SURFACE ROUTES

WEEKDAY OPERATION – YEARS 1954-1955

SPEED IN MILES PER HOUR AND PERCENTAGE OF STANDING TIME TO TOTAL TRIP TIME

		INBOUND									OUTBOUND								
		A. M. RUSH			BASE			P. M. RUSH			A. M. RUSH			BASE			P. M. RUSH		
		Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing
Route	Distance Between Outer Terminal	Between Term. Incld. Stand. Time (A)	Term. Excld. Stand. Time(B)	Time to Trip Time	Between Term. Incld. Stand. Time(A)	Term. Excld. Stand. Time (B)	Time to Trip Time	Between Term. Incld. Stand. Time (A)	Term. Excld. Stand. Time(B)	Time to Trip Time	Between Term. Incld. Stand. Time (A)	Term. Excld. Stand. Time(B)	Time to Trip Time	Between Term. Incld. Stand. Time(A)	Term. Excld. Stand. Time(B)	Time to Trip Time	Between Term. Incld. Stand. Time(A)	Term. Excld. Stand. Time(B)	Time to Trip Time
#Sheridan Road #151	9.06	10.06	13.80	26.88	11.21	15.01	25.92	9.63	14.22	32.40	11.70	17.71	34.05	11.32	16.23	30.22	8.62	13.88	37.80
¢Wilson–Michigan #153	7.92	9.05	13.43	32.83	10.90	15.40	29.11	9.89	14.02	29.40	10.90	14.18	24.01	10.90	15.61	30.15	7.80	13.58	42.50
¢Wilson–LaSalle #156	7.72	9.14	12.62	27.81	11.01	14.99	26.42	11.60	15.82	26.89	14.29	18.67	20.61	12.60	16.69	24.36	10.41	16.14	35.40
&Lincoln–Wabash	9.96	9.62	13.87	31.07	10.83	15.62	30.60	10.02	14.64	29.97	–	–	–	11.22	15.99	28.87	8.24	12.11	32.02
¢Addison #152	15.07	11.30	14.73	23.48	11.64	16.83	30.70	10.51	15.02	30.19	12.91	17.20	24.69	12.44	17.58	29.03	9.42	13.50	30.48
*Clyaourn Avenue	5.59	9.05	14.31	36.67	10.61	14.41	26.21	8.58	14.00	39.52	10.13	15.59	35.01	10.41	15.09	30.98	7.86	13.13	41.51
*Elston Avenue	13.32	11.73	17.01	30.88	14.68	19.48	24.51	12.25	17.87	31.38	14.95	18.91	21.02	15.46	19.58	20.99	11.02	15.53	28.69
*Milwaukee Avenue	12.04	10.16	15.81	34.55	10.62	15.29	30.62	9.09	15.79	42.76	12.45	16.99	26.68	12.05	17.16	28.15	11.04	18.39	39.93
¢Grand Avenue	10.36	10.71	15.65	31.59	11.92	16.81	28.90	11.20	16.01	30.14	11.39	16.07	29.05	12.35	16.72	26.67	10.19	14.70	31.02
*Division Street	10.04	9.70	14.89	34.72	10.71	15.59	29.28	9.85	15.39	33.61	10.77	14.61	26.23	11.46	16.01	28.31	8.47	13.11	35.36
*Ogden Avenue	7.76	8.95	14.77	39.37	10.12	14.29	29.33	9.04	14.22	36.47	10.59	15.88	33.19	11.63	16.80	30.74	9.11	14.83	41.40
*Blue Island Avenue	7.03	8.89	14.97	40.05	10.05	14.63	31.02	8.46	13.03	35.29	9.59	15.02	36.24	9.48	14.21	33.32	8.12	12.57	35.45
*Canal–Wacker	4.53	8.37	12.60	33.52	10.23	14.22	27.71	10.07	13.63	25.99	9.65	13.34	27.75	10.35	13.13	20.91	8.11	13.04	37.65
*Archer–Local	12.62	11.42	16.46	30.28	13.40	18.15	27.38	–	–	–	14.44	18.39	21.20	13.79	18.23	24.51	10.41	16.32	36.11

*Archer–Express	10.98	12.80	19.73	35.19	15.32	20.52	25.32	11.09	17.77	37.49	14.56	19.81	26.87	15.92	19.50	23.33	10.89	18.26	40.29
*Wallace–Racine	11.52	10.16	13.87	26.60	11.23	15.13	25.82	11.15	15.91	29.98	11.82	15.00	20.81	12.07	16.03	24.70	10.19	19.64	45.42
&Garfield–Michigan	12.81	10.98	14.71	25.51	12.29	15.57	20.82	10.10	14.42	30.03	12.11	16.35	26.36	12.11	14.88	19.41	10.17	14.53	30.11
&Indiana Avenue	7.60	10.72	15.21	29.40	11.27	15.57	27.61	9.60	14.59	34.03	11.97	16.81	29.37	11.59	16.22	28.60	8.89	14.80	39.98
*South Park	10.22	11.23	15.36	26.62	11.67	15.81	26.30	10.05	14.28	29.56	11.23	16.07	29.98	11.57	15.27	24.28	8.57	13.92	38.49
¢Cottage Grove	14.42	10.80	14.48	25.79	11.66	15.81	26.10	10.41	13.60	23.68	11.21	14.81	24.37	11.17	15.22	26.35	9.79	13.57	27.90
*South Chicago–Ewing	11.84	13.63	18.03	24.28	15.28	18.92	19.31	13.80	18.08	23.56	16.20	20.72	21.83	16.35	20.57	20.75	14.98	20.47	26.84

& Indicates Winter 1953–1954

* Indicates Spring 1954

¢ Indicates Summer 1954

# Indicates Fall 1954

NOTES

1. Standing Time includes total time at any type of stop made by vehicle and of course includes the time of passenger interchange and that time lost on account of traffic interference, traffic lights, etc.
2. Average Speed in Miles per Hour Between Terminals -
   (A) This includes all standing time.
   (B) This excludes all standing time but assumes that vehicle made stops but promptly proceeded with "0" second standing time.
3. Percentage of Standing Time to Trip Time is equal to total standing time at all stops divided by the overall elapsed time between terminals.

SURFACE ROUTES

WEEKDAY OPERATION – YEARS 1954-1955

SPEED IN MILES PER HOUR AND PERCENTAGE OF STANDING TIME TO TOTAL TRIP TIME

		EASTBOUND									WESTBOUND								
		A. M. RUSH			BASE			P. M. RUSH			A. M. RUSH			BASE			P. M. RUSH		
		Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing	Average Speed in M.P.H.		Percent Standing
Route	Distance Between Outer Terminal	Between Term. Incld. Stand. Time (A)	Excld. Stand. Time(B)	Time to Total Trip Time	Between Term. Incld. Stand. Time(A)	Excld. Stand. Time (B)	Time to Total Trip Time	Between Term. Incld. Stand. Time (A)	Excld. Stand. Time(B)	Time to Total Trip Time	Between Term. Incld. Stand. Time (A)	Excld. Stand. Time(B)	Time to Total Trip Time	Between Term. Incld. Stand. Time(A)	Excld. Stand. Time(B)	Time to Total Trip Time	Between Term. Incld. Stand. Time(A)	Excld. Stand. Time(B)	Time to Total Trip Time
*Skokie	6.22	13.44	16.20	16.61	14.50	17.61	17.42	13.29	16.17	17.72	14.07	16.39	14.02	14.93	17.60	15.21	14.36	17.37	17.21
*Devon–Sheridan	5.29	9.61	13.64	29.61	10.92	15.03	27.11	9.08	14.37	36.71	9.61	14.45	33.49	10.78	16.42	34.51	8.94	14.03	36.39
#Peterson	5.86	11.68	15.97	26.81	14.10	19.92	25.50	14.72	18.11	18.59	15.21	20.48	25.65	16.22	20.40	20.54	12.81	17.42	26.52
*Foster–Northwest Highway	9.19	13.21	18.99	30.08	15.00	21.53	30.59	13.07	19.09	31.48	14.20	20.03	29.37	15.61	21.18	26.40	12.89	18.92	37.19
¢Lawrence Trolley	6.01	10.17	13.84	26.90	11.42	16.01	28.52	10.76	16.15	33.42	14.12	18.90	25.30	14.12	18.61	24.02	11.23	16.98	33.57
#Montrose Trolley	6.63	12.28	17.91	29.98	13.52	19.39	30.19	12.28	18.40	33.18	13.44	18.38	26.18	13.44	18.57	27.03	11.23	16.92	33.51
#Irving Park Trolley	7.25	10.71	15.12	28.99	12.53	16.42	23.61	11.26	16.93	33.50	11.32	15.67	27.60	12.68	18.42	31.41	10.49	15.36	33.51
*Belmont Trolley	9.63	10.61	16.11	34.52	12.92	17.84	30.25	11.23	16.80	32.21	13.23	19.20	30.81	13.77	19.12	27.82	11.21	15.69	34.59

*DIVERSEY TROLLEY	6.05	12.31	16.56	25.63	13.99	18.61	24.68	12.98	17.81	27.17	14.81	19.01	22.15	14.22	19.01	25.28	10.52	14.63	28.30
¢FULLERTON TROLLEY	6.00	8.89	14.17	37.07	10.59	15.68	32.51	9.14	14.01	35.02	10.40	17.18	33.37	11.61	15.79	25.08	8.89	13.77	35.50
*ARMITAGE TROLLEY	6.33	9.49	14.18	33.46	11.18	15.89	30.12	9.30	12.79	28.24	9.25	13.68	29.98	10.54	15.50	30.27	9.49	14.76	33.78
*NORTH TROLLEY	8.00	10.68	16.41	34.98	10.87	16.38	33.35	10.42	16.18	35.23	11.29	16.50	31.62	10.58	15.41	31.51	9.52	15.07	35.80
#CHICAGO TROLLEY	7.83	9.03	14.19	36.38	11.18	14.81	24.62	9.69	15.21	36.35	10.21	14.49	29.51	10.92	15.73	30.52	8.06	13.09	38.50
*LAKE	7.68	9.69	14.41	32.92	11.21	15.17	25.70	9.80	15.81	38.05	10.46	15.21	29.03	11.39	15.52	26.78	8.78	15.41	42.99
&WASHINGTON BOULEVARD	9.06	9.79	14.16	30.81	12.79	18.04	29.11	11.33	16.84	32.75	10.98	16.36	32.89	14.89	19.77	24.66	11.09	17.15	35.31
*MADISON	7.55	10.09	15.20	33.62	10.14	15.60	34.02	8.45	13.23	35.31	9.53	14.60	34.61	10.18	15.71	35.25	8.23	12.67	34.97
&JACKSON BOULEVARD	9.27	9.51	14.37	33.85	12.32	18.26	30.12	9.98	14.71	31.81	9.77	14.74	32.98	12.21	16.66	26.81	9.11	13.46	32.70
*VAN BUREN	4.30	8.16	13.40	38.80	8.91	13.97	36.03	7.08	11.59	38.58	9.08	14.38	36.82	9.76	14.56	32.87	7.86	13.36	40.38
*HARRISON	7.11	9.34	12.98	27.90	10.89	15.83	31.21	8.78	13.59	35.50	9.42	12.48	24.74	10.42	15.19	31.48	8.23	13.07	36.99
&ROOSEVELT ROAD TROLLEY	7.46	9.63	13.70	29.72	10.68	15.09	29.50	7.79	11.69	33.62	9.63	13.81	30.33	10.80	14.79	27.06	8.69	13.08	33.54
*16TH–18TH	6.87	9.70	14.06	31.07	11.02	15.90	30.50	9.79	15.02	34.71	10.83	15.55	30.00	11.27	15.78	27.38	9.71	14.42	32.57
*CERMAL ROAD	6.08	8.91	13.33	33.19	10.26	13.74	25.39	8.20	12.36	34.37	8.69	13.07	33.50	9.99	13.40	25.37	8.20	13.08	37.41
#35TH STREET	5.05	9.29	14.21	34.79	11.60	16.27	27.82	8.39	13.62	38.39	10.71	18.30	41.62	11.90	16.92	29.41	9.67	15.50	37.58
#PERSHING ROAD	5.72	11.12	16.23	31.55	12.13	16.68	27.51	9.38	13.10	29.02	9.88	14.98	34.98	11.75	17.88	30.41	10.99	15.92	30.67
#43RD STREET	2.88	11.06	14.19	21.90	10.11	15.21	34.07	8.66	15.38	43.62	8.80	14.76	40.49	9.72	14.51	32.98	9.72	14.51	32.98
*47TH ST. TROLLEY	6.23	10.21	14.64	30.96	10.43	15.11	30.84	8.38	12.43	32.93	9.62	15.19	38.49	11.00	16.41	33.25	10.12	14.36	28.80
#51ST–55TH TROLLEY	6.96	10.72	15.71	32.00	11.60	16.68	30.41	9.73	15.58	35.25	10.72	16.01	33.16	11.28	16.20	30.37	10.72	16.93	36.90
&59TH–61ST	8.40	9.89	13.41	26.45	11.72	15.03	22.08	9.80	13.72	28.56	10.84	14.37	24.32	12.30	15.41	20.44	10.19	14.73	30.79
#63RD STREET	10.19	11.02	15.39	28.20	11.02	15.42	28.51	9.47	14.77	35.92	11.91	15.20	28.02	11.57	15.67	26.40	10.29	14.11	32.70

*67TH–69TH	7.66	10.92	15.61	29.85	12.08	17.78	31.86	10.19	15.11	32.52	11.06	16.17	31.40	12.08	16.99	28.92	9.89	14.24	30.68
#74TH–75TH	5.96	10.51	14.80	28.95	11.53	15.23	24.22	10.67	14.98	28.72	10.67	14.62	26.95	11.73	15.49	24.42	11.19	15.40	27.87
#79TH STREET	7.05	11.28	16.75	32.57	11.42	16.98	32.58	11.72	15.52	30.86	11.76	16.08	26.89	11.92	17.30	31.05	10.47	15.73	33.62
#87TH STREET	10.41	13.17	17.73	25.71	14.81	18.90	21.10	13.72	18.58	26.97	15.03	18.70	19.42	15.03	18.70	19.42	14.20	1 8.55	23.28
*93RD–95TH	8.71	12.48	15.82	21.32	13.16	16.48	20.51	12.09	16.96	29.02	11.71	14.99	22.07	12.81	16.52	22.49	12.13	16.32	25.82
*103RD–106TH	10.45	14.87	18.20	17.95	15.29	18.39	16.84	14.25	19.60	27.21	14.92	18.27	18.09	16.11	19.59	18.13	14.78	19.41	23.99
*EAST 111TH	2.99	11.87	13.90	18.81	12.80	14.98	19.17	13.27	15.51	18.11	13.56	17.64	22.31	13.80	16.08	19.07	11.87	17.21	34.41

& INDICATES WINTER 1953–1954

* INDICATES SPRING 1954

¢ INDICATES SUMMER 1954

# INDICATES FALL 1954

NOTES

1. STANDING TIME INCLOSES TOTAL TIME AT ANY TYPE OF STOP MADE BY VEHICLE AND OF COURSE INCLUDES THE TIME OF PASSENGER INTERCHANGE AND THAT TIME LOST ON ACCOUNT OF TRAFFIC INTERFERENCE, TRAFFIC LIGHTS, ETC.

2. AVERAGE SPEED IN MILES PER HOUR BETWEEN TERMINALS –

   (A) THIS INCLUDES ALL STANDING TIME.

   (B) THIS EXCLUDES ALL STANDING TIME BUT ASSUMES THAT VEHICLE MADE STOPS BUT PROMPTLY PROCEEDED WITH

   "O" SECOND STANDING TIME.

3. PERCENTAGE OF STANDING TIME TO TRIP TIME IS EQUAL TO TOTAL STANDING TIME AT ALL STOPS DIVIDED BY THE OVERALL ELAPSED TIME BETWEEN TERMINALS.

That "competing" traffic is a most important factor in the speed of operation is shown by a comparison with the Elevated-Subway System. Similar speed studies have been made on that system, and it is reported that the modernization, including the change in methods of operation, have produced "some spectacular speed improvements" on the Rapid Transit System. Here again, to obtain particularity, we are setting forth Tables A and B which show the speed studies prior to modernization, where accomplished, and changes in methods of operation, on five different parts of the Rapid Transit System. They show the present speed of operation, which includes not only the "A and B Stop" basis, but also a fair percentage of new equipment. These five tables, showing the results of these speed tests, are now set forth:

RAPID TRANSIT SYSTEM
(Scheduled speed in miles per hour) Table A
Lake Street Branch
Forest Park to Loop Junction (8.98 Miles)

	AM Rush (Inbound) M.P.H.	Base M.P.H.	AM Rush (Outbound) M.P.H.	Evening M.P.H.
Speed on Local Trips Prior to April 4, 1948	15.40	16.32	14.95	15.85
Present Operation, "A" and "B" Trips	19.25	21.99	18.26	22.45
Increased Speed	3.85	5.67	3.31	6.60
% of Increase	25%	35%	22%	42%

North-South Via Subway
Howard to Jackson Park (19.61 Miles)

Speed on Trips prior to July 31, 1949 (All Express Service)	16.93	19.45	16.69	19.45
Present Operation, "A" and "B" Trips	22.41	23.06	19.45	22.41
Increased Speed	5.48	3.61	2.76	2.96
% of Increase	32%	19%	17%	15%

Ravenswood Branch Only
Kimball to Fullerton (5.86 Miles) Table B

Speed on Trips prior to July 31, 1949 (All Express Trips)	16.74	18.50	15.98	18.50
Present Speed, "A" and "B" Trips in Rush and Local at other times	18.03	21.31	18.03	21.31
Increased Speed	1.29	2.81	2.05	2.81
% of Increase	8%	15%	13%	15%

Douglas Park Branch

Oak Park to Franklin (9. 74 Miles)

	AM Rush (Inbound) M.P.H.	Base M.P.H.	PM Rush (Outbound) M.P.H.	Evening M.P.H.
Speed on Local Trips prior to February 3, 1952	15.37	15.81	15.37	15.81
Present Operation, "A" and "B" Trips in Rush and Local at other times	19.65	22.12	18.60	23.10
Increased Speed	4.28	6.31	3.23	7.29
% of Increase	28%	40%	21%	46%

Logan Square "L" Via Elevated

Round Trip Mileage (14.73 Miles) Via Elevated

Round Trip speed prior to Subway operation which started February 25, 1951	16.37	18.22	16.22	18.61

Logan Square Route via "L"-Subway

Round Trip Mileage (11.68 Miles) via Milwaukee Subway

Present Round Trip Speed	17.97	19.47	18.20	19.74
Increased Speed	1.60	1.25	1.98	1.13
% of Increase	10%	7%	12%	6%

It becomes quite apparent the description of "spectacular speed improvements" is not an inaccuracy. On the Lake Street Branch, for example, the improvement from the first period studied to the present is as great as 42%; the North-South improvement, up to 32%; the Ravenswood Branch about 15%; and the Douglas Park as great as 46%.

The Logan Square Branch, via the Milwaukee Subway, reduced the round trip mileage by 21% under the former elevated route and increased the speed by about 12%, with the result that CTA's patrons now save 15 minutes per day each, or 28% under the former round trip running time.

The conclusion may safely be ventured that where the CTA modern vehicles can use their speed and flexibility, they have brought about a very great improvement in the time of the schedules and the runs. Where, however, competing traffic necessitates prolonged stops and waiting time, the improvement has been anything but satisfactory. In fact, it has been definitely disappointing.

Results on Use of Lines

In appraising human behavior, it is quite dangerous dogmatically to assign reasons, but there is evidence to indicate that the difference in speed does affect the patronage. The 1945 hope of retaining a large part of the war-time patronage has not been realized on either the Surface Lines or the Elevated. There has been a great decline in riding on the entire system. But it can be said that with the speeded-up operation, the Elevated has not suffered as badly as has the Surface System.

To bear out the contention that speed and modernization of equipment do have some effect on traffic, we present a study of originating revenue passengers from 1945 to 1954, inclusive. This is broken down between the Surface System and the Elevated System. As to each of these components, the rate of decline is shown percentage wise, and mathematically as well. The percentage decrease is shown, (a) as to the prior year, respectively, and then (b) in comparison to 1946, which, as shown in Chapter 11 was the high point of traffic in the last 27 years. This table, which shows that the decline in traffic on the Elevated has been "less bad", is shown on Page 182.

The reversal of trend on the "L"-Subway, starting in 1950, coincides closely with the speed-ups brought about through the operating methods outlined above and the acquisition of new rolling stock. 100 new "L"-Subway cars were put into service in 1950; 100 in 1951; and 176 in 1954.

Note that the Surface System decrease under 1946 went from 18.41% in 1949 to 46.46% in 1954, while the "L"-Subway went, respectively, from 22.61% to 29.54%, and the same firmness on the "L"-Subway held in the comparison with decrease under each prior year.

Perhaps we may take the risk of venturing the suggestion that modernization has not justified the hopes of 1945, but that where modernization has been able to translate its speed potential into actual operation, passenger traffic has fallen off substantialy less.

Originating Revenue Passengers

Year	Total Originating Passenger Traffic (In Thousands)			Per Cent Decrease					
				Under Prior Year			Under Year 1946		
	Surface System*	El-Subway System	Total Chicago*	Surface	El-Subway	System	Surface	El-Subway	System
1946	989,734	157,876	1,147,610						
1947	974,369	145,755	1,120,124	1.55%	7.68%	2.40%	1.55%	7.68%	2.40%
1948	914,347	137,622	1,051,969	6.16	5.58	6.08	7.62	12.83	8.33
1949	807,496	122,181	929,677	11.69	11.22	11.63	18.41	22.61	18.99
1950	722,509	110,603	833,112	10.52	9.48	10.39	27.00	29.94	27.40
1951	666,439	112,807	779,246	7.76	(1.99)	6.47	32.66	28.55	32.10
1952	608,212	112,687	720,899	8.74	0.11	7.49	38.55	28.62	37.18
1953	574,822	111,738	686,560	5.49	0.84	4.76	41.92	29.22	40.17
1954	529,934	111,232	641,166	7.81	0.45	6.46	46.46	29.54	44.13

* Includes Chicago Motor Coach Company Traffic Prior to Acquisition on October 1, 1952.

( ) Denotes Increase.

Financial Results are Different

Are the financial results related to the speed results?

In order to see more clearly the four different types of service - -namely, elevated-subway, surface streetcars, trolley buses and motor buses- -the 1954 gross and net income has been distributed between those four types of service, and is set forth in the two page exhibit to this chapter entitled "Statement of Income by Types of Service, Calendar Year 1954."

From the speed studies and the smaller falling off of passenger traffic on the Elevated-Subway, it might be supposed that that would be the profitable branch of the service. However, this is not the case.

The Comptroller's Office and Accounting Division have made a detailed breakdown of the 1954 income. This is based on the books of the CTA. Then certain adjustments are made. The adjustments are in two directions. The books have charged to the Rapid Transit System the cost of injuries and damages at the same percentage rate as that which prevails over the balance of the System. Actually the rate for injuries and damages is far less on the Elevated and Subway System. The records of the Claim Department were therefore analyzed to obtain a proper percentage charge against the Elevated. It was determined that, while the whole system must bear a 6.19% charge, the record on the Elevated-Subway indicates that a charge of 3.25% is sufficient there. The result has been that a burden of $675,000 per year has been taken from the Elevated-Subway System and transferred to the balance of the System.

The other adjustment has been made in order to give the Rapid Transit System credit for fares collected on the Surface System of passengers who then transfer to the Rapid Transit and take their longest ride on the latter, then transfer back to a surface vehicle. There are thought to be approximately 44,000 of such riders daily. By making an equal division of these riders, it appears that an additional credit of 1-1/2 million dollars per year should be made in the income side to the Rapid Transit. The figures, therefore, per books and after the adjustments above referred to, are as follows:

	Per Books	Adjusted
Rapid Transit (Loss)	$(4,495,055)*	$(2,368,198)*
Street Car (Loss)	(3,155,553)	(3,545,171)
Trolley Coach	5,781,339	5,366,683
Motor Bus	2,405,474	1,082,891
Balance Available for Other Charges	$ 536,205	$ 536,205

The balance of $536,205 was used for the retirement of bonds and went into that fund.

* These figures do not include any cost, or interest on the cost, of the present subways. If CTA were required to pay only the cost of capital at the rate of 4-1/2% on the $67,634,176 invested in the present subways (exclusive of cost of rolling stock and fixed transportation equipment), the annual deficit would be increased by $3,043,500.

The trolley coach operation would appear to be the most profitable, with the motor coach coming in second place. It must be noted, however, that the operating cost per mile for trolley coaches and motor buses, before depreciation, is almost identical and after depreciation differs by only 1.45¢. The reason for the phenomenal net operating income by trolley buses is due to the fact that they operate on what may be termed the "cream of the routes" through densely populated areas and with numerous shopping centers along the routes, thereby enjoying the benefit of short-haul riding which is reflected in the high revenue per mile.

Motor buses, on the other hand, serve many sparsely settled areas at a considerable loss to CTA. A survey made early in 1954, when the operating cost per mile was 58¢, exclusive of depreciation, general and administrative expenses, and debt service requirements, revealed that the revenue on 45 routes was only 40.5¢ per mile, accounting for an actual operating loss of 17.5¢ per mile. Miles operated on these losing routes amounted to 28% of total CTA motor bus miles and required the use of 502 vehicles.

The loss on the streetcar operation is a heavy burden on the system as a whole and leaves no room for doubt as to the foresight of CTA in concentrating its efforts on replacing streetcars with buses as rapidly as its finances permitted. An examination of the exhibit shows that the cost per mile of streetcar over trolley and motor bus operation includes these differences:

Way and Structures	10-1/4¢	per mile
Equipment Maintenance	None	
Power	5-1/2¢	per mile
Conducting Transportation	19¢	" "
General - - Operating	4¢	" "
General - - Administrative	3/4¢	" "
Depreciation	8-1/2¢	" "

or a total of 48¢ per mile by which streetcar operating cost exceeds that of bus. When we consider that the adjusted loss from streetcar operation is approximately 20¢ per mile the reason for this deficit operation can be pin-pointed directly to its principal cause - - Conducting Transportation (2-man operation). These results are perhaps an answer to those critics who, living still in a former day, believe that the solution lies in a return to streetcars.

As to the subway and elevated, the argument based on rapidity of service is good, but as to financial operating results, it does not show up as well as one would expect. One of the notable differences is that the "L"-Subway revenue is only 53.02¢ per mile as contrasted to 100.14¢ for streetcars, 98.05¢ for trolley coaches and 73.19¢ for motor buses. There are several reasons for this comparatively low income per mile, one of which has been evaluated in a prior paragraph, i.e., transfer passengers who ride surface to "L"-Subway to surface and never pay a fare to the "L"-Subway system.

A second extremely important factor not reflected in the revenues is the proportionate share of inter-system transfer passenger revenues paid by patrons who originate on the surface system and transfer to "L"-Subway to complete their ride, or vice versa.

Studies made by traffic engineers indicate the average length of ride on the surface system is 5 miles as contrasted to 7-1/2 miles on the "L"-Subway, but that inter-system transfer passengers ride 2-1/2 miles or less on surface vehicles and still ride 7-1/2 miles on the "L"-Subway.

Applying these length of haul factors to passengers carried on a representative week day in November 1954, on which a comprehensive system wide transfer check was made, we find that the "L"-Subway could theoretically be entitled to a revenue credit of $5,091,000*, which would wipe out its entire deficit, per books, and show a balance in excess of $1,000,000. This determination is based upon:

111, 478	Passengers originating on surface routes and terminating their ride on the "L"-Subway.
127, 431	Passengers originating on "L"-Subway and terminating their ride on the surface system.
44, 685	Passengers originating on surface routes; transferring to "L"-Subway; and transferring back to the surface system.

It should be noted, however, that the elevated-subway cost of operation is only 60¢ per mile, approximately 4-1/2¢ less than for bus operation, for vehicles having as great, or greater, load capacity. It is hoped that the motorists will become more cognizant of the advantages offered by CTA's excellent rapid transit "L"-Subway service and by their patronage put this service on a paying basis on the present method of allocation of revenues. It is not unrealistic to believe that rapid transit passenger revenues could approximate those of motor buses, i.e., 72¢ per mile, and if such had been the case in 1954, this operation would have shown a gain of approximately $6,700,000 instead of the adjusted loss of $2,368,000.

In order to attract more riders to its elevated-subway system and to realize the greater revenue per mile necessary to put the rapid transit system on a self-sustaining basis, CTA has recently inaugurated innovations heretofore unheard of in Chicago.

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* Such a theoretical reallocation of revenue would, of course, decrease the revenues of the surface system - with a resulting greater deficit on streetcars and lesser earnings on buses and trolley coaches.

Such major improvements include the combination rapid transit-bus terminal at 54th Avenue in Cicero-Berwyn, where feeder buses and Douglas Park rapid transit trains interchange passengers at a common platform. In connection with this terminal, the first of its kind on the rapid transit system, the CTA launched a program of providing Park "N" Ride lots for its patrons. The lot at this terminal accommodates 300 automobiles.

At Des Plaines Avenue, Forest Park, where feeder buses and Garfield Park rapid transit trains have a common terminal, another Park 'N' Ride lot with a capacity of 420 automobiles has been established for CTA riders.

A third Park 'N' Ride lot is in operation at Linden Avenue, Wilmette, the north terminal of the Evanston line, which accommodates approximately 90 automobiles.

A fourth Park 'N' Ride lot has just been established at another rapid transit terminal, the end of the Ravenswood "L" route at Kimball and Lawrence Avenues, Here, for the first time, CTA's Park 'N' Ride patrons will pay a nominal parking fee. This lot was opened March 7, 1955.

Today, Chicago has the fastest Rapid Transit service in its history and further improvements in rapid transit service are in progress. Not later than 1957, perhaps, the Garfield Park route, which serves the West Side of Chicago, Oak Park and Forest Park, will be operating on a high-speed right-of-way in the median strip of the Congress Street Super-highway. The type of cars planned for use in this service may be high speed units rated at a maximum of 70 to 75 miles per hour. Development work, in co-operation with General Electric and Westinghouse, has been under way for some time and four experimental units are expected to be ready for road tests in late 1955. Certain of these high speed features are going to be incorporated in 40 cars which are to be ordered in the near future.

This fast express right-of-way will extend as far west as the present terminal at Des Plaines Avenue, Forest Park, where there has already been provided facilities for the interchange of passengers with CTA feeder buses serving Maywood, Bellwood and Westchester, and with the Chicago, Aurora and Elgin suburban electric railway.

With the flexibility afforded by the greater use of buses, many transfer interchange points between the surface and rapid transit systems are now conveniently located at the street-level entrances of rapid transit stations. Two under-shelter, off-the-street interchange terminals, at Western and Leland Avenues, on the Ravenswood "L", and at Logan Square "L" Station, have been established, and a new stairway was constructed at Darnen and North Avenues for exchange of riders between northwest side bus lines and the new Milwaukee -Dearborn-Congress Subway. A new "Limited" CTA motor bus service in Central Avenue, designed especially to provide better, faster service for inter-system rush hour riders transferring to and from the Lake Street "L" at the Central Avenue Station

was inauguarated March 21, 1955. Passengers from the "L" will have two points of boarding and alighting from Central Avenue buses instead of the former single point of transfer. Use of the two entrances will protect our patrons from the danger of crossing Central Avenue to board the buses; will more evenly distribute boarding passengers among the "L" cars; and will reduce station stop time in the rush direction.

These are examples of changes in the character of mass transit now being made in Chicago to make greater and more effective use of the "Traffic -free" "L"-Subway system.

More innovations of these types are planned for the future.

CONCLUSION

In total it may be said that the modernization program carried out by the CTA has been quite remarkable in its physical aspects. More has been done in the 9-1/2 years of CTA's existence in the way of physical improvements than had been accomplished in the 38 years preceding CTA.

With the help of the renewal funds which were taken over from the prior lines, some borrowed money, and the use of the currently accruing depreciation fund, it has been possible to pay for over three quarters of the cost of modernization.

In results, the modernization of equipment and the revamping of service has been quite effective on the Elevated-Subway in increasing the speed of service, but the results of the surface operations have been extremely disappointing.

The idea that a good portion of the war-time traffic could be retained by the modernization program, which had been the hope in 1945, has not been realized.

A breakdown of the 1954 earnings shows that the financial results have not been co-ordinate with the speed changes. The loss on the Elevated-Subway and on the Surface streetcars has been very substantial. It has been offset, however, by the financial benefits obtained from the operation of the trolley buses and motor buses.

CHICAGO TRANSIT AUTHORITY

STATEMENT OF INCOME BY TYPES OF SERVICE
CALENDAR YEAR 1954

	RAPID TRANSIT		STREET CARS		TROLLEY COACHES		MOTOR BUSES		COMBINED OPERATION	
		¢ PER MILE		¢ PER MILE		¢ PER MILE		¢ PER MILE		% OF TOTAL REVENUES
REVENUES:										
PASSENGER RECEIPTS	$ 21,822,988.84	50.42¢	$ 17,779,836.00	99.21¢	$ 18,917,532.00	97.12¢	$ 60,235,454.29	72.11¢	$ 118,755,811.13	98.03%
CHARTERED SERVICE	–	–	–	–	–	–	240,047.84	0.29	240,047.84	0.20
OTHER REVENUES (SEE EXHIBIT IA)	1,128,496.80	2.60	167,749.45	0.93	180,810.04	0.93	666,600.25	0.79	2,143,656.54	1.77
TOTAL REVENUES	22,951,485.64	53.02	17,947,585.45	100.14	19,098,342.04	98.05	61,142,102.38	73.19	121,139,515.51	100.00
OPERATING EXPENSES:										
WAY AND STRUCTURES –										
LABOR	1,758,653.66	4.06	1,639,925.79	9.15	246,771.81	1.27	484,955.47	0.58	4,130,306.73	3.41
MATERIAL AND OTHER COSTS	426,121,.65	0.99	452,083.03	2.52	106,916.94	0.55	658,244.53	0.79	1,643,366.15	1.36
TOTAL	2,184,775.31	5.05	2,092,008.82	11.67	353,688.75	1.82	1,143,200.00	1.37	5,773,672.88	4.77
EQUIPMENT –										
LABOR	2,185,603.20	5.05	987,874.33	5.51	676,442.41	3.47	4,491,741.34	5.38	8,341,661.28	6.88
MATERIAL AND OTHER COSTS	797,094.42	1.84	697,604.08	3.89	445,397.14	2.29	4,123,750.97	4.93	6,063,846.61	5.01
TOTAL	2,982,697.62	6.89	1,685,478.41	9.40	1,121,839.55	5.76	8,615,492.31	10.31	14,405,507.89	11.89
POWER AND LIQUID FUELS –										
LABOR	404,575.83	0.93	263,850.58	1.47	152,268.19	0.78	–	–	820,694.60	0.68
MATERIAL AND OTHER COSTS	3,023,952.88	6.99	1,648,302.29	9.20	1,081,080.56	5.55	4,124,778.58	4.94	9,878,114.31	8.15
TOTAL	3,428,528.71	7.92	1,912,152.87	10.67	1,233,348.75	6.33	4,124,778.58	4.94	10,698,808.91	8.83
CONDUCTING TRANSPORTATION –										
OPERATORS AND TRAINMEN – LABOR	4,643,342.40	10.73	7,265,121.30	40.54	5,314,225.99	27.28	21,320,372.40	25.52	38,543,062.09	31.82
OTHER LABOR	6,614,919.49	15.28	1,423,664.52	7.95	906,802.13	4.66	4,598,077.57	5.50	13,543,463.71	11.18
MATERIAL AND OTHER COSTS	450,080.54	1.04	506,605.61	2.82	168,086.95	0.86	996,110.03	1.20	2,120,883.13	1.75
TOTAL	11,708,342.43	27.05	9,195,391.43	51.31	6,389,115.07	32.80	26,914,560.00	32.22	54,207,408.93	44.75
GENERAL EXPENSES DIRECTLY RELATED TO OPERATIONS –										
INJURIES AND DAMAGES –	1,421,530.27	3.29	1,111,607.17	6.20	1,182,880.78	6.07	3,786,916.04	4.53	7,502,934.26	6.19
EMPLOYES GROUP INSURANCE	139,660.24	0.32	103,063.31	0.58	65,821.75	0.34	277,474.53	0.33	(A) 583,019.83	0.48
PENSIONS	1,203,316.56	2.78	887,996.33	4.96	567,122.01	2.91	2,390,728.26	2.86	(A) 5,049,163.16	4.17
FEDERAL INSURANCE CONTRIBUTION	282,426.44	0.65	208,418.67	1.16	133,107.33	0.69	561,119.91	0.67	(A) 1,185,072.35	0.98
RENT OF LEASED LINES AND FACILITIES	314,553.67	0.73	4,185.00	0.02	25,642.00	0.13	37,001.96	0.05	381,382.63	0.32
TOTAL	3,361,487.18	7.77	2,315,270.48	12.92	1,974,573.87	10.14	7,053,240.70	8.44	14,704,572.23	12.14
GENERAL AND ADMINISTRATIVE (INCLUDING TRAFFIC) –										
LABOR	615,339.99	1.42	390,944.03	2.18	349,239.75	1.79	1,335,075.21	1.60	(B) 2,690,598.98	2.22
OTHER	212,912.29	0.49	135,269.60	0.76	120,839.60	0.62	461,946.13	0.55	(B) 930,967.62	0.77

TOTAL	828,252.28	1.91	526,213.63	2.94	470.079.35	2.41	1,797,021.34	2.15	3,621,566.60	2.99
DEPRECIATION	1,577,521.00	3.64	2,501,032.00	13.96	858,251.00	4.41	4,754,357.24	5.69	9,691,161.24	8.00
TOTAL OPERATING EXPENSES –										
LABOR (SEE NOTE C)	16,222,434.57	37.47	11,971,380.55	66.80	7,645,750.28	39.25	32,230,221.99	38.58	68,069,787.39	56.19
MATERIAL AND OTHER COSTS	9,849,169.96	22.76	8,256,167.09	46.07	4,755,146.06	24.42	22,172,428.18	26.54	45,032,911.29	37.18
TOTAL	26,071,604.53	60.23	20,227,547.64	112.87	12,400,896.34	63.67	54,402,650.17	65.12	113,102,698.68	93.37
NET OPERATING INCOME (LOSS)	(3,120,118.89)	(7.21)	(2,279,962.19)	(12.73)	6,697,445.70	34.38	6,739,452.21	8.07	8,036,816.83	6.63
DEBT SERVICE REQUIREMENTS	1,374,935.84	3.17	875,590.55	4.88	916,107.22	4.70	4,333,978.00	5.19	7,500,611.61	6.19
BALANCE AVAILABLE FOR OTHER CHARGES	$(4,495,054.73)	(10.38)¢	$(3,155,552.74)	(17.61)¢	$5,781,338.48	29.68¢	$2,405,474.21	2.88¢	$536,205.22	0.44%
MILES OPERATED		43,285,362		17,921,621		19,478,889		83,536,946		164,222,818

(A) PRORATED BETWEEN TYPES OF SERVICE ON THE BASIS OF TOTAL LABOR (SEE EXHIBIT IA, ITEM 3).

(B) PRORATED BETWEEN TYPES OF SERVICE ON THE BASIS OF A COMPOSITE AVERAGE PERCENTAGE BASED ON (1) PASSENGER REVENUE; (2) REVENUE MILES; AND (3) DIRECT LABOR CHARGES TO TYPES (SEE EXHIBIT IA, ITEM 2).

(C) TOTAL LABOR AS SHOWN DOES NOT INCLUDE STOREROOM AND PURCHASING DEPTS. LABOR WHICH IS INCLUDED IN THE 20% BURDEN ADDED TO MATERIALS, NOT CLAIM DEPT. LABOR WHICH IS CHARGED TO THE RESERVE FOR DAMAGES.

CHICAGO TRANSIT AUTHORITY

ANALYSIS OF OTHER REVENUES FOR YEAR 1954
AND BASIS FOR ALLOCATION TO TYPES OF SERVICE

	TOTAL SYSTEM	RAPID TRANSIT SYSTEM	SURFACE SYSTEM		ALLOCATION TO SURFACE SYSTEM TYPES: STREET CARS	TROLLEY COACHES	MOTOR BUSES
STATION AND CAR PRIVILEGES	$1,030,608.32	$ 405,037.63	$ 625,570.69	(A)	$103,156.61	$111,289.02	$411,125.06
RENT OF TRACKS AND FACILITIES	415,286.63	415,286.63	–	(A)	–	–	–
RENT OF BUILDING & OTHER PROPERTY	266,838.06	231,678.86	35,159.20	(A)	5,797.75	6,254.82	23,106.63
MISCELLANEOUS REVENUES –							
MISC 'L. OPERATING REVENUES	463.11	463.11	–	(A)	–	–	–
NET INCOME FROM MISC 'L. PROPERTY	19,380.00	–	19,380.00	(A)	3,195.76	3,447.70	12,736.54
INTEREST ON SECURITIES	251,857.80	56,340.59	195,517.21	(B)	32,590.40	34,995.64	127,931.17
OTHER MISC 'L. INCOME	159,222.62	19,689.98	139,532.64	(A)	23,008.93	24,822.86	91,700.85
TOTAL OTHER REVENUES	$2,143,656.54	$1,128,496.80	$1,015,159.74		$167,749.45	$180,810.04	$666,600.25

	RAPID TRANSIT	STREET CARS	TROLLEY COACHES	MOTOR BUSES
COMPOSITE AVERAGE USED FOR DISTRIBUTION OF SYSTEM REVENUES AND EXPENSES BETWEEN SYSTEMS AND BETWEEN SURFACE SYSTEM TYPES: BASED ON –				
(A) PASSENGER RECEIPTS	18.38%	14.97%	15.93%	50.72%
(B) REVENUE MILES	26.36	10.91	11.86	50.87
1. COMPOSITE AVERAGE (A & B)	22.37	12.94	13.895	50.795
(C) DIRECT LABOR CHARGES TO TYPES (DOES NOT INCLUDE GEN. & ADM. LABOR)	23.87	17.71	11.16	47.26
2. COMPOSITE AVERAGE (A , B & C)	22.87%	14.53%	12.98%	49.62%
3. TOTAL LABOR	23.832%	17.587%	11.232%	47.349%
COMPOSITE AVERAGE USED FOR DISTRIBUTION OF SURFACE SYSTEM REVENUES AND EXPENSES BETWEEN TYPES, ASSUMED TO BE AN EQUITABLE DIVISION BASED ON INTENSITY OF USE AND EARNING CAPACITY OF FACILITIES: BASED ON –				
PASSENGER RECEIPTS		18.34%	19.52%	62.14%
REVENUE PASSENGERS		18.43	19.44	62.13
REVENUE MILES		14.82	16.11	69.07
AVERAGE VEHICLES OPERATED		14.36	16.10	69.54
4. COMPOSITE AVERAGE		16.49%	17.79%	65.72%

(A) DIVISIONAL REVENUE ARE PER BOOKS, SURFACE SYSTEM REVENUES ALLOCATED TO TYPES PER COMPOSITE AVERAGE 4 ABOVE

(B) SYSTEM REVENUE ALLOCATED TO TYPES PER COMPOSITE AVERAGE 1 ABOVE.

LOCAL TRANSIT HISTORY IN CHICAGO

The evolution of local transit in Chicago is dramatically portrayed in pictures of transit units used in the city during a century of development.

The earliest local transit of record in Chicago was started in 1853 with the omnibus, an enclosed vehicle with 20 seats, operated on carriage type steel tired wheels. Its use was principally for travel between hotels and railway terminals.

The forerunner of modern local transit equipment was the horse car, which operated on rails and made its first appearance on Chicago's streets in 1859. This service moved at speeds of 3 to 6 miles per hour, and provided transportation over a considerable proportion of the city's area until the early 1900's.

Chicago demonstrated early in its history an insistent demand for convenient transportation that would move people over the streets expeditiously and at low cost.

An interesting transit device, which was operated on a few lines in the city beginning in 1864, was the steam dummy, a unit powered by a small steam locomotive. The next unit developed in Chicago's search for greater speed in its transit service was the cable car. This type of unit began operation in the city in 1882, and was operated on a number of lines up to the complete installation of streetcars in 1906.

With the march of progress, it was inevitable that neither horse cars nor cable cars were adequate for the purpose. The powerful, efficient, and economical streetcar became the progressive local transit medium of its day. This unit was improved greatly over the years, and after extensive engineering study, to which Chicago Surface Lines made significant contributions of both engineering knowledge and financial assistance, the modern P. C. C. car was placed in service in the mid-1930's.

With the advance of passenger automobile use, and development of internal combustion engines, the mass transit motor bus first appeared on Chicago streets in 1917. Its use increased rapidly because of its efficient operation and greater flexibility in mounting traffic congestion. The electric powered trolley bus also contributed to this progress, so that now the old red streetcar is gone, and only a few modern P. C. C. streetcars remain in service.

From its modest beginning, local surface transit in Chicago has developed so that the CTA now operates nearly 3600 motor buses, trolley buses, and streetcars, on 1863 miles of route, with service within three standard blocks of virtually all of the city's population.

Rapid Transit

Chicago's early planners recognized the necessity of transit service that could operate rapidly, efficiently, and unimpeded by street traffic. The solution of this problem then, as now, was rapid transit, and the first "L" line began operation in 1892 on a part of the present main line from Congress Street to 39th Street.

Originally, this rapid transit service was powered by dummy steam engines, which were replaced within a comparatively short period by the more efficient electric powered cars.

The modern rapid transit unit used in the city is the P. C. C. car, with electric motors and chassis similar in design to those used on modern streetcars. Another outstanding improvement in CTA rapid transit cars is the multiple door control with which two men operate the entire train. A number of CTA's modern rapid transit cars now in service were adapted from streetcars that were replaced by more effective motor buses.

Chicago's rapid transit service is designed for travel between the central commercial district and outlying business centers, including suburban areas. At present, there are approximately 1250 cars operated on 210 route miles on elevated structure and through city owned subways.

The pictorial history of the evolution of mass transit equipment in Chicago follows:

4/14/55

1853

Seats: 20

Length: 17' to 20'

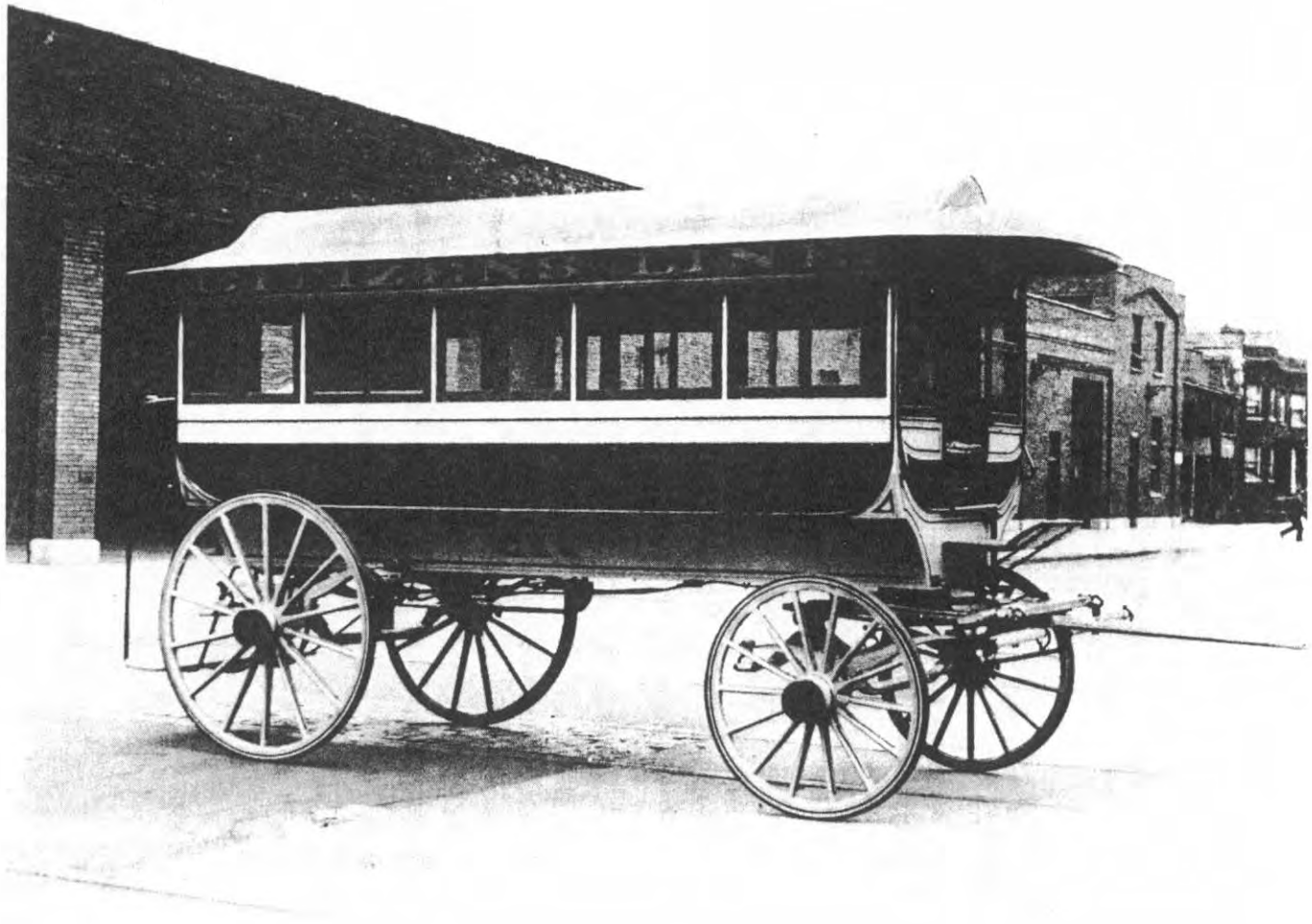
Width: 7'

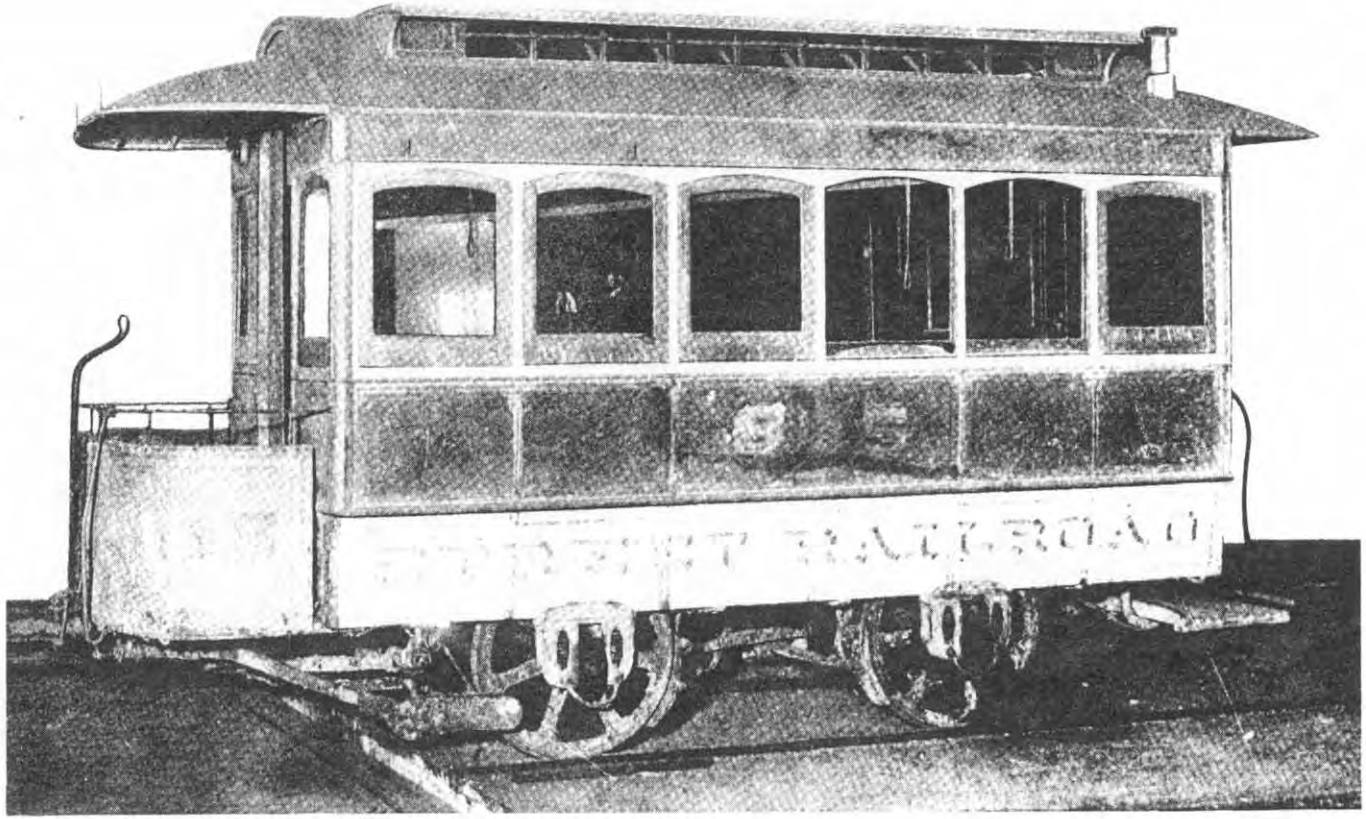
Height: 10'

Weight:

Operation: 1-Man

Remarks: In May 1853 Franklin Parmalee started the first regular omnibus service with five or six buses previously operated by various hotels. The last known regular operation was at the north end of Milwaukee Ave. about 1880.





1859

Seats: 18

Length: 12'

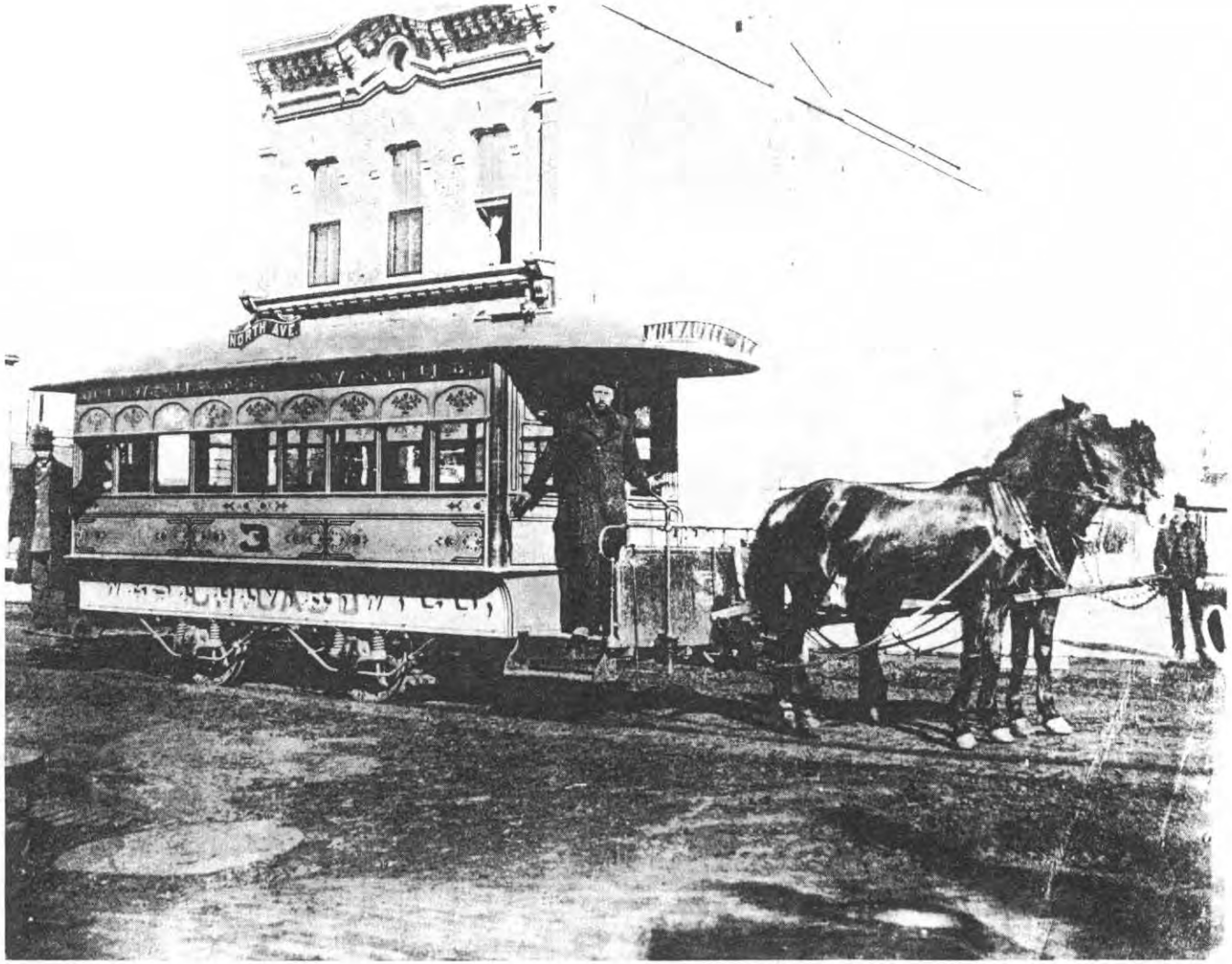
Width: 7'

Height:

Weight: 4,000#

Operation: 1-Man

Remarks: In 1859 there appeared in Chicago the first one-horse four-wheeled street car known as the "bobtail" because it had no rear platform. Passengers entered at the rear and dropped their fare into a slot which led to a box at the drivers end of the car. There were no heating appliances. In winter the floor was covered with about a foot of hay or straw to keep the feet warm. Speed was about three miles per hour. Two coal-oil lamps in opposite corners under the roof comprised the lighting system.

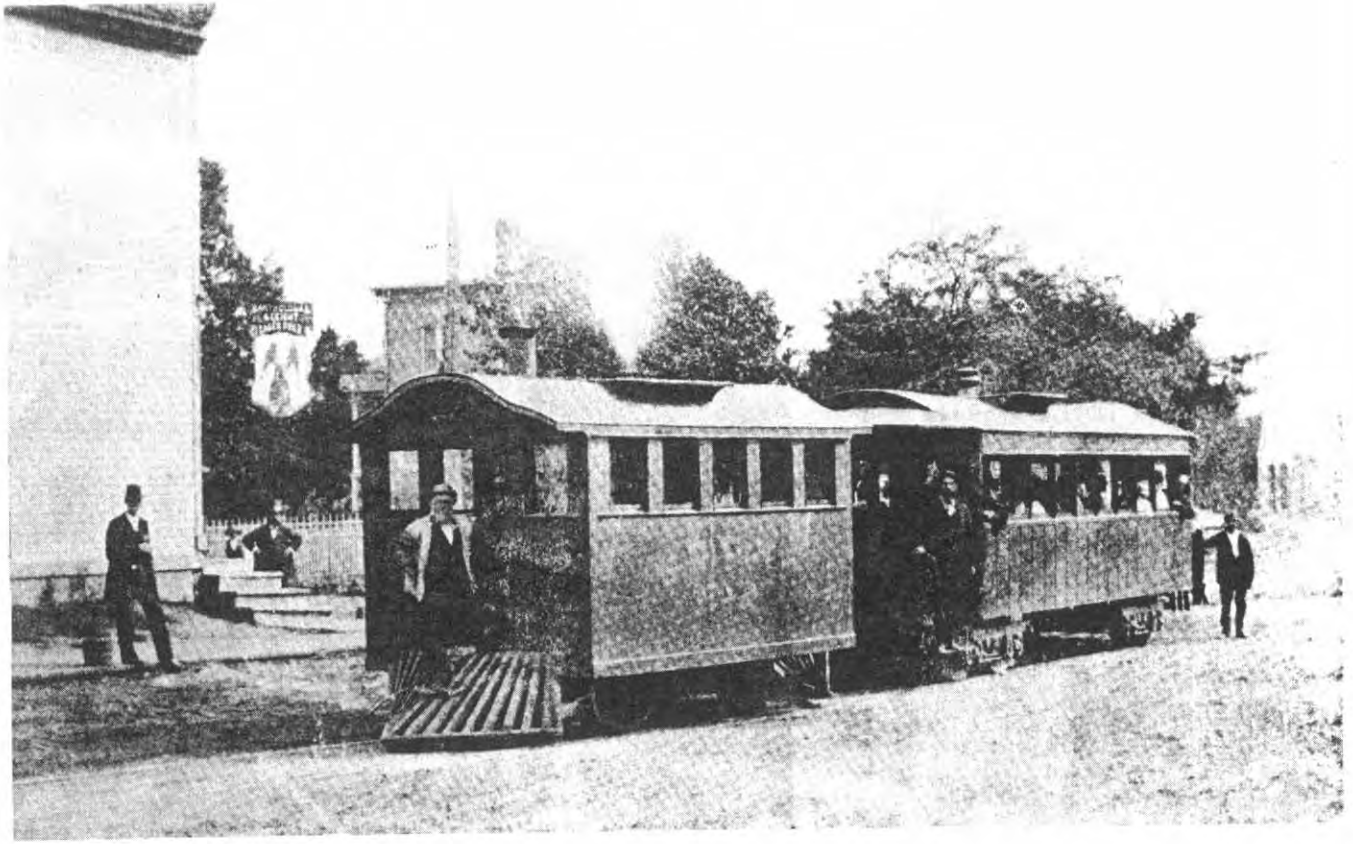


1870 - 1875

Seats:	30
Length:	18'
Width:	7'
Weight:	5,500#
Operation:	2-Man

Remarks: The first important improvement in service was the advent of the single truck double end two-horse car. With the coming of this car also appeared another innovation - a conductor.

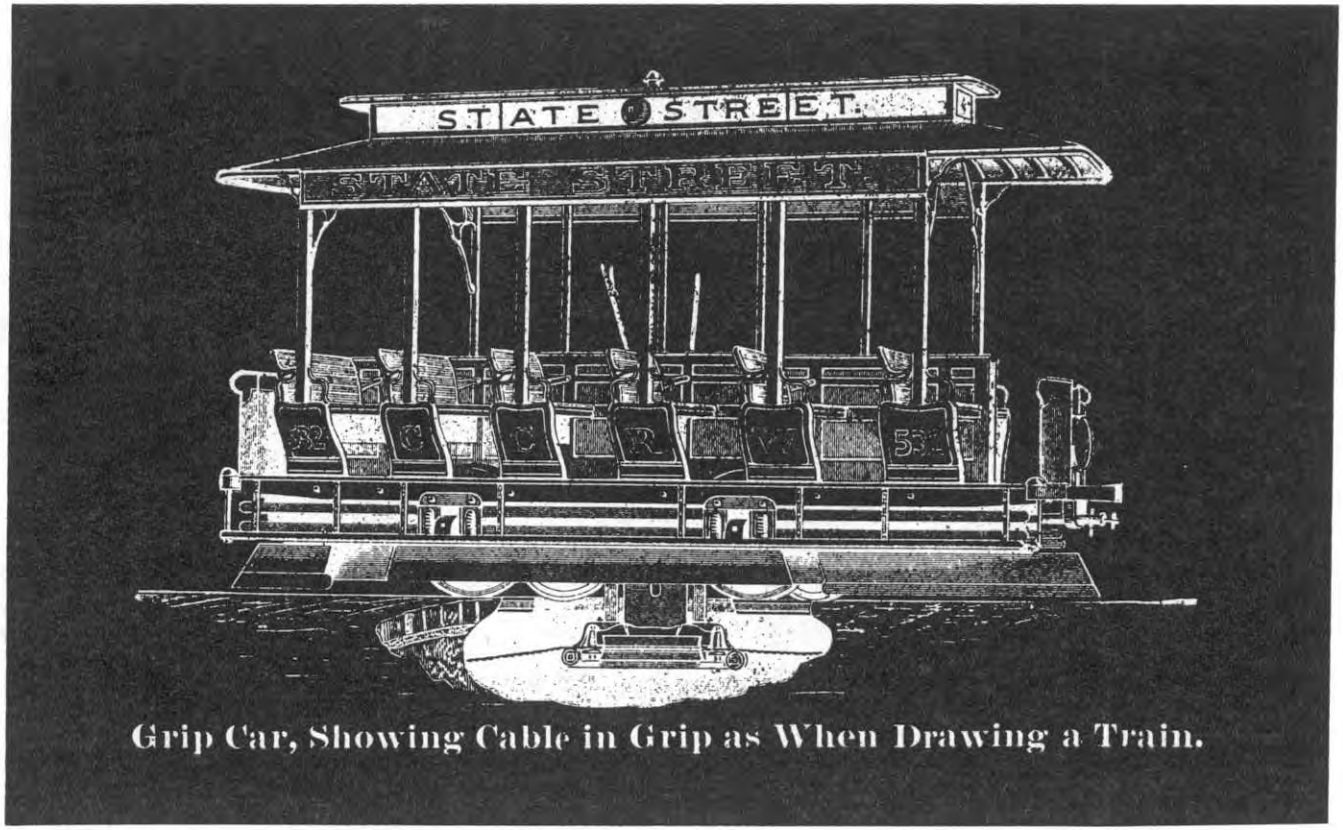
1864



Remarks: In 1864 a steam dummy was operated on Evanston Ave. (now Broadway from Diversey Ave. to Graceland Cemetery.

In 1881 a steam dummy was put in operation on the Cottage Grove Ave. line and 55th St. line in the town of Hyde Park and operated until 1886 when the Chicago City Railway Co. was authorized to substitute cable power.

Photo shows North Side installation.



Grip Car, Showing Cable in Grip as When Drawing a Train.

1882

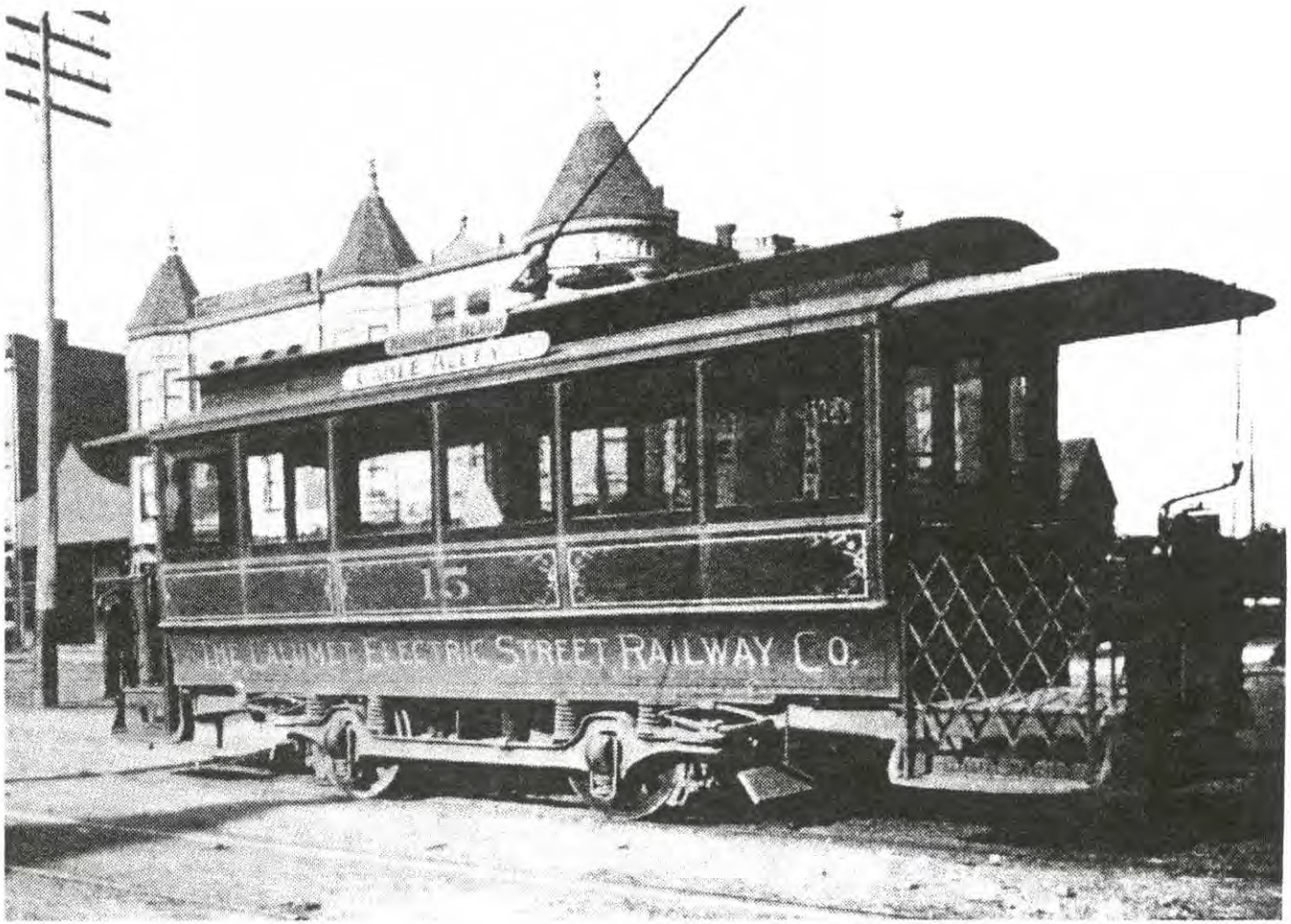
Seats:	20-24
Length:	12' to 16'
Width:	7'
Height:	10'-6"

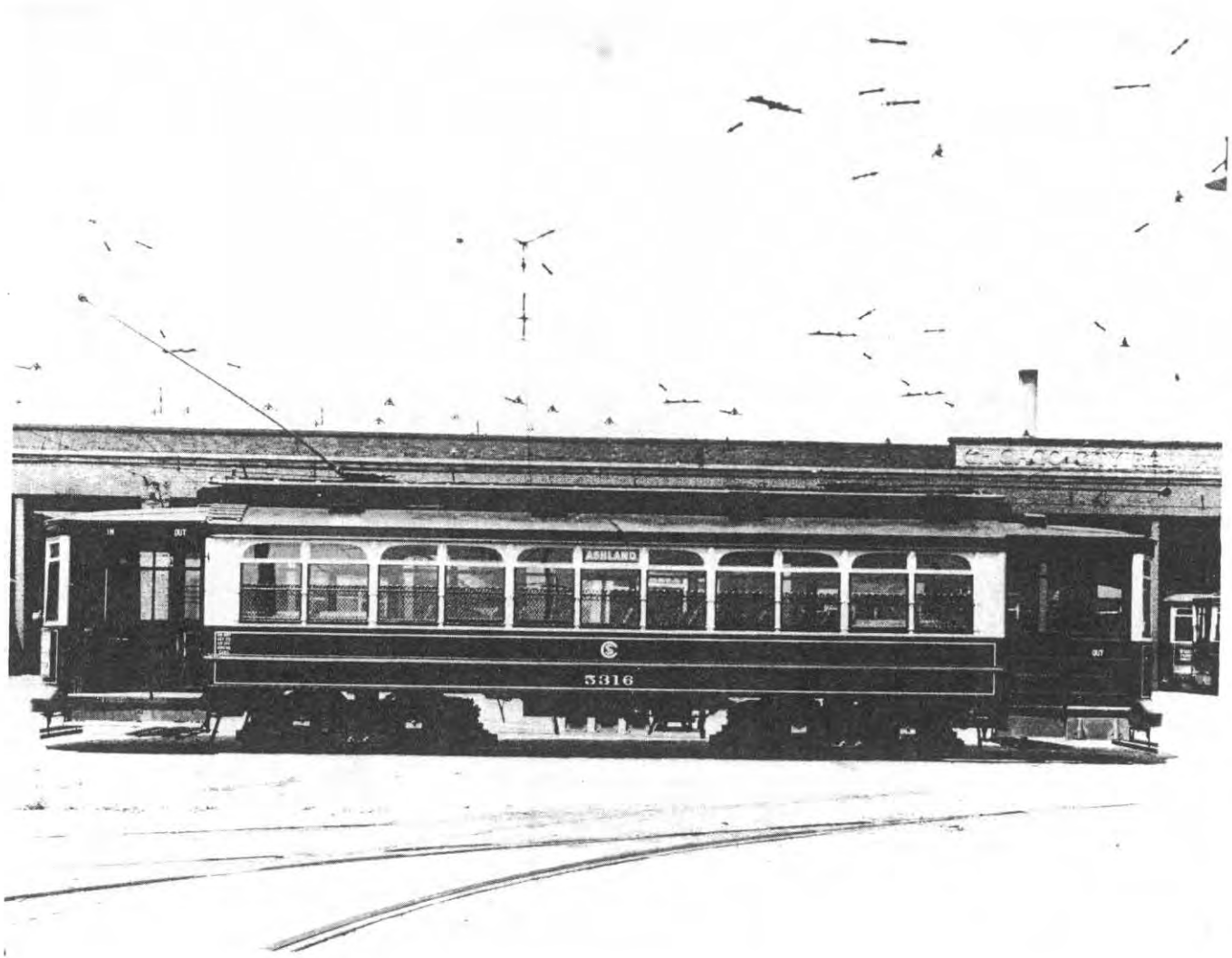
Remarks: The year 1882 marked the first radical change in motive power when the C.C.Ry. Co. installed a cable system on its State St. and Wabash & Cottage Grove Ave. routes. Cars were propelled by means of a moving underground cable connected to the car by a "grip". The cable was propelled by steam engines in the power plants. The grip car which carried the mechanism for "hooking on" to the cable was short and of the open type. Each grip car hauled one or more trailers. Speed ranged from 8-1/2 to 12 miles per hour.

1890

Seats:	20
Length:	18'
Weight:	12,000#
Motors:	Two
Size:	15 HP.

Remarks: On October 2, 1890 the Calumet Electric Street Railway installed the first overhead trolley system in the city. By the time of the Columbian Exposition of 1893 the overhead trolley system in Chicago consisted of 110 miles of single track mostly on the south side. The first electric cars were largely remodeled horse and cable cars. Four-wheel trucks carrying the motors were substituted for the old trucks. Stoves were used for heating and illumination was by electricity.

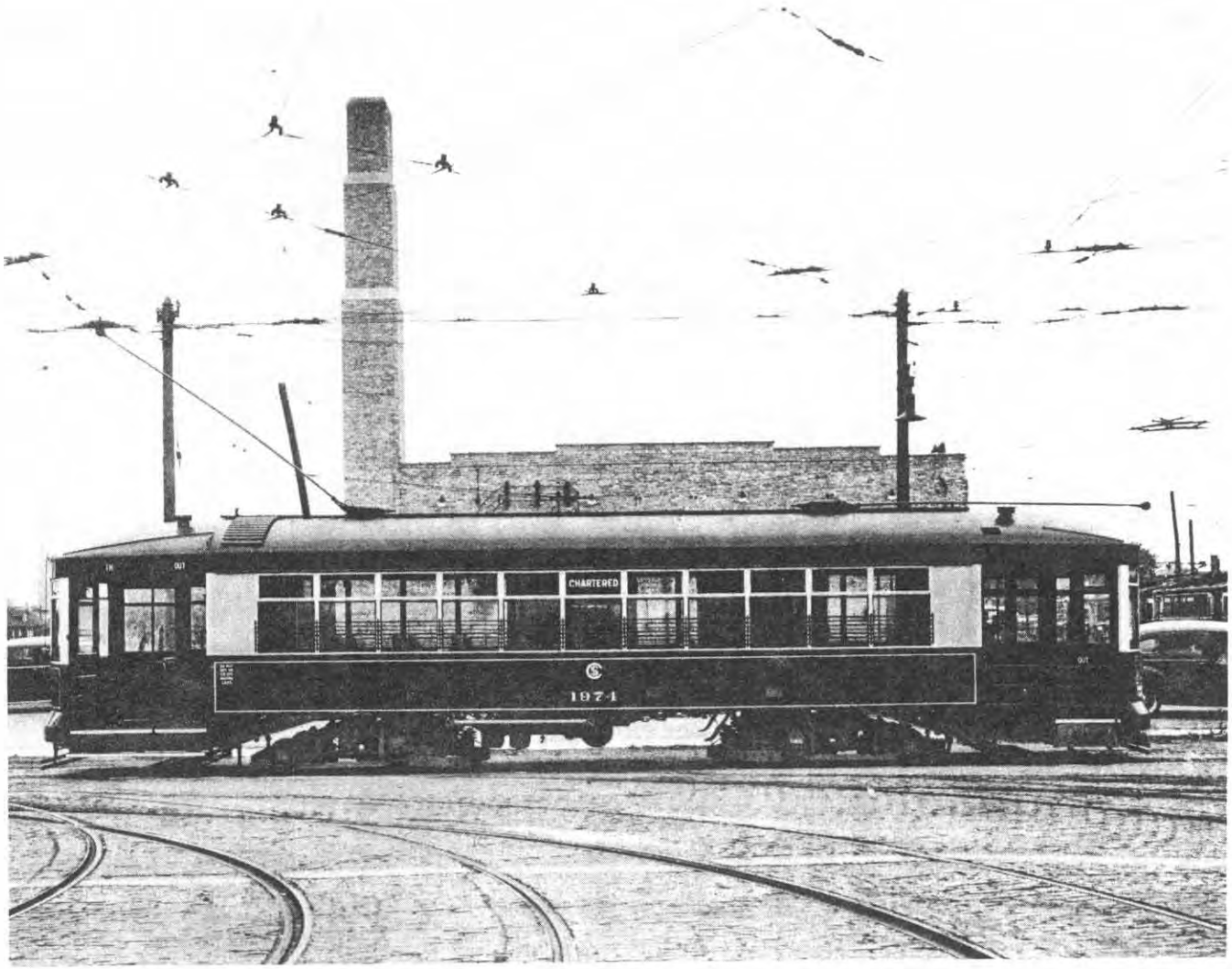




1907-08

5301 - 5600

Built By:	J. G. Brill Co.
Seats:	40
Length Overall	48'-3"
Width at Belt Rail	9'-0"
Height over Trolley Base	12'-3"
Weight:	54,100#
Operation:	2-Man
Motors:	4 GE-80-A
Size:	40 HP.
Control:	GE Type K-28-E 10 Point Non-Automati
Wheel Size:	34"
Remarks:	First "Pay-As-You Enter" type car in Chicago, except for sample installation.

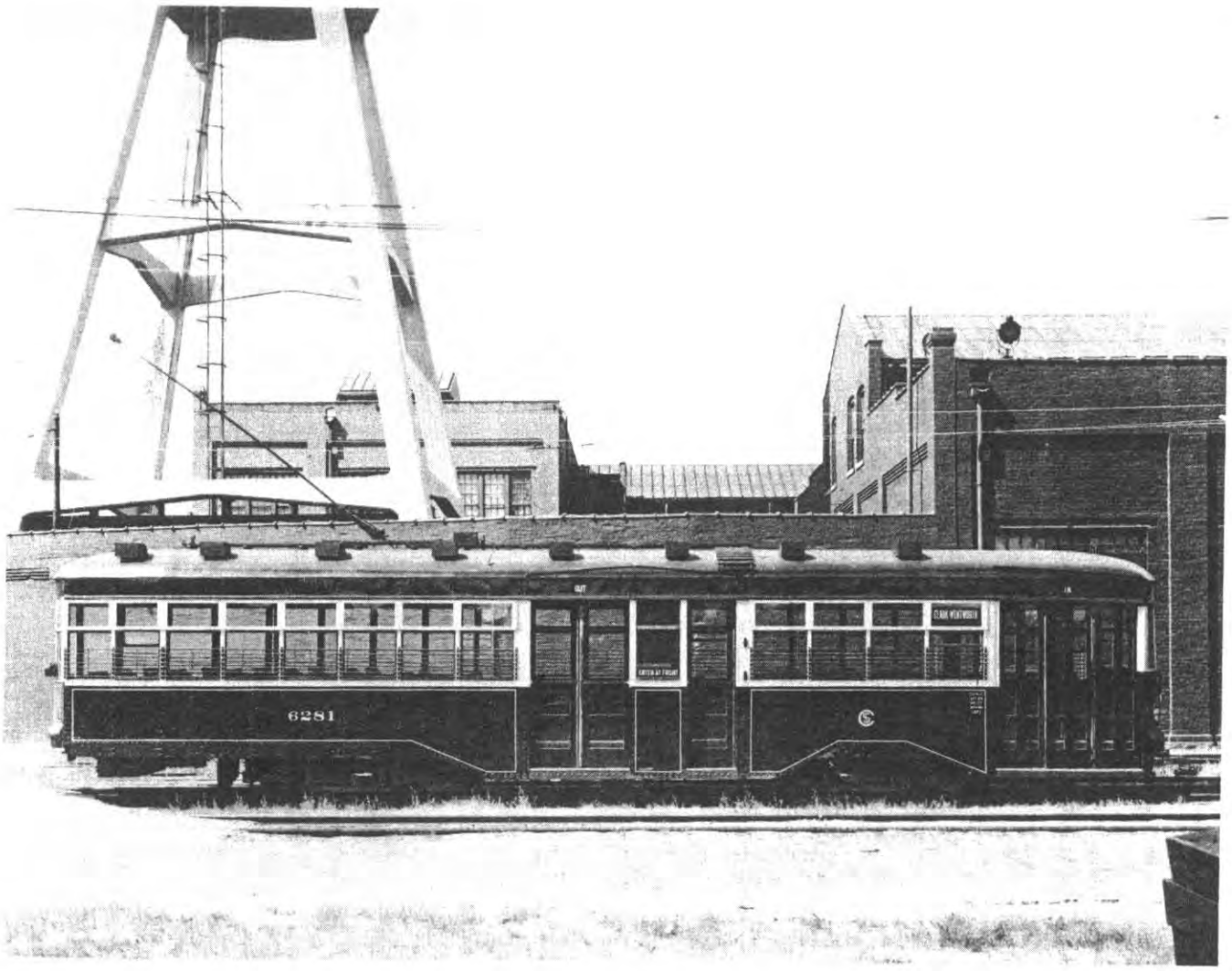


1913-1914

1800 - 1999

Built By:	C.Rys.Co.(100 Cars) American Car(50 ") Southern Car(50 ")
Seats:	53
Length Overall	48'-5"
Width at Belt Rail	8'-6"
Height over Trolley Base	11'-10"
Weight:	35,800#
Operation:	2-Man
Motors:	2 W-534-Y1
Size:	60 HP
Control:	W Type K-51-A 9 point non-automatic
Wheel Size:	22" Pony 33" Driver

Remarks: Seats on the platforms are used for the first time on Chicago cars



1929

3322-3381;6280-6319

Built By:	C.S.L. (34 cars) Brill (33 ") Cummings (33 ")
Seats:	60
Length Overall	49'-0"
Width at Belt Rail	8'-6"
Height over Trolley Base	11'-6-5/16"
Weight:	44,000# (avg.)
Operation:	2-Man
Motors:	4 W-516-D (60 cars) 4 GE-301-B3 (40 ")
Size:	50 HP
Control:	GE-PCM Automatic Accel.
Wheel Size:	26"

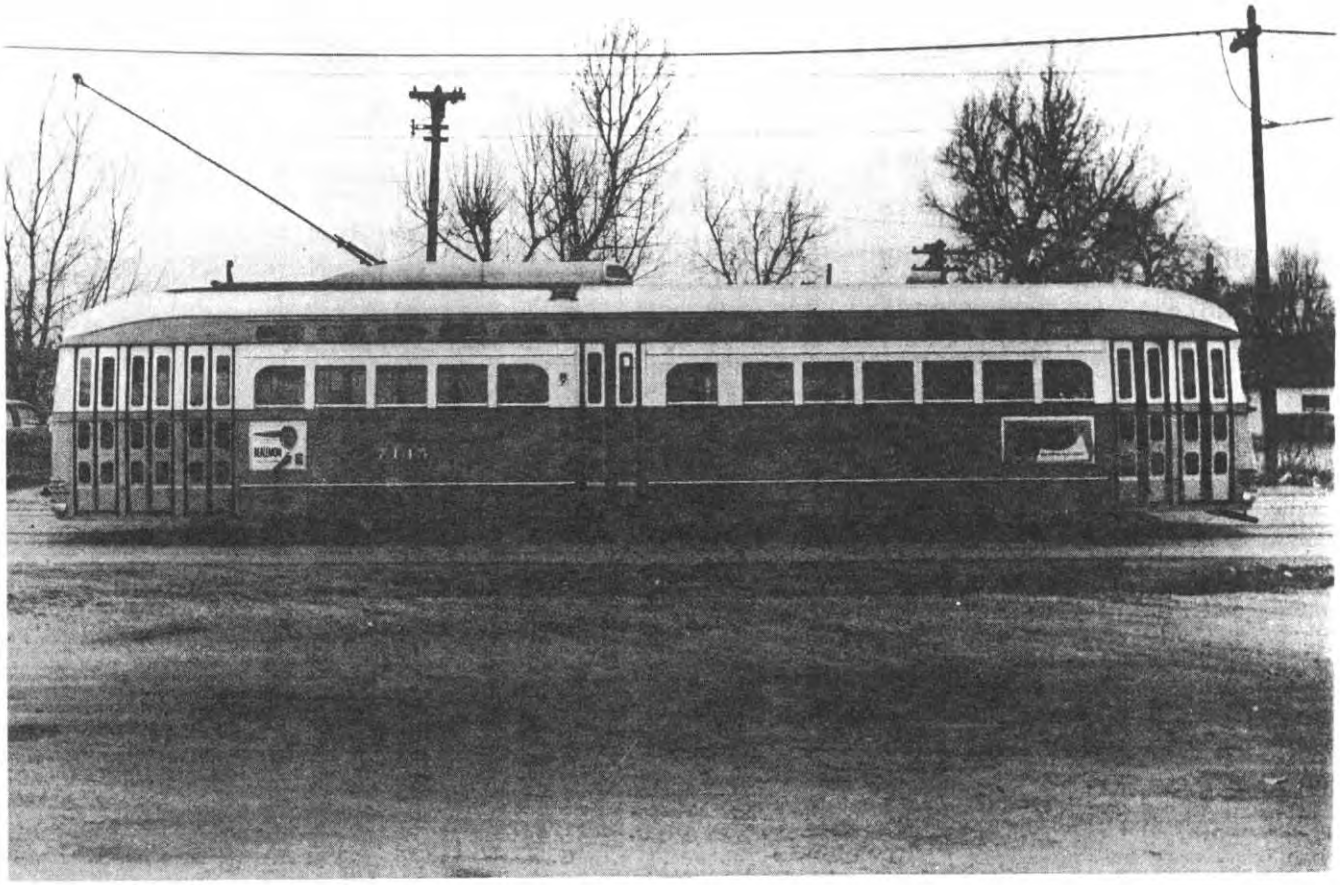
Remarks: The design of these cars is different in appearance and features common to other groups of C.S.L. cars, in that they have a front entrance and center exit and no step from platform to body floor. Conductors location at center provides large unpaid area to facilitate loading. Provision for seated motorman at all times. First surface car with control embodying automatic acceleration.

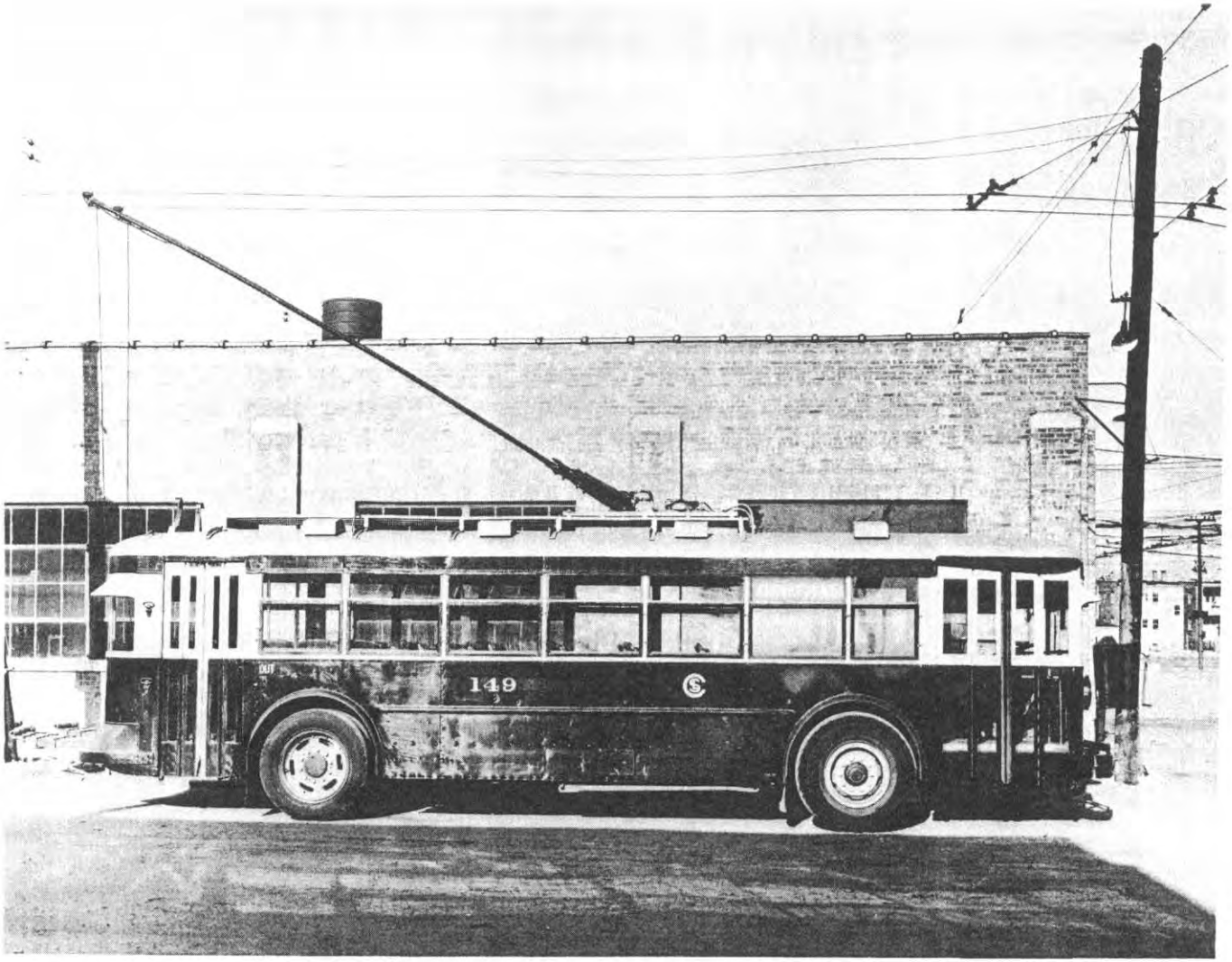
MODERN P. C. C. STREETCAR

1947-1948

P. C. C. Car No. 7145

Total No.	287 (4/13/55)
Built by:	St. Louis Car Co.
Seats:	57
Length Overall:	50'
Width:	9'
Height over Trolley Base:	11' 2-7/8"
Motors:	4 W.H. #1432-J
Wheels:	Super Resilient
Control:	Westinghouse R.C.C.
Weight:	39,800 Lbs.





1930

51-79;92-98;108-114

Total - 43 (10-1-39)

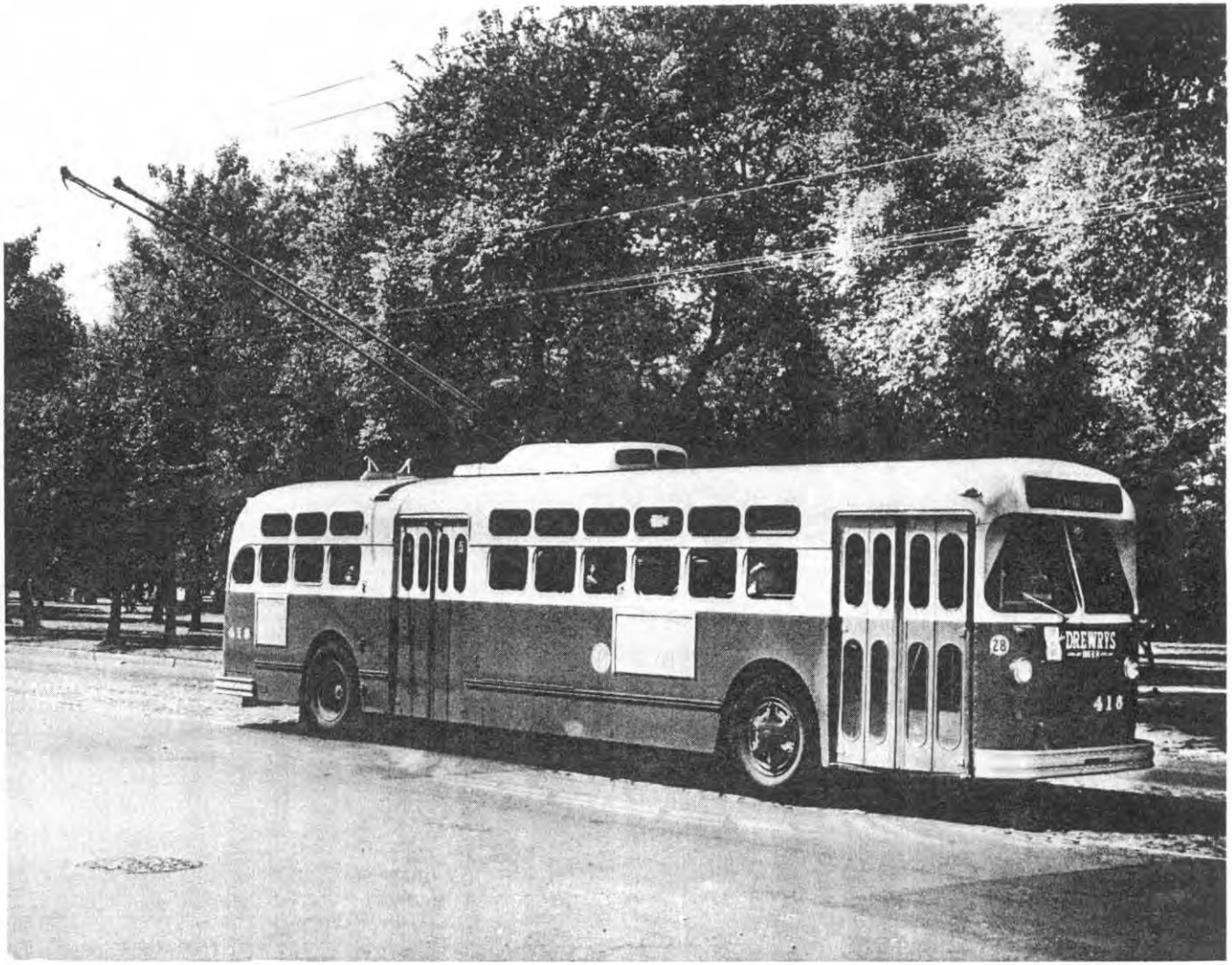
Built By:	Twin Coach
Seats:	40
Length Overall	31'-7"
Width at Belt Rail	7'-7"
Height over Trolley Base	10'-2"
Weight:	17,700#
Motors:	2 W-1426-CT6
Size:	50 HP.
Control:	W-VA Automatic Accel.
Tire Size:	Front 10.50x20S Rear 38x7D
Remarks:	Original trolley bus installation

MODERN TROLLEY BUS

1951-1952

TROLLEY BUS No. 418

BUILT BY:	MARMON-HERRINGTON
TOTAL NUMBER:	349 (4/13/55)
SEATS:	49
LENGTH OVERALL:	478-5/8"
WIDTH AT BELT RAIL:	8' 6"
HEIGHT OVER TROLLEY BASE:	123-1/2"
MOTOR:	5-GE-1213-J-3 SINGLE
SIZE:	140 H.P. 600 VOLTS.
TIRE SIZE:	
FRONT	11:00 x 22
REAR	11:00 x 22
WEIGHT:	20,340 LBS.



MARCH 1917

FIRST OPEN-TOP DOUBLE DECK COACH TO OPERATE IN CHICAGO. FRONT-TRACTOR TYPE, WHEREIN ALL OF THE POWER WAS TRANSMITTED FROM THE ENGINE TO THE FRONT WHEELS.

FIRST DAY OF OPERATION, MARCH 25, 1917.

LENGTH: - 24'2"
WEIGHT: - APPROX. 15,000

SEATS:-UP.DK. 29
LOWER 22

TOTAL 51 SEATS

JULY 1923

DOUBLE DECK OPEN TOP, TWO-MAN COACH, BUILT AND USED IN CHICAGO ABOUT JULY 1923. PHOTO TAKEN IN LINCOLN PARK.

LENGTH: - 27'6"
WEIGHT: - 14,900

SEATS:-UP.DK. 39
LOWER 28

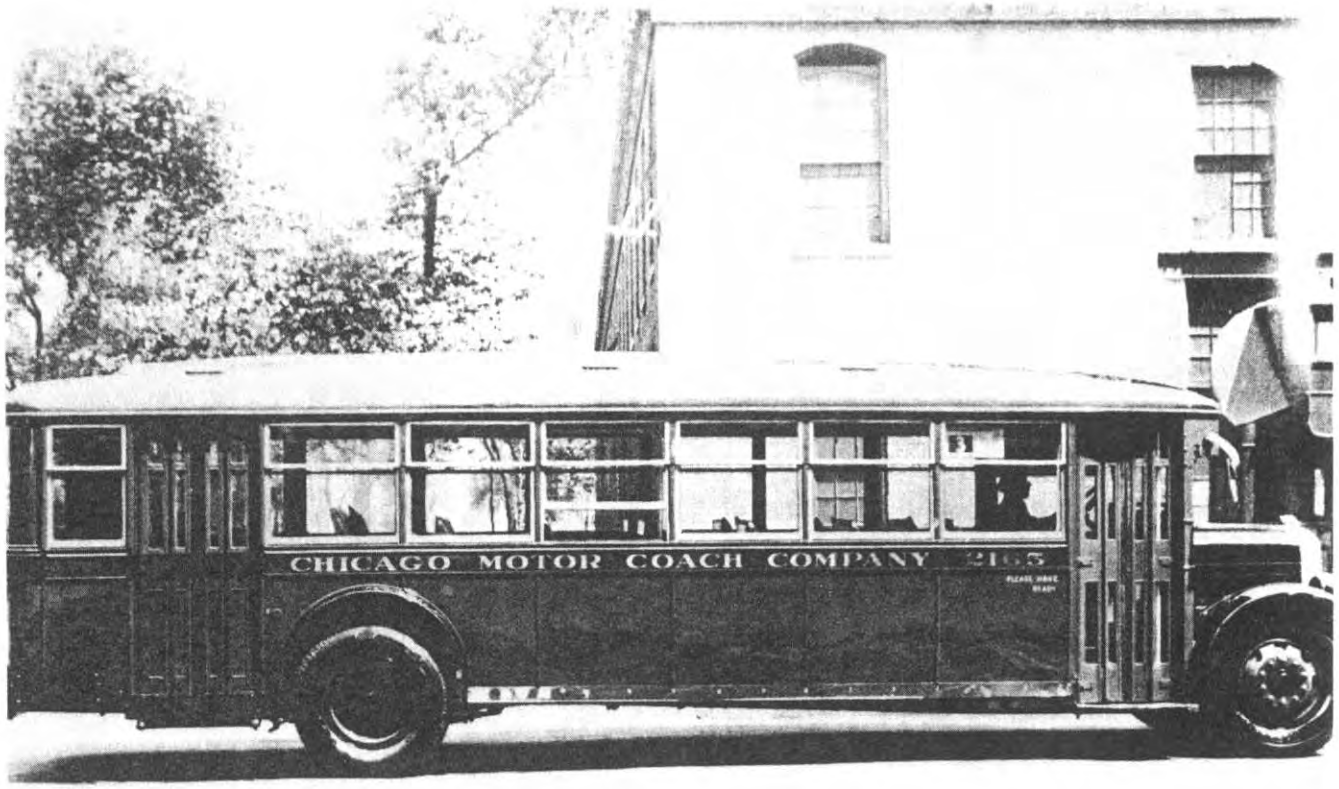
TOTAL 67 SEATS

NOVEMBER 1929

SINGLE DECK 40-PASSENGER COACH WITH FRONT AND REAR EXIT BUILT BY YELLOW TRUCK & COACH MFG.

PUT IN SERVICE IN CHICAGO NOVEMBER 21, 1929

LENGTH: - 30'8"
WEIGHT: - 18,150 LBS.



1927 1928 1930

1-5 301-303 6/7

Total - 10 (10-1-39)

Built By:	Twin Coach
Seats:	40
Length Overall	31'-7"
Width at Belt Rail	7'-6-3/8"
Height:	8'-9-3/8"
Weight:	17,270#
Motors:	Hercules WXE
Size:	Twin 6 cyl. -9 OHP
Tire Size:	Front 10.50x20S Rear 38x7D
Remarks:	Introduction of Transit type body

DECEMBER 1939

SINGLE DECK 45-PSGR. ENGINE-IN-REAR COACH WITH FRONT AND REAR EXITS; PROPELLED BY DIESEL ENGINES WITH HYDRAULIC TRANSMISSION.

PLACED IN SERVICE IN CHICAGO, DECEMBER 1939.

LENGTH: - 35'
WEIGHT: - 19,470

SEATS: - 45

MODERN MOTOR BUS (PROPANE)

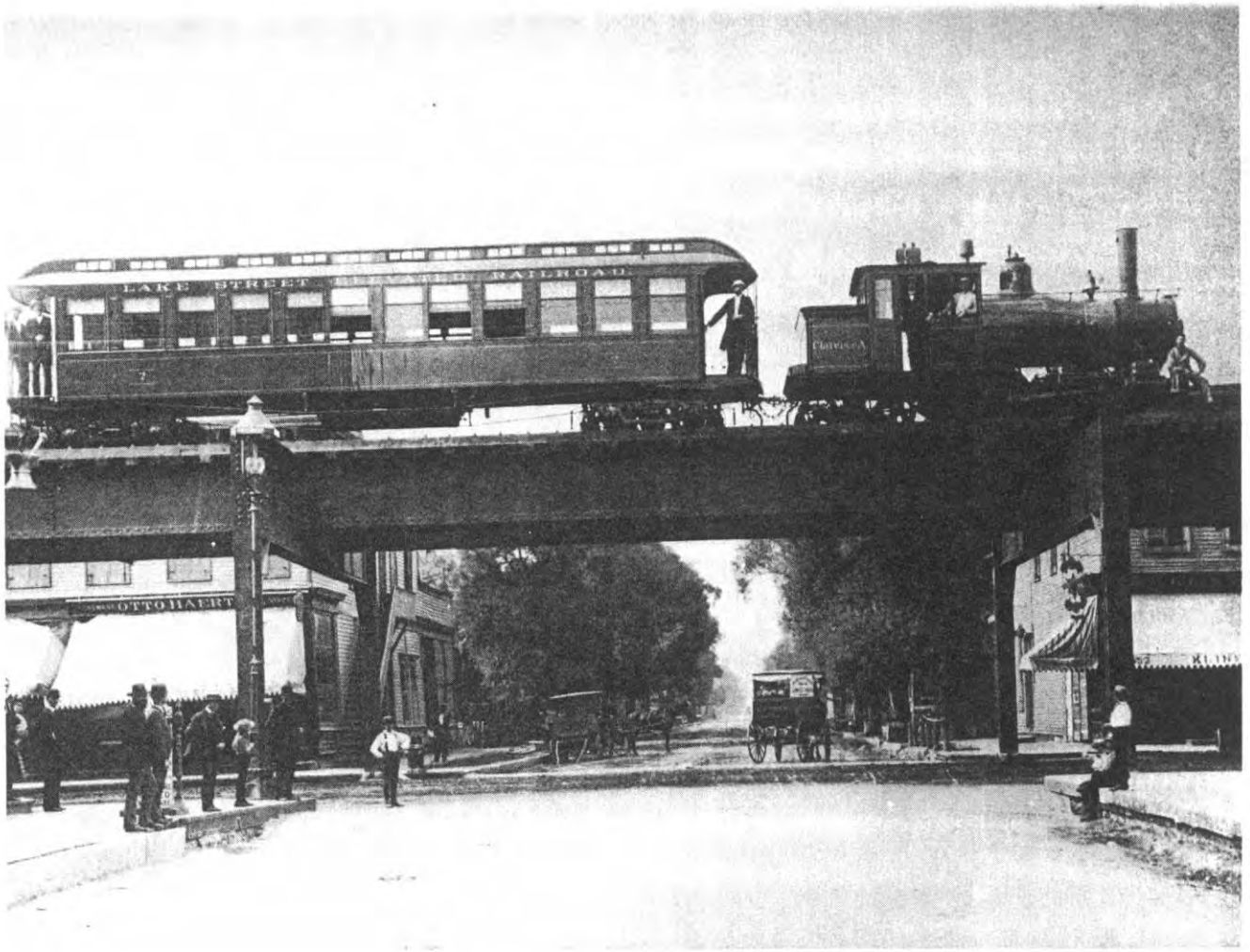
1953-1954-1955

MOTOR BUS No. 5900	
TOTAL No.	500 (4/13/55)
BUILT BY:	TWIN COACH
SEATS:	50
LENGTH OVERALL:	482"
WIDTH AT BELT RAIL:	8' 6"
HEIGHT:	118-1/2"
WEIGHT:	18,500 Lbs.
MOTOR:	F.T.C.-200-45
SIZE:	200 H.P.
TIRE SIZE:	
FRONT	11:00 x 20
REAR	11:00 x 20
REMARKS:	PROPANE FUELED, HYDRAULIC TRANSMISSION

EARLY ELEVATED CAR WITH STEAM DUMMY

1893

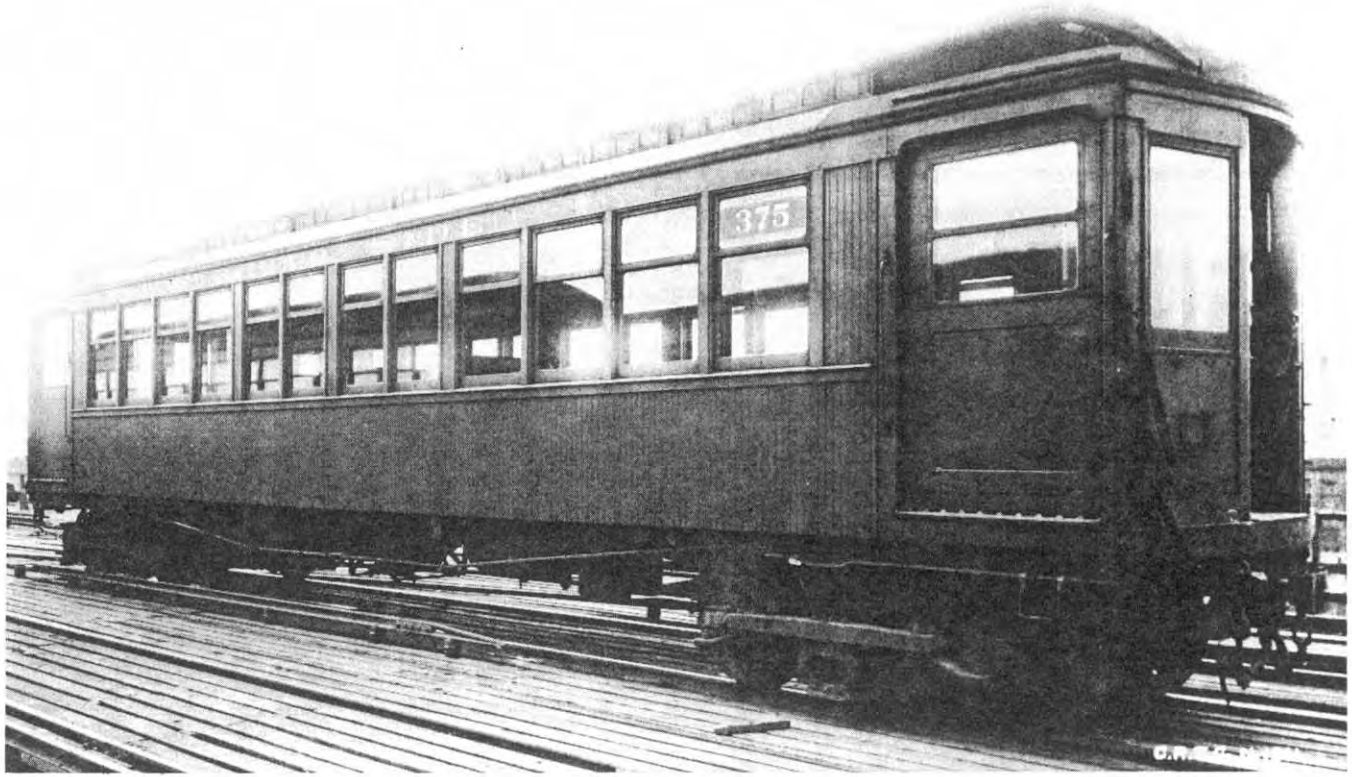
LAKE STREET ELEVATED RAILROAD	
CAR NO. 7	
BUILT BY:	GILBERT
LENGTH:	46'
WIDTH:	8' 9-5/8"
HEIGHT:	12' 6-1/2"
SEATING CAPACITY:	48
WEIGHT:	33,000 LBS.
TYPE:	TRAIL CAR
HEATERS:	ELECTRIC
SIDE GATES:	IRON, MANUALLY OPERATED.
TYPE OF CONSTRUCTION:	WOOD, WITH STEEL REINFORCED PLATFORMS.
REMARKS:	THIS WAS THE FIRST TRAIN TO OPERATE ON THE LAKE ST. "L". ALL OF THE ENGINES WERE GIVEN CHRISTIAN NAMES AND INITIALS.



WOOD BODY R. T. CAR

1906-1907

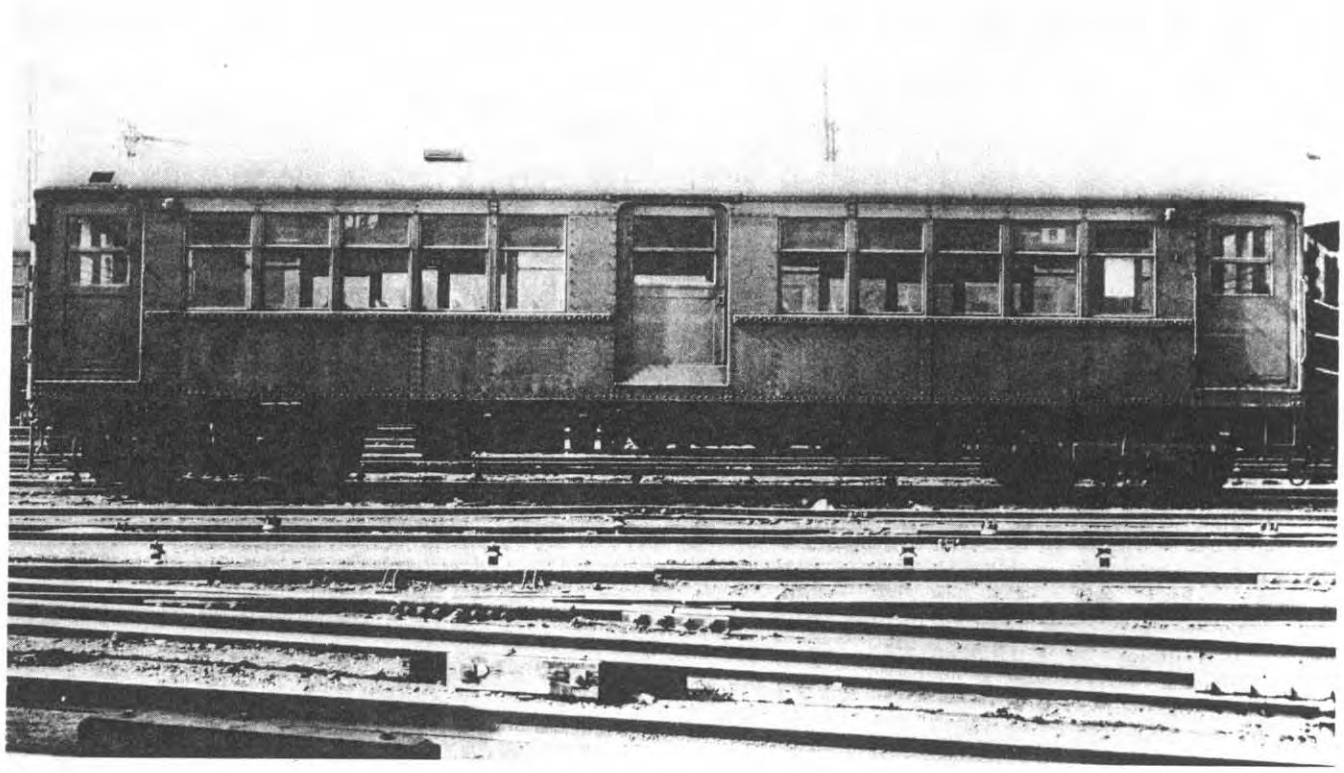
RAPID TRANSIT CAR No.	375
TOTAL NUMBER:	131 (4/1/55)
BUILT BY:	JEWETT
No. OF MOTORS:	2
LENGTH:	46' 8-1/4"
WIDTH:	8' 10"
HEIGHT:	13' 1-1/2"
SEATS:	52
WEIGHT:	59,000 Lbs.
TYPE OF CONSTRUCTION:	WOOD, WITH STEEL REINFORCED PLATFORMS



ALL METAL R. T. CAR

1914-1915

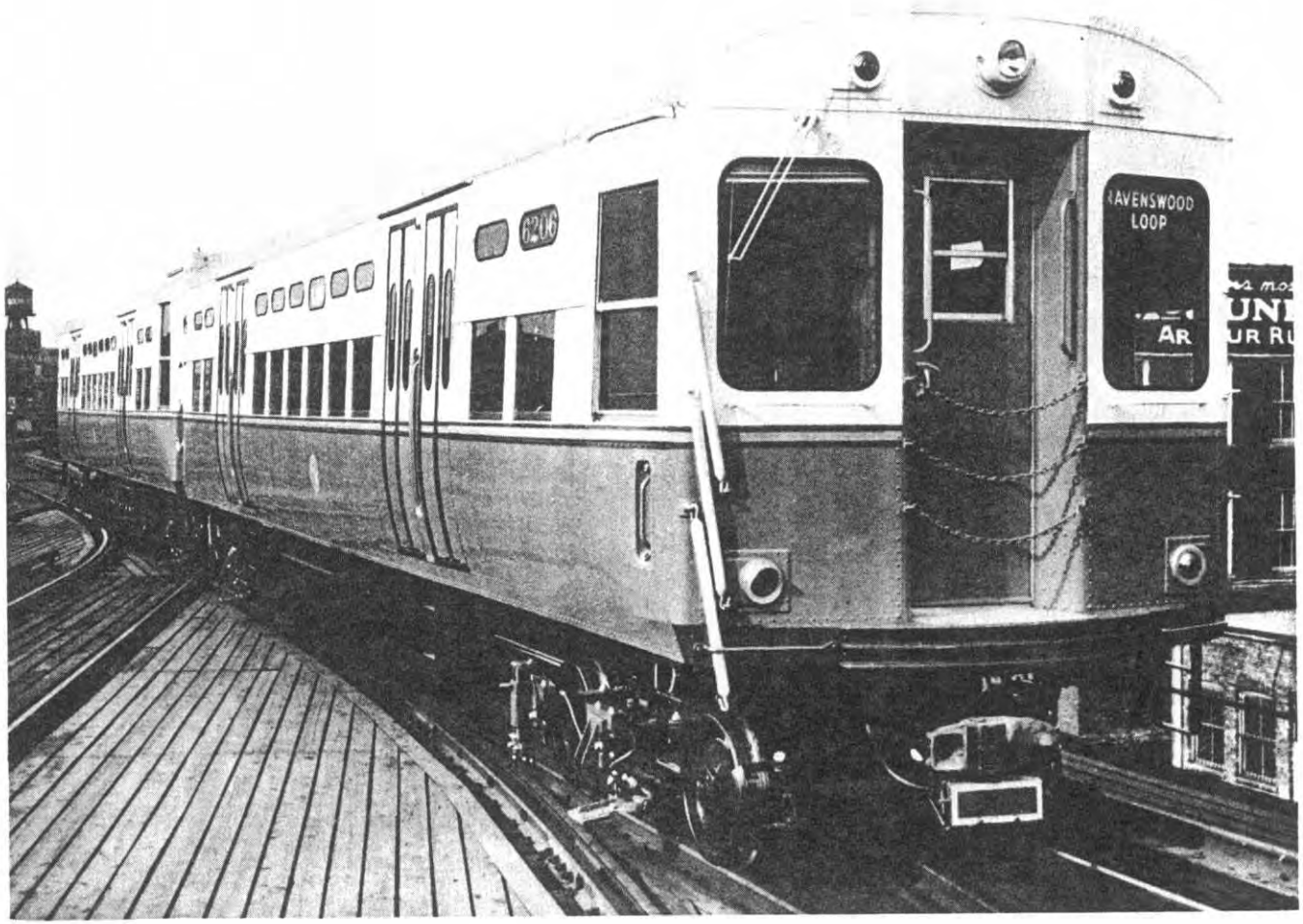
RAPID TRANSIT CAR NO.	4174
TOTAL NUMBER:	184 (4/1/55)
BUILT BY:	CINCINNATI CAR CO
LENGTH:	48'
WIDTH:	8' 8-3/16"
HEIGHT:	12' 3-1/2"
WEIGHT:	70,000 LBS.
SEATS:	52
NO. OF MOTORS:	2
TYPE OF CONSTRUCTION:	ALL METAL



MODERN R. T. CAR

1954-1955

Rapid Transit Car No.	6206
Total Number:	450 (4/13/55)
Built by:	St. Louis Car Co.
Seating Capacity:	51
Motors & Control:	Westinghouse
No. of Motors:	4 (per car)
Type of Motors:	1432 LK
Brakes:	Dynamic and Drum
Drum Brake Actuators:	Westinghouse Air Brake Company
Resilient Wheels:	Carnegie-Illinois Steel Company
Height:	11' 10"
Width:	9' 4"
Length:	48'
Weight:	39,000 Lbs.
Type of Construction:	All Metal



CHAPTER VI

TRANSIT SUBSIDIES

For Release to Afternoon Papers of Wednesday, September 21, 1955

and All Papers Thereafter

Chicago, September 21 - - - Whether transit fares shall continue to increase, or whether transit's mounting operating costs shall be offset by increased financial aid is the vexing problem confronting large urban centers, Werner W. Schroeder, Vice Chairman of Chicago Transit Board, delcared today in the sixth chapter of his transit research study.

In a previous chapter of the study, Mr. Schroeder attributed transit's financial plight largely to competition from the private automobile. Transit, he said, has lost millions of patrons to the automobile, and increased use of personal transportation is jamming city streets so badly that surface mass transit is being strangled.

Two large cities, New York and Boston, Mr. Schroeder pointed out today, long ago chose financial aid for their mass transit services rather than full-cost fares paid by transit riders.

New York, where the subsidized fare is 15 cents, has already subsidized its mass transit services to the extent of at least $2,335,000,000, and for the future will contribute $95,000,000 to $100,000,000 a year.

Without the subsidy, Mr. Schroeder said, the New York Transit Authority's fare would be at least 23-1/2 cents.

If Chicago Transit Authority were subsidized on the same basis, Mr. Schroeder said, the fare here would be about 16 cents, instead of 20 cents.

In the Boston metropolitan area, Mr. Schroeder continued, the subsidy for mass transit, first to the private company and now to its successor, the Metropolitan Transit Authority, totals more than $69,200,000. It is now averaging more than $7,000,000 annually, and includes a special tax levy to offset operating deficits, relief from snow removal costs, and principal reduction payments on subway bonds.

In Boston, where the surface system is mainly a feeder for the subway system, the subway fare is 20 cents - - with 5 tokens for 90¢. The surface system charges a 13 cent non-transfer fare.

Public subsidies are not confined to mass transit. Mr. Schroeder reported that personal automobile transportation is also subsidized. He cited Milwaukee and Chicago as examples. In Milwaukee, he said, officials recently calculated that each automobile registered within the corporate limits caused a loss of $90 a year to the city. An independent study in Chicago, he said, indicates a deficit of $84.54 per automobile per year, comparing motor vehicle revenues with the amount of public funds spent for highway purposes.

Mr. Schroeder cited major arguments for and against public subsidies of mass transit as follows:

Against subsidies - - (1) There are many claims each of them growing, on the tax income of municipalities. . , With these growing tax demands, it becomes more difficult each year to think of a tax subsidy for mass transportation; (2) For municipal activities (police, fire, health, etc.) there has evolved an accepted tax formula. In public transportation, however, there has been a history and custom that the system must be maintained wholly by collecting fares from the users of the system; (3) Whether the morale and alertness of management and employes of a transportation system could be maintained if it were known that any operating deficits could be thrown upon the taxpayer is an important consideration.

For subsidies - - Mr. Schroeder quoted Ralph Budd, former chairman of Chicago Transit Board, as follows: "Responsibility of financing the sorely needed extensions of off-the-street rapid transit, not only within the corporate areas of Chicago, but also within the outlying region, is a co-operative community obligation. . . Financing these vital extensions of rapid transit is a community responsibility, just as is the financing of other essential services such as waterworks, sanitation, street facilities and parks, because providing traffic-ways for moving people and goods is historically an obligation of the entire community."

A special commission in Seattle, Wash., recently asserted of transit that "the whole community should bear the cost of capital investment and amortization, with fares high enough to pay only operating costs."

In other forms of transport there is abundant precedent for public subsidy - - parking lots, city streets, highways and airports are provided for cars, trucks and planes with much of the investment coming from general taxes. As in these fields, urban transport serves a general community interest.

Answering a rhetorical question, "Has Transit Subsidy in New York Paid Off?", Mr. Schroeder quoted William Zeckendorf, one of the city's best known real estate experts, as follows:

> "No great city can afford the luxury of not having a good rapid transit system. Americans and their governments have become hypnotized by the automobile and the superhighway to the neglect of mass transit, the vital circulatory system of the modern city. Our cities are in danger of withering on the vine of the superhighway as their streets become clogged with vehicles, movement of personnel and freight becomes ever more difficult and expensive and industry takes flight to the suburbs. If the subway were to quit tomorrow, New York would be out of business. Private industry should encourage city planning in the transit field in every way that it can for mobility of people and goods means life or death for the businessman."

Commenting on the transit industry's situation, Mr. Schroeder said:

"During the last year 30 urban transit companies abandoned operations and 15 additional companies passed into the hands of new owners, including employes in two instances. One city is expected to go over to public ownership in the near future and six additional large cities are considering some form of metropolitan transit authority to save their transit systems.

"Mayors and/or city councils in 10 other cities have appointed committees in an effort to find a solution to their mass transit problems. Governors of two states have appointed similar committees. The State of Montana has enacted a law authorizing municipalities to contract for bus service if and when service by private operators is discontinued, or threatened to be discontinued. The measure authorizes municipalities to levy a tax to defray the cost of contract transportation service, or to contract indebtedness to purchase, develop, operate or lease motor buses and bus lines.

"On June 15, 1955, the Governor of the State of Wisconsin signed into law a bill granting substantial tax relief to all transit companies operating in the state. Many cities have granted some form of relief to transit operators by elimination or reduction of gross receipts taxes, franchise taxes, vehicle license fees, and, in some instances, snow removal obligations.

"These plans, laws, and concessions have been for the benefit of privately owned companies. This astonishing record would seem to indicate that all urban transit operators are subject to the same economic laws irrespective of whether they are publicly or privately operated."

In conclusion, Mr. Schroeder said:

"That relief must be given mass transportation carriers is quite obvious from the developments that are taking place. In a city such as Chicago, public mass transportation is indispensable to the existence of the community."

Mr. Schroeder said that he will discuss in the next chapter of his study some bold steps that perhaps "can be attempted, thereby making possible an adequate transit service with only a moderate increase in financial assistance for Chicago's vitally necessary mass transit service.

* * * * *

CHAPTER VI

TRANSIT SUBSIDIES

During the last year 30 urban transit companies abandoned operations and 15 additional companies passed into the hands of new owners, including employes in two instances. One city is expected to go over to public ownership in the near future and 6 additional large cities are considering some form of metropolitan transit authority to save their transit systems. Mayors and/or City Councils in 10 other cities have appointed committees in an effort to find a solution to their mass transit problem. Governors of 2 states have appointed similar committees.* The State of Montana has enacted a law, effective July 1, 1955, authorizing municipalities to contract for bus service if and when service by private operators is discontinued, or threatened to be discontinued. The measure authorizes municipalities to levy a tax on taxable property within its limits to defray the cost of contract transportation service or to contract indebtedness to purchase, develop, operate or lease motor buses and bus lines. On June 15, 1955 the Governor of the State of Wisconsin signed into law a bill granting substantial tax relief to all transit companies operating in the state. Many cities have granted some form of relief to transit operators by elimination or reduction of gross receipts taxes, franchise taxes, vehicle license fees, and in some instances snow removal obligations. These plans, laws and concessions have been for the benefit of privately owned companies. This astonishing record would seem to indicate that all urban transit operators are subject to the same economic laws irrespective of whether they are publicly or privately operated.

The operations that have ceased in the last year are in the main in smaller communities. In larger cities the continuance of public mass transportation still remains an indispensable instrumentality of city life.

The increasing difficulty of keeping public transportation in operation at a fare which is not prohibitive has been described in some detail in prior chapters.

In some of the larger cities, notably New York and Boston, public transportation has for many years been supported in part by subsidies paid out of tax revenues of the various municipalities involved.

Arguments Against Tax Subsidy

The arguments against a tax subsidy may, in this writer's opinion, be summarized as follows:

(1) There are many claims, each of them growing, on the tax income

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*Foregoing data from American Transit Association.

of the municipalities. Schools, police departments, fire departments, street departments, health and sanitary departments and public parks all have a claim on the public revenue in cities, and the need for more personnel in schools, police and fire departments has repeatedly been emphasized. With these growing tax demands, it becomes each year more difficult to think of a tax subsidy for the support of public mass transportation.

(2) For the municipal activities described in (1) above, there has evolved an accepted tax formula consistent with constitutional mandates and consistent with the historic manner of conducting those activities. In public transportation, however, there has been a history and custom that the system must be maintained wholly by collecting fares from those who use the service.

(3) Whether the morale and alertness of the management and employes of a transportation system could be maintained if it were known that any operating deficits could be thrown upon the taxpayer is an important consideration. The temptation to supply unnecessary services may be greater when resort can be had to the easy device of levying a tax.

Arguments in Favor of Subsidy

On the other hand, arguments have been advanced in favor of subsidies. Mr. Ralph Budd, at or about the time of his retirement as Chairman of Chicago Transit Board, made these comments regarding long range improvements in Chicago's mass transit in a speech at the annual meeting of the Bankers Club held May 24, 1954:

> "Responsibility of financing the sorely needed extensions of off-street rapid transit, not only within the corporate area of Chicago but also within the outlying region, is a co-operative community obligation. . . . .
>
> "Financing of these vital extensions of rapid transit is a community responsiblity, just as is the financing of other essential services such as waterworks, sanitation, and street facilities, and parks, because providing traffic-ways for moving people and goods is historically an obligation of the entire community."

He concluded by saying:

> "No community can long remain vigorous if the obligation to provide attractive, convenient and modern transportation is long neglected. Adequate transportation is the energizing force for all community development and progress. Comprehensive planning, and co-operative action, are basic to the needs of Chicago and the metropolitan area, and to the attainment of their fullest destiny."

* * * * *

A special commission in Seattle, Wash., recently asserted of transit that "the whole community should bear the cost of capital investment and amortization, with fares high enough to pay only operating costs"

Mayor Pomeroy of Seattle asserted, "some portion of any transit operation must be considered from the standpoint of value received by the entire community".

* * * * * * *

In an address before the American Society of Civil Engineers last February, Mr. Charles E. DeLeuw of Chicago declared that subsidy is definitely necessary for adequate public transit. Among other things, he stated, picturing a transitless situation:

> "Values of property in our central business districts - on which a very large share of our total taxes are based - would decline to such an extent that the average owner of residential property would feel a very sharp pain in the pocketbook. This, in turn, would hasten the flight to the suburbs, and the problem of municipal finances could reach catastrophic proportion."
> (Passenger Transport, 2-18-55.)

* * * * * * *

In other forms of transport there is abundant precedent for public subsidy. Parking lots, city streets, highways and airports are provided for cars, trucks, and planes with much of the investment coming from general taxes.

As in these fields, urban transport serves a general community interest.

Historical Background of New York City Transit System (Subsidized)

The need for rapid transit in New York City was recognized during the administration of President Lincoln, when some New York merchants organized the Metropolitan Street Railway Co. in 1864. The company sought legislation for the construction of an underground railroad from the Battery to Central Park, but the street car interests successfully "talked down" the subway idea for nearly half a century.

As New York suffered from growing pains through the 1880's and 1890's the population saturated the transit facilities. Public clamor for relief became louder and more influential. In 1894 the law was revised to permit a referendum by the voters on the question of "Municipal construction and ownership of a rapid transit subway." The people favored the question and removed the opposition that had plagued a solution of the transit problem for many years. The

original subway in New York, called the IRT, was begun in 1900. The first section was completed in 1904. The then cost of this subway, extending from City Hall to Broadway and 145th Street via Lafayette Street, Fourth Avenue, 42nd Street and Broadway, was apparently about 35 million dollars.

Extension of the subway system to Brooklyn, Bronx and Queens soon followed. The BMT System in Brooklyn entered the subway field in 1913.

In 1924 the Board of Transportation was created to construct and operate an "Independent " system. Ground was broken in April 1925, at St. Nicholas Avenue and 123rd Street. The new subway was opened on September 10, 1932. It cost 770 million dollars.

The IRT, in receivership since 1932, and BMT transit systems were acquired by the City in 1940 for $317,291,932 and were unified with the IND System into what is today the New York City Transit System.

Mounting transit deficits of the New York City Transit System under the Board of Transportation, primarily due to the continuance of the inadequate 5¢ fare, with their throttling effect on the City's expense budget, and the need for improved efficiency and economy in transit operation, revealed by engineering study of the system, indicated the necessity for a change in transit administration.

Accordingly, the Governor proposed and the Legislature on March 25, 1953, enacted Title 15 - Public Authorities Law, creating the New York City Transit Authority and empowering it to lease from the City all rapid transit and surface lines then operated by the Board of Transportation and to maintain and operate them at a fare sufficient to pay operating costs, exclusive of depreciation. Capital costs remained a charge upon the City.

The New York City Transit Authority took over operation of the transit facilities owned by the City of New York on June 15, 1953.

Under the Act, the Authority is mandated to fix or adjust the rate of fare to produce sufficient revenue to meet the expense of operation and to maintain such operation on a self-sustaining basis. The Authority declared that it would not raise the rate of fare without having first studied and considered, to the extent feasible and permissible within the time limits fixed by the Act, the operations, finances and revenues of such transit facilities.

New York City Transit Investment

To build and acquire the transit system being operated by New York City Transit Authority in its behalf, the City of New York has made expenditures of approximately $1,783,300,000. Of these expenditures, about $1,466,100,000 were disbursed directly by the City for construction and

equipment of rapid transit lines and the purchase of privately owned bus lines and about $317, 200, 000 under the BMT, BQT and IRT-Manhattan Unification Plans.

These expenditures were not all of recent date but have been made consistently over the years to keep abreast of the City's rapid transit needs. New York City securities issued or assumed for transit purposes by calendar years 1900 - 1940 and by fiscal years ending June 30, 1941 - 1954, and monies derived from other sources, have been as follows:

Year		Issued*	
1900 - 1904	$	$43,616,000	
1905 - 1909		14,823,000	
1910 - 1914		46,869,000	
1915 - 1919		95,643,000	
1920 - 1924		72,659,000	
1925 - 1929		283,500,000	
1930 - 1934		263,843,000	
1935 - 1939		181,904,000	
1940 - 1944		335,052,000	
1945 - 1949		87,079,000	
1950 - 1954		358,312,000	*
Total		$1,783,300,000	*

Total Transit Debt
June 30, 1954

Securities outstanding at June 30, 1954, covering direct City debt and deficiency in operation, including pension contributions, covers the following:

Construction and Equipment	$	952,150,388
Cost of Unification		311,573,200
Deficit in Transit Operation		22,737,354
Total Outstanding Debt		1,286,460,942
Sinking Fund Reserve		337,777,774
Unamortized Transit Debt	$	948,683,168

*Securities issued during the years 1900 to 1949 were obtained from the City of New York Board of Transportation Report for the three and one-half years ended June 30, 1949. The amount of city transit securities issued during the five fiscal years ended June 30, 1954, and related data, are as follows:

Fiscal Year Ended June 30	Total Issued To Date	Issued During Year
1950	$1,504,768,000	$79,780,000
1951	1,529,348,000	24,580,000
1952#	1,582,834,881	53,486,881
1953#	1,652,860,118	70,025,237
1954#	1,699,427,472	46,567,354
	Total securities issued in 5-year period	274,439,472
	Monies derived from other sources applicable to all years	83,872,528
		$358,312,000

Includes $30,556, 881 for year 1952, $45,000,000 for year 1953 and $15,637,354 for year 1954 account of Operating Deficits.

Fixed Charges on Transit Debt

The magnitude of the cost of subsidy for local transportation paid or payable by the City of New York from tax monies for fixed charges on Transit Debt (for capital outlay, interest, pension costs, and deficits in transit revenues) over the past fourteen years is best illustrated by the following summary of net annual cost:

Fiscal Year Ended June 30,	Total Fixed Charges	Operating Def. or Sur.		Net Annual Cost
1941	$55,922,969	$27,769,214		$28,153,755
1942	57,181,350	21,531,191		35,650,159
1943	57,293,387	24,845,086		32,448,301
1944	56,919,701	16,980,731		39,938,970
1945	56,731,997	13,984,214		42,747,783
1946	56,945,342	8,095,981		48,849,361
1947	57,121,681	16,773,314	(D)	73,894,995
1948	57,284,460	30,748,643	(D)	88,033,103
1949	59,887,526	13,353,085		46,534,441
1950	63,182,729	1,206,043	(D)	64,388,772
1951	70,358,413	3,067,520	(D)	73,425,933
1952	72,005,639	24,773,883	(D)	96,779,522
1953*	99,594,423	46,089,034	(D)	145,683,457
1954*	114,782,552	5,712,501		109,070,051
	$935,212,169	$9,613,566		$925,598,603

*Includes interest and amortization and redemption on operating deficiences -- $26, 721, 318 in 1953 and $42,765, 500 in 1954

(D) Denotes Deficit.

Thus we find that since the date of unification, on June 1, 1940, when all Rapid Transit facilities were taken over by the City, net annual appropriations for Transit Debt Service less net operating surplus amounted to a total of $925,598,603, of which $584,995,334 was for interest and $350,216,835 for amortization and redemption.

On the basis of the above data, the subsidy to City Transit during the fourteen years since unification, on June 1, 1940, to June 30, 1954, has averaged approximately $66,114,200 per year.

According to the First Annual Report of New York City Transit Authority, the City's tax budget for the fiscal year ending June 30, 1955 includes $43,315,802.79 for interest and $27,826,758.27 for amortization and redemption, a total of $71,142,561.06 for Capital Debt issues; additional budget figures are $411,125.00 for interest and $9,600,000.00 for redemption of serial bonds issued for the deficit in Transit operations, including Pension Contributions, being a total of $43,726,927,79 for interest and $37,426,758.27 for amortization and redemption, making for that year a gross total of $81,153,686.06 on these debts.

Capital Budget - Future Years

In addition to the repair and rehabilitation work being done on the transit facilities under the Deferred Maintenance Program of not less than $75,000,000 to be expended at a rate of $15,000,000 per year (a $15,000,000 accrual to "Reserved for Deferred Maintenance" was included in operating expenses for the year ended June 30, 1954), the Authority contemplates the expenditure for new construction, modernization of plant and structures and replacement of equipment during the next five years of the remainder of the transit funds exempt from the City's debt limits, some $387,000,000 in addition to allocation of $40,000,000 of non-exempt funds per year. Since the Authority does not accumulate depreciation funds out of operating revenue, it must rely on the City to provide capital funds for replacement of obsolete and out-dated equipment. The amount of $40,000,000 per year is the amount estimated as the requirement for such purpose.

This program will require the issuance of $117,400,000 of securities per year for capital expenditures only.

Employes' Pensions under Company Agreements

One of the obligations assumed by the City, when it purchased the IRT and BMT Systems under the Transit Unification Plan of 1940, was to continue the pension agreements made by the private companies and the unions. The actual liability of the City of New York for the former company pension plans as of June 30, 1954, for employes on the IRT and BMT Systems for service prior to July 1937, was $3,473,789 per year.

In accordance with the law and under the lease with the New York City Transit Authority, the City of New York has assumed full responsibility for the payment of Employes' Pensions under company agreements.

The Transit Authority's contribution to the New York City Employes' Retirement System for its share of employes' pensions is paid out of its operating revenues and was $22,525,079.53 in the 1953-54 fiscal year.

New York City Transit Subsidy
Over 2-1/3 Billion Dollars to Date

On the basis of data heretofore presented, the New York City Transit subsidy paid or payable by the city from tax monies for capital outlay, interest, pensions and deficits in transit revenues from the year 1900 to June 30, 1954 has reached the staggering sum of approximately $2,333,033,200, made up as follows:

Capital Investment at June 30, 1954	$1,783,277,416
Interest on Transit Debt - 7-1-40 to 6-30-54	584,995,334
City's portion of pension costs - 7-1-40 to 6-30-54 (estimated)	48,633,000
	2,416,905,750
Less - monies derived from sources other than general tax funds	83,872,528
Total subsidy paid or payable	$2,333,033,222 *

* This amount would be increased, if figures were available for interest paid on transit debt prior to July 1, 1940.

Future Subsidy

The capital budget of the City of New York calls for the annual issuance of $117,400,000 of securities over the next five years, which must be serviced as to interest and amortization, and in addition the City's portion of pension costs, amounting to $3,473,789 per year, must be met. In a previous paragraph it has been noted that the City's tax budget for the fiscal year ending June 30, 1955 provides a gross total of $81,153,686 for capital debt service and operating deficits. Since the outstanding debt at June 30, 1954 includes $22,737,354 for deficit in transit operations, it would appear that the probable cost for the year ending June 30, 1956 would be approximately $81,150,000, plus debt service on the new issue of $117,400,000 and the current pension cost, or an estimated total of $94,521,053 made up as follows:

Interest	$48,244,000
Amortization and Redemption	42,803,264
Current Annual Pension Cost	3,473,789
	$94,521,053

After considering the five-year capital budget; the City's portion of pension cost; the retirement of older bond issues; and assuming no deficit from operations, it would appear that the City will have to budget between 95 million to 100 million dollars per year in future years to service its transit debt.

Has Transit Subsidy in New York City Paid Off ?

Perhaps the best answer to this question may be found in the following comments by one of New York's best known real estate experts:

"No great city can afford the luxury of not having a good rapid transit system" said William Zeckendorf, head of Webb & Knapp, which controls millions of dollars in properties in several cities.

"Americans and their city governments have become hypnotized by the automobile and the superhighway to the neglect of mass transit, the vital circulatory system of the modern city.

"Our cities are in danger of withering on the vine of the superhighway as their streets become clogged with vehicles, movement of personnel and freight becomes ever more difficult and expensive and industry takes flight to the suburbs."

Discussing New York, Mr. Zeckendorf noted that Manhattan is jammed while Staten Island, only five miles away, remains almost rural.

"An extension of the subway to Staten Island would open up that area for development which would greatly aid the Wall Street District by providing homes for hundreds of thousands of workers who could get back and forth easily," he stated.

Mr. Zeckendorf said that growth in New York City - where 20,000,000 square feet of new office space has been added since 1940 has been possible because the city has a good rapid transit system for getting the workers into the new buildings, even though the city itself "may be bursting at the seams".

"If the subway were to quit tomorrow New York would be out of business," he continued. "But with its rapid transit it can grow despite its disadvantage in being the nation's only city having a restrictive rent law."

Mr. Zeckendorf asserted that every industry and business in the city gains or loses according to the state of rapid transit.

"Private industry should encourage city planning in the transit field in every way it can for mobility of people and goods means life or death for the businessman," he said.

To gain a proper perspective of the 20,000,000 square feet of new office space added to the New York business district since 1940, Chicago's Merchandise Mart, the second largest structure in the world, has a net rentable area of 3,040,700 square feet and has an average daily working population of 20,000 persons. If the Merchandise Mart area were used exclusively for office space rather than for display purposes, retail stores, restaurants, etc., which occupy over two-thirds of the space, it could accommodate approximately 21,700 office workers. New York, therefore, has provided more than 6-1/2 times the office space of the Merchandise Mart and added work space for 142,000 office workers. In addition to the increased tax revenues from business represented by 142,000 office employees, at the ratio of 1 to 3 employed population to total residents this number of wage earners represent a population of 426,000 persons, with their economic contribution to the city. The significance of 426,000 persons is apparent when it is noted that this is the approximate population of such large cities as Dallas, Texas, Indianapolis, Ind., or Newark, New Jersey.

No doubt Chicago's business area could have been expanded proportionately had there been more rapid transit facilities.

New York Fares Without Subsidy

It is interesting to note what the fare in New York City would be if there had been no subsidies. The present fare is 15¢.

If the New York City Transit Authority had been required to operate on a self-sustaining basis during the year ended June 30, 1954, under major adverse conditions met by the Chicago Transit Authority, their 15¢ fare would have been inadequate by 8-1/2¢ based on the following increased cost factors:

Fixed charges on Transit Debt –		
Interest	$43,801,665	
Amorization & Redemption	70,980,887	$114,782,552
Depreciation at 8% of total revenues		21,895,225
Pension cost assumed by City of New York		3,473,789
State Gas Tax on 21,000,000 gallons at 5¢		1,050,000
F.O.A.B. contribution at $72.26 average per employee on 43,400 employees		3,136,084
Total increased cost		$144,337,650
Fare Increase Required to Break Even		8.5¢

On the other hand, if Chicago in 1954 had had the same basis of subsidization as did New York, the fare could have been decreased to slightly less than 16¢. This is shown by the following:

If Chicago Transit Authority had operated during the year 1954 under conditions enjoyed by New York City Transit Authority, its fare could have been reduced by 4.18¢, based on the following decreased cost factors:

Debt Service Requirements -

Revenue Bonds, Principal, interest and reserves	$7,500,612	
Equipment Trust Certificates, principal and interest	4,738,668	
Other Long Term Debt (C.A. & E.Ry.), principal and interest	174,471	
Depreciation at 8% of total revenues	9,691,161	
Pension Costs (19.6% assumed by City of New York)	989,636	
State Gas Tax on 29,850,322 Gal. at 5¢	1,492,516	*
F. O. A. B. contributions	1,185,072	
City Vehicle License Fees	241,041	*
State Vehicle License Fees	6,373	*
Park District Franchise Fee	200,000	*
Payment to City of Chicago for -		
Amortization of cost of fixed transportation equipment in the subways	294,116	*
Repaving of abandoned street car right-of-way	300,000	*
Total Decreased Cost Factors	$26,813,666	
Fare decrease, based on 641,166,501 revenue passengers	4.18¢	

*Immediate relief that could be granted CTA, amounting to $3,039,900 (including snow removal expense), without going to an all-out subsidy such as is in effect in New York City and Boston.

NOTE: CTA's Snow and Ice Removal Expense for 1954 was $505,855 (Includes $32,169 for elevated and subway).

The importance of public aid to rapid transit was also recognized by Boston, Massachusetts at the turn of the century.

The Boston Elevated Railway Company was incorporated June 2, 1894, under Massachusetts laws to construct and operate an elevated railway in Boston and Cambridge.

Company was also authorized under an amended charter, June 10, 1897, to lease the properties and franchises of the West End Street Railway Company and that property was acquired through a lease which took effect on October 1, 1897. In July 1911, a special act was passed providing for the purchase and merger of the West End Street Railway Company properties upon the expiration of the lease on June 10, 1922, and the consolidation was approved by the stockholders of both companies.

On April 29, 1903, the Boston Elevated Railway Co. leased for 99 years all the tracks of the Old Colony Street Ry. located in the City of Boston.

The City of Boston constructed the first subway in America, the original Tremont Street Subway, which was leased to the West End Street Railway Co. The first section, from Church St. to Park St., was opened September 1, 1897, and the completed Tremont St. Subway to North Station was opened September 3,1898, followed by the East Boston Tunnel, which opened December 30, 1904. The first elevated line, Main Line-Sullivan Square to Dudley Street, was started June 10, 1901, followed by the Atlantic Avenue Elevated on August 22, 1901. Other new rapid transit lines were opened in 1908, 1909, 1912, 1914 & 1917, and annual rapid transit revenue miles increased from 1,516,175 in 1901 to 14,467,782 in 1917, while system revenue miles increased from 43,631,384 to 59,193,759, a total of 36%. Revenue passengers during this same period increased from 213,703,983 to 381,017,338, a total of 78%.

Despite the favorable increase in revenue passengers as contrasted to increased miles, the 5¢ fare which had been in effect throughout the period was inadequate to meet mounting costs of operation with the result that the property was in bad physical condition, needed considerable rehabilitation, and depreciation funds were grossly inadequate.

In view of the critical financial situation of the Boston Elevated Railway Company, and to protect the investment of the City of Boston in rapid transit facilities as well as preservation of the public convenience, the Commonwealth of Massachusetts, by Special Acts of 1918, passed an Act to provide for the Public Operation of the Boston Elevated Railway Company. The Board of Trustees thereby created took over the management of the properties on July 1, 1918, and continued in control until the creation of the Metropolitan Transit Authority under Chapter 544 of the Acts of 1947, which provided for a Board of Public Trustees who took over management of the affairs of the Authority on July 2, 1947.

Resume of the 1918 Act to Provide for Public Operation

The Act went into effect July 1, 1918 and continued until July 2, 1947. Under the arrangement, the management of the railway was placed in the hands of five trustees who were appointed by the Governor, with the advice and consent of the Council, to serve for a period of ten years.

The Trustees were authorized to fix and regulate fares sufficient to meet the entire cost of service. Under the provision of the Act the cost of service includes operating expenses, taxes, rentals, interest on all indebtedness, such allowances as the Trustees may deem necessary or advisable for depreciation and obsolescence and losses in respect to property sold, destroyed or abandoned, all other expenditures and charges properly chargeable against income or surplus, including dividends on preferred and common stocks of the Boston Elevated Railway Company, which retained its corporate status with limited powers.

The Act provided that prior to acceptance of public control the company must raise $3,000,000 by preferred stock, of which $2,000,000 was to be expended on improvements and $1,000,000 was to be held in a reserve fund to be used for making up a deficiency when income did not meet the cost of the service as defined in the Act.

The act further provided that in the event the amount remaining in the reserve fund is insufficient to meet any deficiency, such deficiency will be paid by the state and in case the Commonwealth shall be called upon to pay any dificiencies to the company, such amount with interest or other charges incurred in borrowing money for the purpose shall be assessed upon the cities and towns in which the company operates by an addition to the state tax next thereafter assessed in proportion to the number of persons in said cities and towns using the service of the company at the time of said payment as determined by the trustees. Such deficiency assessments shall be paid back to the communities if future earnings permit.

Public Management and Operation Under Act of 1918

When the Boston Elevated Railway was taken over by the Board of Trustees on July 1, 1918, the property was in bad physical condition, needed considerable rehabilitation, and depreciation reserve funds were grossly inadequate. During the first year of operation, July 1, 1918 to June 30, 1919, there was an operating deficit, after profit and loss items of $4,980,152, of which $1,000,000 was charged against the reserve fund and the balance of $3,980,152 assessed against the communities.

With considerable rehabilitation - - virtually all of the track was rebuilt, wooden cars on rapid transit lines were replaced by steel cars, antiquated surface rolling stock was replaced by new equipment - - and operating economies effected by the substitution of one-man surface cars for two-man cars starting in late 1919, and the use of motor buses starting in 1922, the condition of the

company improved rapidly after 1920. The original deficit assessment was paid back to the communities in the following eleven years and no further assessments were made until the year ended June 30, 1932.

During the seventeen years from July 1, 1930 to August 29, 1947, with the exception of the years 1942 and 1943, revenues failed to cover the cost of service, and the net operating deficit for this period amounted to $27,600,000, after profit and loss items, of which approximately $23,600,000 was assessed against the communities.

In view of declining traffic and increased costs, mounting deficits were foreseen and in response to public demand to stop payment of unjustified dividends ($1,193,970 per year) and to effect other savings in fixed charges, the state legislature, in 1947, passed an Act providing for the creation of the Metropolitan Transit Authority and the acquisition and operation by it of the entire assets, property and franchise of the Boston Elevated Railway Company.

The need for a Transit Authority, and the social and economic advantages to be gained thereby, is expressed in the introduction of a 1945 Report on Rapid Transit, made by the Legislative Commission of the Commonwealth of Massachusetts:

> "This report is offered as a guide to an attractive, modern, integrated and economical system of rapid passenger transport for the Boston and suburban areas, the establishment of which should make a substantial contribution to the restoration of this community to the position of pre-eminence to which its location, tradition and initiative entitle it among great commercial centers.
>
> The development of Boston as a port and terminal by sea, by air and by rail, demands as a necessary adjunct such a system of rapid transit as this report envisages, not as an uncertain postwar project, but as a positive public necessity.
>
> The enormous advantages which will result to the Commonwealth are so attractive and compelling that popular imagination, enterprise, co-operation and confidence should combine to bring the system to a state of fulfillment as speedily as possible, successfully meeting the inevitable challenge to rise above purely local considerations and to act for the general and genuine public welfare. Only with such an attitude can any great and beneficial public work be brought to pass."

The commission also recognized at that time that attractive rapid transit service, i.e., frequent service with modern equipment, could not be self-sustaining and made provision for payment of deficits in Section 21 of their report, viz.:

> "Whenever the income of the authority together with the amount in the surplus and reserve account is insufficient to meet the

cost of the service as herein defined, as of the last day of December in any year, it shall be the duty of the trustees to notify the state treasurer of the amount of the deficiency and the commonwealth shall thereupon pay over to the authority the amount of such deficiency and the amount needed to restore as of said date the surplus and reserve account to the maximum herein established. Pending such payments it shall be the duty of the trustees to borrow such amounts of money as may be necessary to enable them to make all payments as they become due.

"In order to meet any payment required of the commonwealth under the provisions of this section the state treasurer may borrow at any time, in anticipation of the assessments to be levied upon the cities and towns in the district, such sums of money as may be necessary to make said payments, and he shall repay any sums so borrowed as soon after said assessments are paid as is expedient."

Resume of the Act of 1947 to Provide for Public Ownership

The Metropolitan Transit Authority, a body politic and corporate and a political subdivision of the Commonwealth, is composed of the territory within, and the inhabitants of, the 14 cities and towns served by this railway system.

The Act provides that the governor, with the advice and consent of the council, shall appoint a Board of Public Trustees, five in number, to manage the affairs of the Authority. These trustees are granted authority to determine the character and extent of the services and facilities to be furnished, and in these respects their authority is exclusive and not subject to approval, control or direction of any state, municipal or other department, board or commission. The trustees must, however, obtain the approval of the State Department of Public Utilities to fix the rates of fare, and approval of the D. P. U. and legislative enactment to extend the transit system into any city or town not included in the Authority at its inception. The trustees took over the management on July 2, 1947.

The assessment of operating deficits against the communities remained the same as under the 1918 act, but the Authority was required to provide a $2,000,000 reserve fund to be applied to deficits instead of $1,000,000 required under the 1918 Act.

Pursuant to the provisions of Chapter 544 of the Acts of 1947, the Public Trustees of the Authority exercised the option contained in Section 17 of Chapter 333 of the Acts of 1931 and on August 29, 1947, the Authority acquired the whole assets, property and franchises of the Boston Elevated Railway as a going concern in consideration of the assumption of all of the Company's then outstanding indebtedness and liabilities and the payment of $20,297,490 in cash (being $85 per share for the

238,794 outstanding shares of common stock.)

The City of Boston still retained its ownership of subways and rapid transit lines, representing an investment of $61,949,359 at December 31, 1947, and the Commonwealth retained its ownership of the Cambridge Subway, representing an investment of $8,226,760 at December 31,1947, and continued to charge the Authority for rentals of said properties. However, Section 21 of Chapter 544 of the 1947 Act provides that "The trustees are hereby directed, quarterly in each year, to certify to the state treasurer the amount paid during the preceding quarter for rentals of subway and rapid transit extensions and facilities referred to in the preceding paragraph (certain rentals paid to the City of Boston on Boylston St. Subway Extension and Huntington Ave. Subway), and used by the Authority under lease or contract for the use thereof, and the commonwealth shall thereupon pay over to the Authority the amount so certified." - "Any sums so paid to the Authority, together with interest or other charges incurred in borrowing the money therefor, shall be assessed on the cities and towns constituting the Authority."

The real estate of the Authority, with the exception of that actually in use for tunnels, subways, stations, transfer areas, elevated and rapid transit lines, remained subject to taxation by the city or town in which located in the same manner and to the same extent as if privately owned. The personal property of the Authority, however, was exempted from local taxation.

As a result of subsequent legislation the following substantial changes have been made in the Public Ownership Act, Chapter 544 of the Acts of 1947:

1. The Authority was, by Chapter 572 of the Acts of 1949, exempted from all taxes upon its real and personal property, and from betterments and special assessments, and was exempted from any tax, excise or assessment to or for the Commonwealth or any of its political subdivisions, and also exempted from the payment of any fees or charges for any permits or licenses issued to it by the Commonwealth, by any department, board or officer thereof, or by any political subdivision of the Commonwealth, or by any department, board or officer of such political subdivision.

   The Authority is, however, required to pay fees, duties, and license taxes for the registration, operation or use of its vehicles on the public ways, and for fuels used for propelling such vehicles in the same manner and to the same extent as other political subdivisions of the Commonwealth pay such fees, duties, excise or license taxes.

2. By virtue of said Chapter 572, the Authority was authorized to acquire, and did acquire on August 3, 1949, the subways and other transit properties of the City of Boston, the cost of service being charged with the net interest on the City's outstanding transit indebtedness over the income of the City's

sinking funds available to pay the same.

3. By virtue of Chapter 197 of the Acts of 1953, the number of the Board of Trustees was reduced to three, of whom one shall be experienced in the transportation field, one in labor relations and one in administrative and financial matters.

4. Chapter 196 of the Acts of 1954 changed the provision of Chapter 544 which required the Trustees, subject to the approval of the Department of Public Utilities, to "fix such rates of fare and charges for service furnished or operated as in their judgment are best adapted to insure sufficient income to meet the cost of the service" as defined in that Act. The new provision requires the Trustees to "fix such rates of fare and charges for service furnished or operated as in their judgment will produce as much income as is feasible considering the effect of such rates of fares and charges for service upon the use of the service furnished or operated, and the economic welfare of the territory constituting the Authority, and considering all other factors deemed pertinent by the Trustees." and further provides that the rates of fare and charges for service shall be so fixed that they do not in any year produce income of more than two million dollars in excess of the amount necessary to meet the cost of the service and to restore the reserve fund, and further provides that the rates of fare and charges for service shall be so fixed that they produce sufficient income to meet at least that portion of the cost of service which is commonly known as "operating expenses, " and which is determined by excluding from the entire cost of the service approximately six million dollars annually composed of interest and principal payments on all bond issues and rentals on the Cambridge Subway.

Operation Under Public Ownership

Despite the relief afforded the Authority by the elimination of certain taxes, dividends, subway and tunnel rentals, (except Cambridge Subway) and a reduction in snow removal costs, the falling off of traffic and increased cost of labor, material and other services have caused a deficit in each year since its inception. (Note: fixed charges for dividends and rentals referred to above were eliminated but fixed charges on bonds issued in substitution thereof are chargeable to cost of service of the Authority, although in a lesser amount.)

The 10¢ fare in effect at date of take-over in 1947 remained in force (with certain variations effective August 6, 1949) until January 28, 1950, when it was increased to 15¢ on Rapid Transit; 10¢ on surface with no transfer; and 15¢ with transfer. On April 12, 1954 the fare was increased to 20¢ (5 tokens for 90¢) on Rapid Transit, and 13¢ non-transfer fare on Surface Lines.

The following statistical data illustrate the results from operation before and after the take-over:

Income and Cost of Service

Yr. End. Dec. 31	Income	Operating Expenses	Operating Ratio	Fixed Charges	Misc. Ded.	Result of Oper. (A)
1946	$39,082,108	$32,040,457	82.0%	$9,677,648	$115,310	$2,751,307*
1947	39,325,681	34,307,680	87.2	9,513,852	150,038	4,645,889*
1948	38,736,026	38,965,417	100.6	8,800,956	95,408	9,125,755*
1949	37,399,089	38,485,560	102.9	6,883,493	84,622	8,054,586*
1950 (B)	42,567,910	38,285,706	89.9	4,950,670	6,156	674,622*
1951	40,715,551	40,719,980	100.0	5,405,202	16,031	5,425,662*
1952	39,042,963	41,896,706	107.3	6,105,841	45,632	9,005,216*
1953	37,067,698	39,921,101	107.7	6,211,022	61,442	9,125,847*
1954 (C)	38,624,610	38,584,065	99.9	6,541,660	50,379	6,551,494*

* Denotes excess of cost of service over income.
(A) Excluding Profit and Loss Items.
(B) Fare increased from 10¢ to 15¢ on Rapid Transit - 10¢ on Surface Lines, effective 1-28-50.
(C) Fare increased from 15¢ to 20¢ on Rapid Transit - 13¢ on Surface Lines, effective 4-12-54.

Revenue passengers carried have declined from 433,094,952 in 1946 to 244,112,283 in 1954, a decrease of 188,982,669 or 43.64%. The decrease in 1954 below the number carried in 1953 was 24,174,016 or 9.01%.

The total amount assessed against the communities to cover operating deficits of the Authority during the 7-1/3 years from August 29, 1947 to December 31, 1954 was approximately $45,600,000, or an annual average of $6, 217, 500, and in addition the communities assumed a portion of the cost of snow removal and related expenses effective with the 1953-1954 snow season, which is estimated to have averaged in the neighborhood of $225,000 per year and since August 2, 1949, the principal reduction payments on bonds issued for purchase of, and additions to subways, tunnels and other facilities which has averaged $591,400 per year.

Boston Transit Subsidy Over 69 Million Dollars to Date

On the basis of data here presented, the Boston Transit subsidy paid or payable by the communities for deficits in operation from the period July 1, 1930 to December 31, 1954 has been:

July 1, 1930 to August 29, 1947	$23,600,000
August 29, 1947 to December 31, 1954	45,600,000
Total Subsidy Paid	$69,200,000

Is Subsidy for Transportation Something New ?

The idea of subsidy for public transportation being quite novel in the central part of the United States, the question arises whether there is any precedent for such action.

On July 29, 1954, there appeared in the Milwaukee Sentinel an article stating that a transit study in that city had shown that each automobile caused a loss of $90 a year to that city; in short, that city was in fact subsidizing private automobiles to that extent. Data were therefore obtained to determine the basis of that conclusion.

The Milwaukee data were obtained from financial statements for the calendar year 1953 as reported by the Comptroller of the City of Milwaukee to the State Highway Commission pursuant to sections 86.26 and 84.01 (7A), Wisconsin Statutes. The study and report on the impact of the motor vehicle on City finances were prepared by the Administrative Assistant to the City Comptroller for submission to the Technical Subcommittee of the Municipal Public Transportation Study Committee. The substance of this report and pertinent comments thereto are shown on the attached Exhibit 1.

Subsequently a study was made of the Chicago situation.

Data for the Chicago study are based on The Annual Appropriation Ordinances (Budgets) of the City of Chicago and the Chicago Park District for the calendar year 1954. A thorough analysis was made of receipts from motorists and expenditures for highway purposes, per Exhibit 2 attached, selecting all identifiable items of income and expenditures such as were included in the Milwaukee study. These items are shown in fine detail so that the data may be confirmed or corrected in the event this study becomes significant or controversial.

This analysis and basis or logic for allocation of certain expenses has been reviewed by the Chief Auditor of the City of Chicago, who advises that 100% accurate data could not be obtained without an exhaustive analysis of expenditures, which his office may not undertake without authorization, but as a whole the presentation appears to be reasonably correct. The Chicago Park District expenditures are considered to be extremely accurate because their appropriation ordinance contains a summary statement indicating the amounts appropriated for each functional activity of the various departments, and expenditures for rehabilitation, maintenance and operation of boulevards and park drives are specifically set forth.

The result of this study shows the Chicago deficit per average motor vehicle to be $84.54, as contrasted to $90.00 for Milwaukee, Wisconsin.

A comparative statement of expenditures for highway purposes and receipts from motorists - - Exhibit 3 - - is most revealing. The actual maintenance and operating expenses of the respective cities are within 21¢ per motor vehicle of each other. Altho there are notable variations in like items of expense, these differences may be attributable to advance planning, physical condition of highways and appurtenances thereto, weather conditions or availability of funds earmarked for specific expenditures.

Another item of particular significance is the fact that the average receipts per motor vehicle in Chicago amount to $43.54 as contrasted to $28.72 in Milwaukee, indicating that Chicago motor vehicles defray approximately 90% of the total cost of maintenance and operation of city streets while Milwaukee motor vehicles contribute only 59% of these costs.

The principal reason for this is that the City of Chicago levies a City Vehicle License Fee (Wheel Tax) on both public and private motor vehicles whereas the City of Milwaukee levies a similar tax on public motor vehicles only. Had this situation prevailed in Chicago, the deficit would have been increased by $16,076,500 (see first item on Exhibit 2) and the deficit per average motor vehicle would have been $103.03 as contrasted to $90.00 for Milwaukee.

CONCLUSION

The foregoing analyses and the facts upon which they are based indicate the substantial tax burden that may become involved in a program of all-inclusive subsidy of public mass transportation.

That relief must be given mass transportation carriers is quite obvious from the developments that are taking place at the present time.

In a city such as Chicago public mass transportation is indispensable to the existence of the community and, as we shall later point out, more particularly to the central and neighborhood business districts. With the falling off of traffic which is nationwide - - and percentage wise approximately parallel throughout the nation - - and with the substantial increases in labor costs, the problem inevitably presents itself whether fares shall continue to be progressively increased or whether part of the load shall be thrown upon the taxpayers generally. There is no easy answer to this question.

Perhaps other bold steps can be attempted, thereby making possible an adequate transit service with only a moderate increase in financial assistance for Chicago's vitally necessary mass transit.

Some of these bold steps will be discussed in the next chapter.

COPY

EXHIBIT I

IMPACT OF THE MOTOR VEHICLE ON CITY FINANCES

THE FOLLOWING IS A STATEMENT OF HIGHWAY COSTS OF THE CITY OF MILWAUKEE TAKEN FROM A REPORT PREPARED BY THE CITY COMPTROLLER FOR THE STATE HIGHWAY COMMISSION. ALTHOUGH THESE ITEMS ARE LISTED AS "HIGHWAY COSTS," IT SHOULD BE REMEMBERED THAT OTHERS BESIDES MOTORISTS BENEFIT FROM THE ITEMS INCLUDED. STORM WATER DRAINAGES, ALTHOUGH PROPERLY INCLUDED IN THE STATE REPORT AS AN INCIDENTAL HIGHWAY EXPENSE, WOULD BE OF BENEFIT TO PROPERTY OWNERS ALSO. STREET PAVING AND SIDEWALK CONSTRUCTION LIKEWISE PROVIDE ACCESS TO BUILDINGS AS WELL AS RIGHT OF WAY FOR VEHICLES.

THE FOLLOWING FIGURES SUMMARIZE THE REVENUE OBTAINED BY THE CITY DIRECTLY FROM MOTOR VEHICLES WHETHER PAID THROUGH THE STATE AS GASOLINE OR REGISTRATION FEES OR PAID DIRECTLY IN THE FORM OF PARKING RECEIPTS. PARKING REVENUE OF COURSE, ARE USED FOR OFF-STREET PARKING PURPOSES. THE CITY ALSO RECEIVES SUBSTANTIAL REVENUE FROM PROPERTY WHOSE VALUES ARE CREATED BECAUSE OF MOTOR VEHICLES (E.G., SHOPPING CENTERS) OR FROM INCOME CREATED BECAUSE OF THE SALE AND SERVICING OF VEHICLES. NONE OF THESE ITEMS ARE INCLUDED OR ARE MEASURABLE. ALTHOUGH PUBLIC TRANSIT VEHICLE PRODUCE GREATER CITY RECEIPTS THAN DO PRIVATE VEHICLES, THIS DOES NOT NECESSARILY MEAN THEIR PAYMENT IS DISPROPORTIONATE. THE CITY LICENSE FEES THAT THEY PAY ARE KEPT COMPLETELY BY THE CITY WHEREAS IN THE CASE OF PRIVATE VEHICLES ONLY ABOUT ONE-THIRD OF ALL MOTOR VEHICLE FEES AN GASOLINE TAXES PAID BY THE CITY MOTORISTS TO THE STATE IS RETURNED TO THE CITY.

1953 HIGHWAY COSTS

TOTAL CITY EXPENDITURES	$22,957,154
DIRECT EXPENDITURES BY STATE HIGHWAY COMMISSION	2,248,754
TOTAL EXPENDITURES FOR HIGHWAY PURPOSES WITHIN THE CITY OF MILWAUKEE	$25,205,908
NUMBER OF MOTOR VEHICLES IN THE CITY AS AT DECEMBER 31, 1953	212,316
AVERAGE EXPENSE PER VEHICLE	$118.72

1953 REVENUES FROM MOTOR VEHICLES

GENERAL RECEIPTS BY CITY OF MILWAUKEE FROM STATE ALLOWANCE RAISED FROM MOTOR VEHICLES	$ 2,709,193
PARKING REVENUES	852,591
STATE EXPENDITURES RAISED FROM MOTOR VEHICLE TAXES	2,248,754
TOTAL RECEIPTS FROM MOTOR VEHICLES	5,810,538
CITY REVENUES, PUBLIC TRANSIT REGISTRATION FEE	278,633
CITY REVENUES, TAXI LICENSES AND PERMITS	9,064
GRAND TOTAL	$6,098,235
AVERAGE CITY REVENUE PER VEHICLE	$28.72
AVERAGE CITY REVENUE PER PUBLIC TRANSIT VEHICLE	321.75

DEFICIT PER AVERAGE MOTOR VEHICLE	$90.00
DIFFERENCE BETWEEN 1953 HIGHWAY COSTS AND 1953 REVENUE FROM MOTOR VEHICLES	$19,107,673

7-27-54

CITY OF CHICAGO AND CHICAGO PARK DISTRICT

SUMMARY OF RECEIPTS AND EXPENDITURES FOR YEAR 1954 (ESTIMATED)
AS INDICATED IN THE ANNUAL APPROPRIATION ORDINANCES
OF THE RESPECTIVE MUNICIPAL CORPORATIONS

(SETTING OUT ONLY THAT PORTION APPLICABLE TO MOTOR VEHICLES AND HIGHWAY COSTS)

CORPORATE REVENUES OTHER THAN FROM GENERAL TAXES

CITY OF CHICAGO:		
VEHICLE TAX FUND - VEHICLE LICENSE FEES PAID TO CITY - PRIVATE VEHICLES	$16,076,500	
" " " - " " " " " " - PUBLIC VEHICLES	273,500	
" " " - REIMBURSEMENT OF EXPENSE AND OTHER REVENUES	330,000	
MOTOR FUEL TAX FUND - DISTRIBUTIVE SHARE OF STATE MOTOR FUEL TAX	17,200,000	
PARKING REVENUE FUND - ON-STREET PARKING METER COLLECTIONS	2,000,000	
" " " - OFF-STREET PARKING REVENUE	508,700	
DEPT. OF FINANCE - MAINTENANCE & CLEANING STATE HIGHWAYS	6,800	
TOTAL - CITY OF CHICAGO		$36,395,500
CHICAGO PARK DISTRICT:		
PARKING STATIONS	850,000	
FRANCHISE FEES ($200,000 FROM C.T.A.)	240,000	
MAINTENANCE OR STATE HIGHWAYS (DUE FROM STATE OF ILLINOIS)	72,000	
FINES AND FORFEITURES ($315,000 TOTAL - EST. 95% FROM MOTORISTS)	300,000	
TOTAL - CHICAGO PARK DISTRICT		1,462,000
TOTAL CORPORATE REVENUES OTHER THAN FROM GENERAL TAXES		$ 37,857,500

APPROPRIATIONS FOR EXPENDITURES

	TOTAL (WHEN RELEVANT)	PORTION APPLICABLE TO HIGHWAY COSTS: EXPENSES	PORTION APPLICABLE TO HIGHWAY COSTS: CAPITAL OUTLAY
CITY OF CHICAGO:			
APPROPRIATED FROM CORPORATE FUND:			
COMMITTEE ON LOCAL TRANSPORTATION	$ 4,800	$ 2,400	
" " LOCAL INDUSTRIES, STREETS AND ALLEYS	12,000	6,000	
" " HARBORS, WHARVES AND BRIDGES	10,300	5,150	
" " LICENSE	9,300	1,550	
COMMISSIONS AND SPECIAL AGENCIES -			
CHICAGO PLAN COMMISSION	205,046	68,350	
PUBLIC VEHICLE LICENSE COMMISSION		101,338	
LICENSE APPEAL COMMISSION	14,870	1,487	
MUNICIPAL COURT - TRAFFIC REFEREE & BUREAU		28,100	
DEPARTMENT OF POLICE	40,235,136	SEE VEH. TAX FUND	
" " STREETS & SANITATION COMMISSIONER'S OFFICE	196,300	130,867	
BUREAU OR STREETS - ENGINEERING & INSPECTION DIVISION		34,000	
DEPT. OF STREETS & SANITATION - STREET SWEEPING AND REFUSE COLLECTION	13,523,888	1,352,389	

BUREAU OR ELECTRICITY - STREET LIGHTING & POLICE TELEGRAPH	4,803,633	4,332,412
BOARD OF LOCAL IMPROVEMENTS		220,284
DEPARTMENT OR PUBLIC WORKS -		
BUREAU OF ENGINEERING	467,691	343,691
" " MAPS AND PLATS	99,710	89,739
" " RIVERS AND HARBORS (CHIEFLY BRIDGE OPERATION)	1,841,810	1,508,984
" " SEWERS	530,000	530,000
APPROPRIATED FROM WATER FUND:		
DEPARTMENT OF WATER AND SEWERS - COMMISSIONER'S OFFICE	99,556	24,889
BUREAU OF SEWER		4,084,007

(CONTINUED)

CITY OF CHICAGO - CONTINUED:	TOTAL (WHEN RELEVANT)	PORTION APPLICABLE TO HIGHWAY COSTS: EXPENSES	PORTION APPLICABLE TO HIGHWAY COSTS: CAPITAL OUTLAY
APPROPRIATED FROM VEHICLE TAX FUND:			
COMMITTEE ON TRAFFIC AND PUBLIC SAFETY		$ 90,500	
CHICAGO STREET TRAFFIC COMMISSION		31,452	
CITY CLERK - VEHICLE LICENSE DIVISION		285,296	
DEPARTMENT OF FINANCE - TO REIMBURSE THE CORPORATE PURPOSES FUND FOR SALARIES AND WAGES OF POLICEMAN ENGAGED IN THE DUTY OF REGULATING TRAFFIC		5,722,500	
DEPARTMENT OF FINANCE - MISCL. EXPENSES CHARGEABLE TO VEHICLE TAX FUND		158,000	
CITY COLLECTOR - SALARIES & EXPENSES OF VEHICLE TAX SECTION		147,844	
BUREAU OF STREETS - COMMISSIONER'S OFFICE DEPARTMENT OF STREETS AND SANITATION		171,538	
BUREAU OF STREETS - SUPERINTENDENT'S OFFICE		18,116	
" " " - ENGINEERING & INSPECTION DIVISION		429,036	
" " " - PAVEMENT MAINTENANCE DIVISION		5,059,272	
BUREAU OF SANITATION - PAVEMENT MAINTENANCE		1,775,000	
" " " - SNOW REMOVAL		450,000	
BUREAU OF ELECTRICITY - OPERATION AND MAINTENANCE OF TRAFFIC SIGNALS		716,405	
BUREAU OF STREET TRAFFIC - TRAFFIC ENGINEERING SECTION		332,764	
" " " " - SIGN DIVISION		995,335	
" " " " - STREET AND WARNING TRAFFIC SIGNALS		573,800	
DEPARTMENT OF PUBLIC WORKS - COMMISSIONER'S OFFICE		9,000	
BUREAU OF ENGINEERING - BRIDGE MAINTENANCE		690,000	
" " ARCHITECTURE & BUILDING MAINTENANCE		36,000	
" " SEWERS - ENGINEERING & INSPECTION SERVICE		100,000	
" " " - REPAIRING & REPLACING COVERS AND LIDS FOR MANHOLES AND CATCH BASINS		254,600	
APPROPRIATED FROM FORESTRY FUND:			
DEPARTMENT OF FINANCE - GENERAL	$ 244,031	162,687	
DEPARTMENT OF PUBLIC WORKS - BUREAU OF PARKS & RECREATION	2,804,206	1,869,471	
APPROPRIATED FROM PARKING REVENUE FUND:			
BUREAU OF PARKING - ADMINISTRATIVE DIVISION		34,003	
" " " - METER MAINTENANCE DIVISION		665,228	
" " " - OFF-STREET PARKING DIVISION		194,600	
DEPARTMENT OR POLICE		642,000	
BUREAU OF ENGINEERING		44,214	
INTEREST ON REVENUE BONDS		847,500	
CONSTRUCTION OF PARKING FACILITIES AND PURCHASE OF METERS			12,739,000
APPROPRIATED FROM BONDS FUNDS:			
STREET IMPROVEMENTS - 103RD STREET			22,646
" " - KIMBALL AVENUE			12,864
" " - NORTH STATE STREET WIDENING			211,599
" " - 22ND STREET AND INDIANA AVENUE			15,647
" " - ROBEY STREET			195,159
ELECTRIC STREET LIGHTING SYSTEM (1951 BONDS)			362,056
" " " " (1953 BONDS)			9,547,000

BRIDGE CONSTRUCTION			9,620,642
SUPERHIGHWAY CONSTRUCTION			11,867,400
SEWER CONSTRUCTION			13,731,000
APPROPRIATED FOR POLICEMEN'S ANNUITY AND BENEFIT FUND:			
AMOUNT OF TAX TO BE LEVIED IN THE YEAR 1954	4,400,000	628,570	
OND REDEMPTION AND INTEREST FUND:			
ELECTRIC STREET LIGHTING SYSTEM (1947 AND 1951 BONDS)	1,147,000		
SEWER BONDS	4,483,000		
STREET & ALLEY RECONSTRUCTION AND IMPROVEMENT BONDS	590,000		
SUPERHIGHWAY BONDS (1947 AND 1952 BONDS)	3,735,000		
BRIDGE BONDS	699,000		
	$ 10,654,000		
PRINCIPAL			9,045,000
INTEREST		1,609,000	
TOTAL EXPENDITURES BY THE CITY OF CHICAGO (APPROPRIATED)		$ 37,609,368	$ 67,370,013

(CONTINUED)

EXHIBIT 2

	TOTAL (WHEN RELEVANT)	PORTION APPLICABLE TO HIGHWAY COSTS: EXPENSES	PORTION APPLICABLE TO HIGHWAY COSTS: CAPITAL OUTLAY
CHICAGO PARK DISTRICT:			
APPROPRIATIONS FOR GENERAL CORPORATE EXPENSES:			
DIVISION OF FINANCE AND PROPERTY - PARKING LOT ATTENDANTS		$ 148,721	
DEPARTMENT OF OFFICE ORGANIZATION AND ADMINISTRATION	$1,364,943	192,198	
DIVISION OF ENGINEERING - DESIGN & CONTRACT SECTION	2,933,812	456,900	
" " " - ELECTRICAL SECTION	1,415,105	635,680	
" " " - MECHANICAL SECTION	1,926,480	235,400	
" " " - REPAIR SECTION	3,033,068	733,684	
" " " - TRAFFIC SECTION	468,398	360,369	
" " " - LANDSCAPE SECTION	3,687,093	681,798	
" " " - RECORDS AND ESTIMATES SECTION	115,740	17,928	
DIVISION OF POLICE	4,196,728	2,922,883	
TOTAL EXPENDITURES BY CHICAGO PARK DISTRICT (APPROPRIATED)		6,385,561	-
TOTAL APPROPRIATIONS FOR EXPENDITURE		$ 43,994,929	$ 67,370,013

SUMMARY OF HIGHWAY COSTS

	TOTAL	PER AVERAGE MOTOR VEHICLE
TOTAL APPROPRIATIONS FOR EXPENDITURES -		
MAINTENANCE AND OPERATION	$ 42,385,929	$ 48.75
DEBT SERVICE - INTEREST ONLY	1,609,000	1.85
CAPITAL OUTLAY (CONSTRUCTION AND BOND REDEMPTION)	67,370,013	77.48
TOTAL HIGHWAY COSTS	111,364,942	128.08
TOTAL RECEIPTS FROM MOTOR VEHICLES	37,857,500	43.54
EXCESS OF 1954 HIGHWAY COSTS OVER RECEIPTS FROM MOTOR VEHICLES	$ 73,507,442	$ 84.54
NUMBER OF MOTOR VEHICLES LICENSED BY THE CITY OF CHICAGO AS AT DECEMBER 31, 1954		869,518 *

* INCLUDES PASSENGER AUTOMOBILES, MOTOR TRUCKS, TAXIS AND BUSES BUT DOES NOT INCLUDE 2,610 MOTORCYCLES.

CHICAGO TRANSIT AUTHORITY

COMPARATIVE STATEMENT OF EXPENDITURES FOR HIGHWAY PURPOSES AND RECEIPTS FROM MOTOR VEHICLE

CHICAGO, ILLINOIS, DATA BASED ON APPROPRIATION ORDINANCES (BUDGET) FOR CALENDER YEAR 1954.
MILWAUKEE, WISCONSIN, DATA BASED ON ACTUAL RECEIPTS AND EXPENDITURES IN CALENDAR YEAR 1953.

	EXPENDITURES FOR HIGHWAY PURPOSES AND RECEIPTS FROM MOTOR VEHICLES		EXPENDITURES AND RECEIPTS PER AVERAGE MOTOR VEHICLE		INCR. OR (DECR.) CHICAGO OVER MILWAUKEE IN RECEIPTS AND EXPENDITURES PER
	CHICAGO	MILWAUKEE	CHICAGO	MILWAUKEE	AVG. MOTOR VEHICLE
ADMINISTRATIVE, ENGINEERING AND SUPERVISION NOT INCLUDED ELSEWHERE	$ 2,991,692	$ 888,630	$ 3.44	$ 4.19	$ (.75)
ROADS AND STREETS	7,782,356	1,361,542	8.95	6.41	2.54
RIDGES AND CULVERTS	2,446,634	1,081,350	2.82	5.09	(2.27)
FORESTRY	2,713,956	727,980	3.12	3.43	(.31)
EWERS	4,993,496	436,774	5.74	2.06	3.68
STREET SPRINKLING, OILING, CLEANING AND SNOW REMOVAL	1,837,789	948,901	2.11	4.47	(2.36)
TREET LIGHTING	4,986,092	1,143,692	5.71	5.39	.32
STREET SIGN AND GUIDE BOARDS, AND SIGNALS AND MARKERS	2,845,909	433,473	3.27	2.04	1.23
RAFFIC POLICE	9,915,953	3,246,116	11.41	15.29	(3.88)
PARKING LOTS AND PARKING METERS INCLUDING (FOR CHICAGO) IN-TREST ON REVENUE BONDS	1,890,052	126,022	2.18	.59	1.59
TOTAL MAINTENANCE AND OPERATION	42,385,929	10,394,480	48.75	48.96	(.21)
DEBT SERVICE -					
INTEREST	1,609,000	155,363	1.85	.73	1.12
BOND PAYMENTS	9,045,000	717,000	10.4	3.38	7.02
ONSTRUCTION	58,325,013	13,939,075	67.08	65.65	1.43
TOTAL EXPENDITURES	111,364,942	25,205,908	128.08	118.72	9.36
OTAL RECEIPTS FROM MOTOR VEHICLES	37,857,500	6,098,235	43.54	28.72	14.82
DEFICIT	$ 73,507,442	$19,107,673	$ 84.54	$ 90.00	$ (5.46)
OTOR VEHICLES LICENSED			869,518	212,316	657,202

) DENOTES RED FIGURES

CHAPTER VII

EFFECT OF TRAFFIC CONGESTION AND PARKING ON MASS TRANSIT

For Release to Morning Papers of Tuesday, December 27, 1955 and all Papers Thereafter

Chicago, December 27 - - - Public Officials and civic leaders are becoming increasingly aware of the transportation needs of the approximately 1,184,000 workers in Chicago who daily depend upon public transit to get to and from work, Werner W. Schroeder, Vice Chairman of Chicago Transit Board, de - clared today in the seventh chapter of his transit research study.

With complete relization of their needs, Mr. Schroeder said, the emphasis will shift away from building more and more facilities for private automobiles, and will turn to expediting the movement of public transit vehicles, and to extending rapid transit service.

These more than 1,000,000 Chicago workers, who depend upon mass transit for their home-to-work and return transportation constitute 65 per cent of the city's working population, Mr. Schroeder said, and are entitled to a better break, and more consideration.

The majority of this group, Mr. Schroeder asserted, have contributed, and still do, to the cost of construction and maintenance of the city's streets by payment of city vehicle license fees, state gas tax, real estate taxes and assessments. That the majority of transit riders do own automobiles, Mr. Schroeder added, is established beyond doubt, there being one automobile registered in Chicago for every 4.7 units of population.

Pointing out that traffic congestion continues to increase alarmingly despite the construction of expressways, the widening of streets, the establishment of one-way streets and other traffic aids, Mr. Schroeder said:

> "It is conceivable that Chicago's streets could still handle the present volume of traffic and that normal speeds could be attained by buses and autos provided the streets

were used for their primary function - - the unimpended movement of people and goods."

To bring about the proper use of the streets, Mr. Schroeder said, would require drastic regulations in the more congested areas of the city. The most important of these regulations, Mr. Schroeder said, would be the following:

1. During rush hours, reserve some streets for buses and streetcars only and adjust traffic lights to speed public transit. On others, designate street lanes in each direction exclusively for transit use.

2. Eliminate left-hand turns, and also right-hand turns, across transit lanes at transit stops during rush hours.

3. Eliminate parking on all streets used for public transit service, both free space and space semi-reserved by parking meters.

4. Confine curb loading and unloading of trucks and delivery vehicles on transit streets to selected hours, nights preferably, but in any event to off-peak hours.

5. Prohibit cab stands on all transit routes. Cab companies, railroad stations and hotels should cooperate to furnish off-street parking space for cabs.

6. Concentrate future construction of parking garages in the fringe areas adjacent to the loop and neighborhood shopping centers.

7. Synchronize traffic lights to speed the flow on transit streets and instruct traffic officers to expedite the speed of transit vehicles in every way possible.

To speed up the flow of traffic in the Loop, and to increase the capacity of the existing streets, Mr. Schroeder listed the following suggestions for consideration, which, he explained, had been prepared at his request for consideration by planners:

1. Establishment of special transit lanes on the following streets for streetcars and transit buses in revenue service.

   (a) Wabash Avenue - - All four lanes restricted to

transit use exclusively between Wacker Drive and Congress Street. Special treatment to be worked out for trucks making local deliveries, and for parking garage patrons.

(b) State Street - - Two lanes, the present streetcar lanes (one northbound, the other southbound), reserved for transit vehicles between Wacker Drive and Congress Street,

(c) Dearborn Street - - One lane, the present northbound streetcar lane, reserved exclusively for transit vehicles between Congress Street and Wacker Drive.

(d) Clark Street - - One lane, the present southbound streetcar lane, reserved exclusively for transit vehicles between Wacker Drive and Congress Street.

(e) Washington Street - - One lane, eastbound only, reserved exclusively for transit vehicles between Franklin Street and Wabash Avenue.

(f) Madison Street - - One lane, westbound only, reserved exclusively for transit vehicles between Wabash Avenue and Franklin Street.

2. Construct a high-level subway for buses under Washington Boulevard between Jefferson Street and Michigan Avenue.

3. Construct a network of continuous pedestrian concourses under the sidewalks along State Street and certain other streets. These passageways would connect with all mezzanine stations of the State Street subway, with the Illinois Central-Prudential Building underpass at Randolph Street and Michigan Avenue, and with as many stores and office buildings as wished to provide connections.

The suggested mezzanine pedestrian passageways, Mr. Schroeder continued, would extend under the east side of State Street from a point south of Van Buren Street to the south side of Randolph Street; under the west side of State Street from about a half block south of Jackson Boulevard to the south side of Randolph Street; under the north side of Adams Street just west of Clark Street to the west side of State Street with a spur under the west side of Dearborn Street extending half a block north of Adams Street; and under the south side of Randolph Street from just west of State Street to the Illinois Central and the Prudential building via the existing underpass at Michigan Avenue.

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CHAPTER VII

EFFECT OF TRAFFIC CONGESTION AND PARKING ON MASS TRANSIT

Public officials and civic leaders are looking at transportation in Chicago and coming to the realization that more consideration is due the 554,956 people who are carried into the central business district of Chicago daily by 15,406 public transit vehicles - - streetcar, bus, elevated and railroad.

They also are becoming increasingly aware of needs among the approximately 1,184,000 workers in Chicago as a whole who depend on public transportation to get to and from work.

With complete realization of these needs the emphasis will shift from the building of more and more facilities for private automobiles and will turn to expediting the movement of public transit vehicles and extending rapid transit service.

This, the more comprehensive, more rapid movement of people by mass transit, is Chicago's great problem; it is also the problem of every other large city in the country. Prior chapters of this study have shown great progress in modernization of vehicles and facilities by CTA, but the results, particularly in the use of surface vehicles, have been disappointing as pointed out.

The transit industry has for many years criticized the expenditures of millions of dollars for street improvements that cater almost exclusively to the automobile, and predicted the monstrous traffic snarl prevailing in downtown areas all over America and its adverse effect on the economy of the nation.

Civic leaders throughout the world have been acutely aware for some time that traffic congestion is causing disintegration of downtown districts, diffusion of major tax sources, and disruption of whole municipal economies:

- - BACK IN 1952 - -

ROGER W. BABSON predicted, by 1962 "no parking of private autos will be permitted within a mile of downtown".

JOSEPH W. LUND, president of National Association of Real Estate Boards said: "by 1963, unless we act now, most of our cities will be places few people will want to live in, work in or even visit".

HARLAN BARTHOLOMEW, noted city planner said: "It should be evident to all who are generally interested in the present as well as the future welfare of our cities that the streets of our business

districts be cleared for expeditious mass transportation flow regardless of whose individual interests are involved or whose toes are stepped upon. This is a matter of paramount public interest, - - a matter of dominant public necessity".

COL. S.H. BINGHAM told the Mayor's Conference that "Downtown U.S.A. was doomed to die" unless cities stressed movement of people instead of vehicles.

THEODORE MATSON, Yale's traffic expert, warned cities that "down-town" business districts would soon become "ghost towns" unless traffic congestion was decreased.

- - LAST YEAR 1954 - -

HAL BURTON, noted author, termed the problems of downtown areas throughout the country - in fact 230 American cities - "appalling".

THE SAN FRANCISCO NEWS said: "The warning of disaster that which will befall the rich heart of the city is sounding as plainly and in-sistently as the fog horns in the bay".

TODAY - 1955

HENRY J. EVANS, Traffic and Parking Specialist, U.S. Chamber of Commerce, says: "It becomes more and more evident that downtown streets have become overcrowded and that parking facilities cannot cope with the ever-growing urban population. Traffic engineers should con-centrate on keeping cars out of the city centers and substitute mass transportation. More people must be induced to leave their cars at home and use buses".

STEEN RASMUSSEN, one of Europe's foremost architects and city planners, recently stated: "Almost the only economical solution to the mounting problem of automobile traffic is the development of mass rapid transit and the eventual barring of motor cars from city centers".

JAMES C. DOWNS, JR., Chicago Housing and Redevelopment Coordi-nator, says of the transportation situation (Chicago Sunday Tribune of October 9, 1955): "It is my pet theory that public transportation is at a low point right now. I think we will see a big revival of public trans-portation in the next 20 years. Private transportation is just too in-efficient in getting you where you want to be. We have got to reinstate right-of-way transportation. We must get over the idea that a bus can just get in line with a lot of private drivers and get some place. A bus needs priority".

MAYORS of many cities - Chicago, Philadelphia, Salt Lake City, Tulsa,

Jamestown, New York and Richmond, Virginia, just to mention a few - have appealed to citizens to use public transportation.

GENERAL MOTORS has made a half-hour color film stressing the Theme that roads need to be used to move the most people, not necessarily the most vehicles. Film points out the value of on-street parking bans, reserved lanes and streets for buses.

The time has certainly arrived for all public officials to face squarely the problem of increasing the speed of public transportation vehicles and thus more equitably serve the 65% of Chicago's working population who use public transportation. These people are entitled to a better break.

Despite express highways, street widenings, one-way streets and other traffic aids, traffic congestion is steadily increasing and speeds in some areas have decreased almost to the three miles per hour attained in Chicago in 1859 when one-horse, four-wheeled streetcars were in use. The Chicago Daily News of May 12, 1955, reports that city traffic engineers, while studying the Loop traffic situation, required 8 minutes and 10 seconds to drive (or crawl) east on Washington from N. Wacker Drive to State Street, an average of 3.4 miles per hour - - walking speed.

It is conceivable that Chicago's streets could still handle the present volume of traffic and normal speeds could be attained by buses and autos provided the streets were used for their primary function- -the unimpeded movement of people and goods. To bring about this proper use of streets would, however, require drastic regulations in more congested areas, the most important of which would be:

1. During rush hours, reserve some streets for buses and streetcars only and adjust traffic lights to speed public transit; on other streets designate specific street lanes in each direction exclusively for transit use.

2. Eliminate left hand and also right hand turns across transit lines at transit stops during rush hours.

3. Eliminate parking on all streets used for public transit service, both free space and space semi-reserved by parking meters.

4. Confine curb loading and unloading of trucks and delivery vehicles on transit streets to selected hours, nights preferably, but in any event to off-peak hours.

5. Prohibit cab stands on all transit routes. Cab companies, railroad stations and hotels should cooperate to furnish off-street parking space for cabs.

6. Concentrate future construction of parking garages in fringe areas adjacent to the Loop and neighborhood shopping centers.

7. Synchronize traffic lights to speed the flow on transit streets and instruct traffic officers to expedite the speed of transit vehicles in every way possible.

These are drastic changes. They will cause some inconvenience to private automobile drivers. Merchants and manufacturers will be required to adjust their in-coming delivery schedules to a new method of handling transportation in Chicago. Without doubt there would be a period of trial and error- -a period requiring patience during adjustments to a new concept of public transportation. But in spite of temporary inconveniences- -which might result in temporary political pressure- -it must not be forgotten that the 65% of Chicago's workers who use public transportation are entitled to more consideration.

This chapter and the next will deal with some details of suggested changes in traffic controls. The above are general and naturally are subject to experimentation to learn what results can be gained. The next chapter will contain a discussion of more specific changes which can be effective.

Both chapters will demonstrate that Chicago is afflicted with traffic congestion problems, as are all other large cities, which require bold measures for their solution. Some of the problems which are here, and others that are bound to develop, will be discussed in these chapters.

Chicago has 3,627 miles of paved streets, of which 931 miles are in the arterial system. This arterial system is built and maintained by State gas tax money and Federal aid. The balance of 2,696 miles of paved business and residential streets were built with funds derived from assessments against the property owners and maintained by gas tax money, auto license fees and general tax funds. Thus we find that the streets are not the exclusive property of those who choose to usurp them for business purposes or personal convenience to the detriment of all others.

The economic loss from traffic congestion in Chicago is staggering. For just the one million persons who use CTA service each weekday, the cost of traffic delays is estimated at $117,000,000 a year. Five million dollars of this amount is a direct charge upon CTA riders, resulting from increased operating costs due to traffic delays. These increased operating costs are reflected in CTA fares. The remaining $112,000,000 represents personal time wasted in traffic delays by CTA riders, whose time has been conservatively priced at $1.00 per hour.

And how about other economic waste? The cost of arterial system streets varies widely, depending on width and physical obstacles, and may

range in price from $125,000 to as much as $350,000 per mile. But the community investment of millions of dollars to provide adequate streets is nullified as much as 50% by the autoist who believes he has the inalienable right to drive his own car to work every day and park it on a street that may have cost $350,000 per mile to construct. Cars parked on both sides of a conventional 4-lane street reduce its capacity by 50%, and on a 6-lane street by 33-1/3%, and only one parked car per block reduces the capacity of the street almost as much as if the block were parked solid by cars.

Another questionable practice is the installation of parking meters on transit streets. Why, for the sorry sum of 40¢ per space for an eight-hour day, should the public be deprived of the use of a full traffic lane on millions of dollars worth of streets that were built with money contributed by all of the people for use by all of the people?

Surveys taken in many large cities show that it is people, and not streets jammed with automobiles, that make a retail area prosper, and downtown and neighborhood stores derive a major share of their business from people who travel by public transit. An even higher percentage of downtown workers travel to and from their employment by public transportation.

Philadelphia and New York motorists in recent years objected strenously when parking bans were enforced on some streets, but traffic moved more smoothly after the ban. So, too, did the merchants object in the beginning. They predicted a severe loss of business. It never materialized; in fact business improved. Philadelphia has now banned all private car parking in the central business area, and is expanding the area covered by the ban.

To the motorists' possible complaint that this proposal would deprive them of the use of their cars, the best answer is found in a recently published book by the well-known author Hal Burton. It was prepared for the Central Business District Council of the Urban Land Institute and titled "The City Fights Back":

> "For public transportation is a city's life blood- - more important than broad highways, expressways and off-street parking facilities. Both are desirable to keep downtown healthy, but the rarest diamond of them all is public transportation- -the rarest and most often ignored".

The relative efficiency and economical use of street space by public transit versus private automobile has been established in Chapter 2 of this transit research study. It has been shown that 15,406 public transit vehicles- - streetcar, bus, elevated, and railroad- -carried 554,956 passengers into the central business district on the 1954 Cordon Count day as contrasted to 278,500 passengers carried by 185,667 private autos and taxicabs. Thus we find that 7.66% of the total passenger carrying vehicles carried 66.58% of the total passengers.

It would appear safe to assume that the same, or greater, ratio of the total intra-city traveling public is riding mass transit. On that basis, of the 1,778,600 civilian labor force employed in Chicago, approximately 1,184,000 depend on mass transportation to get to and from work.

Surely this group, representing two out of every three persons who must travel daily, rain or shine, are entitled to the greatest consideration as regards utilization of street space, particularly since they too have contributed, and still do, to the cost of construction and maintenance of the city's streets by payment of city vehicle license fees, state gas tax, real estate taxes and assessments. That the majority of transit riders do own automobiles is established beyond doubt, there being one automobile registered in Chicago for each 4.7 units of population.

The Congress Street Superhighway presently under construction and the proposed Northwest Superhighway will attract thousands of additional automobiles that will aggravate the already intolerable traffic jam in the Loop area and reduce traffic to a snail's pace. Additional parking space must be provided, to the detriment of the whole central business area.

To provide adequate off-street parking and storage facilities in the Loop, while not impossible, would be a waste of valuable space. An average of 200 square feet is required for the storage of a single automobile, if parked by an attendant, and from 250 to 300 square feet if driver-parked in a garage such as the publicly owned one under Michigan Avenue; a fair over-all average being 240 square feet per auto. On the basis of 1.5 persons per auto, 160 square feet per person is required for auto storage, so that even by using the most modern type of garage, practically the same or a greater amount of space would be required for auto parking as for the workers transported in them, the average floor space per worker being 140 to 150 square feet in modern business buildings.

Thus we find that if city planners continue the present practice of providing bigger and better superhighways converging on the central business district, the seven drastic regulations heretofore referred to should be adopted and enforced to prevent a complete traffic stand-still. If these regulations are enforced, periphery parking lots must be provided far enough away from the central business district to prevent bottle-necks in the heavily traveled arterial system, and fast, frequent shuttle bus service to the business and retail section must be established.

Contrary to popular belief, transit and service vehicles have not contributed to the increased traffic congestion experienced in the central business district in the past twenty years; in fact, their numbers have decreased considerably although their size and capacity have been increased over the years. That the automobile is the real offender is clearly shown by the following Cordon Count summary of the daily number of vehicles entering the

area on a representative business day between the hours of 7:00 A.M and 7:00 P.M.:

Year	Street Cars and Buses	Automobiles And Taxis	Service Vehicles	Total Vehicles
1935	9,942	120,452	22,931	153,325
1940	8,560	150,676	24,826	184,062
1946*	8,870	136,001	22,525	167,396
1950	8,968	166,272	20,790	196,030
1954	7,357	185,667	22,091	215,115
Incr. or (Decr.) 1954 over 1935	(2,585)	65,215	(840)	61,790
% Inc. or (Decr.)	(26.0%)	54.1%	(3.7%)	40.3%

* First post-war year.

NOTE: Passengers entering by street cars and buses decreased from 296,993 in 1935 to 186,057 in 1954, a 37.4% decrease. Passenger car registrations in 1954 increased 396,200 or 99.9% over 1935.

Too many of the vehicles that enter the loop in a 12-hour period remain there for eight hours or longer. These relatively few vehicles cause the traffic rush-hour congestion by jockeying to get into or out of street parking spaces, or by jamming up traffic lanes while awaiting their turn to get into or out of parking lots and garages. Trucks tie up whole streets while maneuvering up to loading docks.

The attached Exhibit Number 1, summarized from the 1954 Cordon Count, shows the number of surface vehicles entering, leaving and remaining in the central business district between the hours of 7:00 A.M. and 9:30 A.M., and the maximum accumulation of vehicles reached at 3:15 P.M. Also shown are the number of vehicles entering and leaving the area between the hours of 4:00 P.M. and 6:30 P.M. and related data.

Exhibit Number II, also summarized from the 1954 Cordon Count, shows the number of people entering and leaving the central business district by all means of transportation between the hours of 7:00 A.M. and 9:30 A.M., and the number remaining at 9:30 A.M. Those remaining at 9:30 A.M. are presumed to be employed in the area.

An analysis of these exhibits reveals that 59,708 surface vehicles entered the area in the A.M. rush period. Of those only 3. 7% or 2,206, were mass

transportation vehicles, but they carried 47% of the total surface passengers entering the area. During this period, 52,465 private automobiles and taxicabs, or 87. 9% of total surface vehicles, brought in only 49. 8% of the total surface passengers. Service vehicles accounted for 8. 4% of the vehicles and 3. 2% of passengers.

It is particularly significant that only 16,441 of the private automobiles remained in the area at 9:30 A.M. Presumably they were parked all day by owner-occupants employed in the loop area. These automobiles accounted for only 24,662 of a total of 69,756 surface passenger-workers and a grand total of 262,224 passenger-workers remaining in the area.

Thus we find that out of 262,224 persons employed in the area who depend on some mode of transportation, 192,468 (73. 4%) came via off-street rapid transit; 42,368 (16. 2%) came via surface mass transit; 25,985 (9. 9%) came via private automobile and taxicab; and the balance (.5%) came via service vehicle. Yet this small group who come by automobile and taxicab, less than 10% of all persons employed in the area, plus the service vehicles, are directly responsible for most of the present traffic congestion.

The greater traffic congestion experienced in the evening rush hours is also accounted for in Exhibit I. Note that the accumulation of private automobiles was 16,441 at 9:30 A.M., had increased to 24,233 by 3:15 P.M., and had diminished to 16,229 by 6:30 P.M., thereby adding some 8,000 more automobiles to the late afternoon traffic jam.

What traffic conditions in the central business area will be like after the Congress Street and Northwest Superhighways are completed is anybody's guess- -Congress Street Superhighway with a rated capacity of 6,000 automobiles per hour and the Northwest Superhighway with a rated capacity of 9,000 automobiles per hour, will be able to deliver 37,500 automobiles into this area during the 2-1/2 hour rush period. But where can they go? The streets in the area are already overtaxed by the 55,000 to 60,000 vehicles now entering and leaving during the rush hours. Something will have to be done.

In a preceding paragraph it was stated that more than 73% of all persons employed in the area, who depend on some mode of transportation, travel by off-street rapid transit, and the balance use some means of surface transportation. This latter group, whether traveling by means of public or private transit, is subject to the same irritating traffic conditions and loss of time. Why then, since streets are inadequate to carry the load under present conditions, should we not attempt new corrective measures?

Other cities have dared to take drastic action, with beneficial results. Why not Chicago?

The Central Business Area - - Parking Facilities

The following study was undertaken to determine the demand for and availability of parking space in the central business area, and the additional parking facilities required in the foreseeable future if curb parking is prohibited.

The Chicago Plan Commission, the Department of Street Traffic and Parking and the Bureau of Parking of the Department of Streets and Sanitation, state that the most recent study on the subject of parking facilities is the July 1952 "Report on Parking Facilities for the Central Business District of Chicago", prepared by DeLeuw, Cather & Company, to determine the feasibility of constructing City-owned parking garages. There has been no significant increase in parking facilities in the area since 1952 other than the construction of publicly owned garages in 1954 and 1955.

The DeLeuw, Cather Report considered the central business district of Chicago to be bounded on the east by Michigan Avenue from 9th Street on the south to Wacker Drive on the north, thence eastward by irregular outline to St. Clair and Seneca Streets and north to Erie Street. The west boundary is extremely irregular, ranging as far west as State Street at Erie Street, Clark Street at Ohio Street, Franklin Street at Illinois Street, the Chicago River at Kinzie Street, Clinton Street at Lake Street, Jefferson Street between Washington and Adams Streets, Clinton Street between Adams and Van Buren Streets, LaSalle Street at Van Buren Street and Federal Street at Taylor Street. This area is considerably larger than the Central Business District as defined for Cordon Count data, the Cordon area being bounded on the north and west by the Chicago River and on the south by 12th Street.

There are differences in physical characteristics of the two areas, there being more light manufacturing establishments, small retail stores, railroad yards, and a proportionately greater amount of space in which curb parking is permitted in the area surveyed by DeLeuw, Cather than in the Cordon area. Because of these differences, the conclusions reached by DeLeuw, Cather are not entirely applicable to the entire Cordon area under review here.

The Central Business District hereinafter referred to is that portion of the Cordon Count Area bounded on the north and west by the Chicago River and on the south by Harrison Street. Within these boundaries, and one block north and west of them, is the heart of Chicago's vast financial, retail, wholesale, administrative and entertainment enterprises, furnishing employment to over 300,000 people. It is also the area of the City's greatest traffic congestion.

Based on data obtained from the 1952 DeLeuw, Cather report and an independent survey of subsequent additions, there are 21,730 off-street parking spaces in the whole Cordon Count area and 19,280 in the central business district, made up as follows:

In Garages	12,350	
In Parking Lots	6,930	
Total in central business District	19,280	89%
In Garages and Lots south of Harrison Street	2,450	11
Total in whole Cordon Count Area	21,730	100%

It is estimated that of the total number of persons traveling to and from work by 17,324 autos and taxicabs in the entire Cordon Count Area, 89% are employed in the central business district, and that this district contains 98% of the 8,642 autos and taxicabs accumulated from 9:30 A.M. to 3:15 P.M. in the whole Cordon Count area.

On that basis, the present shortage of off-street parking space in the central business district is estimated to be:

Parking spaces required:	
89% of 17,324 vehicles (all day parkers)	15,420
98% of 8,642 (for accumulation)	8,470
Total parking spaces required	23,890
Parking spaces available:	
Includes Michigan Avenue underground Garage, Grant Park Lot between Randolph and Monroe Streets, and city-owned parking Garages Nos. 1,2,3 and 8.	19,280
City-owned parking garages:	
#1 - 11 W. Wacker Drive	
#2 - 20 S. Wacker Drive	
#3 - 535 S. State Street	
#8 - 120 N. LaSalle Street	
Additional Parking Spaces required	4,610

One might expect that some of these excess cars could be parked in garages or lots across the River from the central business district. However, there are only 2,900 of such parking spaces in the first block across the river,

between North St. Clair Street on the northeast and West Van Buren Street on the southwest, and none is convenient to the central business district because of the long walk back. Also, the large number of workers employed in such buildings across the river as the Tribune Tower, Wrigley Building, Merchandise Mart, Daily News Building, Railroad Stations and U.S. Post Office, and the many visitors to those buildings, require such extensive parking facilities as to preclude the possibility that much, if any, parking space would be available for overflow from the central business district. It may be assumed, therefore, that approximately 4,500 autos and taxicabs clutter up the district by curb parking and cruising.

The new Prudential Life Insurance Company Building at Randolph and Michigan Avenue will have a working population of 10,000 when full occupancy is attained, and in addition, planners anticipate over a million visitors to the observation tower annually, as well as thousands attending conventions in assembly halls of the building. The project provides private parking space for 500 autos but a conservative estimate of requirements is 1,100 parking spaces, leaving an overflow of 600 autos per day.

The impact of this one building on the traffic and parking problem is pointed out to illustrate what may be expected in the near future if the central business district expands as it should when Chicago becomes one of the most important ports of entry for the foreign trade that is anticipated when the St. Lawrence Seaway is finished. Purchase of land and construction for parking spaces, if conveniently located, has cost the city slightly over $4,000 per car space (Garages Nos. 1 and 8), so the parking demand of this one building would require an investment of approximately $4,400,400.

If the Congress Street and Northwest Superhighways deliver their capacity of 37,500 autos into the central business district between the hours of 7:00 A.M. and 9:30 A.M., and the present percentage (35%) of these autos remaining in the area continues, over 13,000 additional parking spaces will be required. At an average cost of some $2,833 per car space (average cost for city garages located in the district), these 13,000 spaces, plus the 5,200 additional parking spaces presently required will require an investment of some $51,500,000.

City-owned Garage No. 1 at 11 W. Wacker Drive, with a capacity of 717 cars, occupies about ½ of a square city block and Garage No. 2 at 20 S. Wacker Drive, with a capacity of 1,230 cars, occupies almost a full square city block. At the rate of 1,300 parking spaces per city block, garaging of 18,200 additional cars would require the abandonment of 14 more productive square city blocks out of the total of approximately 75 square city blocks in the central business district. Over 10 square city blocks of the area are now used for parking space that could be used for productive enterprise.

Thus it appears that a continuation of the present trend of city planning would result in a central business district (the most valuable land in Chicago)

consisting of 2/3rd productive business sites and 1/3rd non-productive parking spaces.

Although the above data and conclusions are mathematically and statistically correct, such a situation could not come to pass because of physical limitations in capacity of the streets for carrying traffic, and also before such a saturation point had been reached, more stores and businesses would follow those which have already made their exodus to outlying urban or suburban areas.

The average person, including the contributing motorist, probably has little conception of the staggering financial loss that would be incurred if the central business district were allowed to be choked to death by traffic, and abandoned, but the June 1955 issue of "Architectural Forum" sums it up in a readily understandable manner in its round table report "How to Rebuild Cities Downtown":

> "Those who lightheartedly propose its (downtown) abandonment are not quite aware what they would have to replace. They would have to replace a real estate investment of some $500 billion, which is roughly $3,000 for every man, woman and child in the U.S. On top of this they would have to replace the public investment in utilities, such as streets, water lines, sewers, gas, electric lines, rebuilding them in new areas. Adding the private and the public investment together, this is like saying that every man, woman and child in the U. S. can afford to buy a new Cadillac and throw it in the river."

New sources would have to be found, this article states, for four-fifths of the nation's taxes, which are now collected from cities, and of which, anywhere from 20 to 65 per cent comes in turn from the downtown areas of these cities.

The only solution of the problem is to attract people, and not vehicles, to the central business area as well as outlying business centers, and only rapid mass transit facilities can do the job.

More Specific Revision of Loop Traffic

For the purpose of this chapter, and at my request, the following suggestions have been prepared for consideration by planners for improving traffic flow in the loop, and for increasing capacity of the present streets:

A. Establish special TRANSIT LANES on certain streets for street cars and transit buses in revenue service.

These would include:

North-South Streets:

Wabash Avenue - Wacker Drive to Congress Street (4 lanes) Special treatment to be worked out for trucks making local deliveries and parking garage patrons.

State Street - Wacker Drive to Congress Street (present streetcar lane northbound and southbound).

Dearborn St. - Wacker Drive to Congress Street (present northbound streetcar lane).

Clark Street - Wacker Drive to Congress Street (present southbound streetcar lane).

Wells Street - (Transit lanes to be designated here later, if necessary).

East- West Streets:

Washington St. - Franklin to Wabash (1 eastbound lane).

Madison St. - Wabash to Franklin (1 westbound lane).

B. Construct a high-level subway for buses under Washington Blvd. between approximately Jefferson St. and Michigan Ave.,

C. Construct a network of continuous pedestrian concourses under the sidewalks along State Street and certain other streets. These passageways would connect with all mezzanine stations of the State Street subway, with the Illinois Central- Prudential underpass and with as many stores and office buildings as wished to provide connections.

Stores and office buildings could construct show windows on this passageway.

This traffic plan for the Loop would present a picture something like this:

The mezzanine pedestrian passageways, which would be underground, at about the mezzanine level of the State Street subway, would extend along the east side of State Street from a point south of Van Buren Street to the south side of Randolph Street; along the west side of State Street from about a half-block south of Jackson to the south side of Randolph; along the north side of

Adams Street just west of Clark Street to the west side of State Stree with a spur on the west side of Dearborn Street extending half a block, north of Adams; and along the south side of Randolph Street from just west of State Street to the Illinois Central and Prudential Building via underpass.

Such a concourse would enable pedestrians to travel below the street level at about the mezzanine level of the State Street Subway, along State Street from Van Buren to Randolph, connecting to the Illinois Central Passenger Stations and the Prudential Building, together with a concourse somewhat over two blocks long on the north side of Adams Street.

Business people, shoppers, pedestrians would be enabled to cover this vastly important area sheltered from bad weather with no vehicular traffic to impede their progress and with access to the many important buildings and streets along the route.

With the rearrangement of vehicular traffic on the surface, Wabash Avenue would be practically dedicated to public mass transportation and important changes would be made in other prominent streets. Eventually there should be a bus subway in Washington Street from a point west of the River to the Grant Park Garage.

This chapter, considering the vast program discussed, is relatively short. More details with reference to the matters already discussed will be supplied in the next chapter. In that chapter also there will be a discussion of suggested traffic changes in areas other than the loop.

EXHIBIT I

CORDON COUNT DATA

Surface Vehicles Entering, Leaving and Remaining in the Central Business District Between the Hours 7:00 A.M. to 9: 30 A.M. on a Typical Weekday, May 1954, and Maximum Accumulation of Vehicles Reached at 3:15 P.M.

	Entering	Leaving	Remaining	Maximum Accumulation
C.T.A. Vehicles	2,019	1,940	79	28
Out-of-Town Buses	187	150	37	19
Total Mass Transit	2,206	2,090	116	47
Private Automobile	47,132	30,691	16,441*	24,233
Taxicabs	5,333	4,450	883	1,733
Service Vehicles	5,037	3,634	1,403	1,822
Total Surface Vehicles	59,708	40,865	18,843	27,835

*Private automobiles remaining at 9:30 A.M. are presumed to be all-day parkers owned by persons employed in the area.

Surface Vehicles Entering, Leaving and Remaining in the Above Area Between the Hours 4:00 P.M. to 6:30 P.M. on the Same Typical Weekday, May 1954

	Entering	Leaving	Excess Leaving Over Entering	Balance Remaining at 6:30 P.M.
C.T.A. Vehicles	1,695	1,817	122	(70)
Out-of-Town Buses	169	160	(9)	36
Total Mass Transit	1,864	1,977	113	(34)
Private Automobile	35,537	43,196	7,659	16,229
Taxi Cabs	6,146	6,006	(140)	1,876
Service Vehicles	2,871	3,237	366	1,248
Total Service Vehicles	46,418	54,416	7,998	19,319

( ) Denotes Red Figures.

CORDON COUNT DATA

Passengers Entering, Leaving and Remaining in the Central Business District Between the Hours 7: 00 A.M. to 9: 30 A.M. on a Typical Weekday, May 1954

Means of Transportation	Entering	Leaving	Remaining
SURFACE TRANSIT -			
CTA Street Cars and Buses	71,764	30,491	41,273
Out-of-Town Buses	2,492	1,397	1,095
Total Mass Transit	74,256	31,888	42,368
Private Automobiles	70,701	46,039	24,662
Taxicabs	8,000	6,677	1,323
Service Vehicle	5,037	3,364	1,403
Total All Surface	157,994	88,238	69,756*
RAPID TRANSIT -			
Subway and Elevated Cars	121,182	31,982	89,200
Railroad Cars	106,245	2,977	103,268
GRAND TOTAL	385,421	123,197	262,224*

A maximum of 311,370 people (workers, shoppers, theatre goers, etc.) in this cordon area was reached at 2:00 P.M.

* Those remaining at 9:30 A.M. are presumed to be employed in the area.

CHAPTER VIII

NEED FOR MORE EFFICIENT UTILIZATION OF STREETS AND HIGHWAYS

For Release to Afternoon Papers of Thursday, March 22, 1956 and all Papers Thereafter

Chicago, March 22 - - - Early construction of comprehensive extensions of off-the-street rapid transit must be coupled with more efficient use of street space if Chicago is to solve its traffic and transportation problems, Werner W. Schroeder, Vice-Chairman of Chicago Transit Board, declared today in the eighth chapter of his transit research study.

There is widespread recognition of the urgent need for off-the-street rapid transit extensions, and a growing public demand for positive action, Mr. Schroeder said. Planning for the construction and financing of a comprehensive program, he added, should be a co-ordinated public agency effort.

Among the potential projects that should be studied are off-the-street rapid transit extensions that have been informally suggested in the recent past. These include the following:

Northwest Expressway:	Extend the Logan Square rapid transit route (Milwaukee Avenue-Dearborn Street subway) North and West near California Avenue and in the median strip of the Northwest Expressway; initial extension to the vicinity of the city limits at Canfield Avenue; later extension to O'Hare International Airport, if warranted. (Note: The City Council has just designated this extension an official project.)
Lake Street:	(A) In the immediate future, elevate the Lake Street rapid transit route west of Laramie Avenue by arranging to use a portion of the adjoining elevated right-of-way of the Chicago and North Western Railway. (B) Later reroute Lake Street route south near Kenton Avenue (4600 West) and into the West Side subway, the rapid transit facility now being built in the median strip of the Congress Street Express-way.

South Expressway:	Provide rail rapid transit in the South Expressway to a point in the far south side appropriate for feeder-bus connections. This rail service could connect with the State Street subway extended south from Roosevelt Road to the point where the expressway is planned to enter or parallel State Street.
Englewood:	Extend the Englewood branch of the North-South "L"-Subway route westward from Loomis Boulevard to the Clearing Industrial District near Cicero Avenue and Midway Airport.
Southeast Extension:	Extend the Jackson Park branch of the North-South "L"-Subway southeast from South Parkway or Prairie Avenue to 92nd Street and Commercial Avenue via South Chicago Avenue.
Southeast Expressway:	(Alternative) Provide express bus facilities from the Jackson Park branch of the North-South "L"-Subway to the Southeast Expressway, and then in the median strip of the expressway to South Chicago or beyond.
Cross Town Rail Rapid Transit:	(A) Extend rail rapid transit via California and Western Avenues from the proposed Northwest Expressway extension to the proposed extension of the Englewood branch of the North-South "L"-Subway route. (B) Extend rail rapid transit southward from the proposed Northwest Expressway route at about 4600 West to a connection near 63rd Street and Cicero Avenue with the proposed westward Extension of the Englewood branch of the North-South "L"-Subway route.
Southwest Expressway:	Provide facilities in the Southwest Expressway for express bus service between the Loop and the Clearing Industrial District and Midway Airport Area.
West Side Subway:	Extend CTA service, either rail or bus, westward from Des Plaines Avenue, Forest Park, where the median strip rapid transit facility in the Congress Expressway is now planned to end.

Subways in Central Business District:	(A) Construct a bus subway in Washington Street between Jefferson Street and Grant Park.
	(B) Construct a two-track subway in the Loop to replace the elevated Loop. This subway would permit Ravenswood and Evanston trains to enter the Loop and turn back via Kinzie, LaSalle, Jackson Boulevard, Grant Park and Randolph St. Another subway in Clinton Street and in Jackson Boulevard, between Clinton and LaSalle, would permit part of the West Side subway trains to turn-back via Clinton, Jackson, Grant Park, Randolph and LaSalle.

For more efficient use of street space, Mr. Schroeder recommended the following:

(A) Transit Lanes - - Establish lanes for through movement of transit vehicles and cabs.

(B) Parking Controls - - Expand the use of rush-hour parking controls on heavy traffic streets, either in the direction of heavier use, or on both sides, where justifiable.

(C) Physical Changes - - Curb cutbacks, throat widening, channelization and grade separations where justified.

(D) Establish by-pass routings over adjacent streets to increase the capacity for through traffic at many busy intersections; also increase intersection capacity by restricting left-turn movements and by reducing the volume of right-turn movements.

(E) Spread out the Rush-Hours - - Staggered work hours would tend to level off the rush-hours traffic congestion.

(F) Far Side and Near Side Stops - - Study the relative advantages of near side and far side bus stops at intersections.

(G) Bus Terminals and Cab Stands - - Where practical, move "on-street" bus terminals and cab stands away from bus stops at busy intersections.

In concluding the chapter, Mr. Schroeder said:

"It is certain that greater efficiency in the use of street space is desired by all interests. Enormous savings in capital outlays, in maintenance, and in travel time can be obtained by a vigorous, open-minded approach to attain the objective -- greater efficiency in the use of existing streets.

"More efficient use of street space alone will not solve our urban transportation problems, however. Chicago's inadequate private right-of-way rapid transit facilities must be extended. Positive action has already been delayed too long. We must now undertake the job of planning, financing and constructing rapid transit extensions, if Chicago is to increase its economic vigor by surging forward in the fields of commerce, finance, manufacturing and industry."

* * * * * *

CHAPTER VIII

NEED FOR MORE EFFICIENT UTILIZATION OF STREETS AND HIGHWAYS

There is a growing realization throughout the country that urban traffic congestion, the greatest single problem of most large cities, has not and can not be overcome solely by the construction of new highways, expressways, freeways, and widening and modernization of present streets. Bold and drastic traffic regulations must also be adopted to gain more efficient utilization of the streets and highways we now have as well as those presently under construction or planned for the future. On January 19, 1956, the Honorable Richard J. Daley, Mayor of Chicago, said:

> "One of the most pressing problems which faces all of the cities of the nation is the present traffic congestion and the threat of future congestion. This could paralyze our city.
>
> The streets of Chicago were not planned for the millions of automobiles which have become an indispensable part of American living, and no engineer, no traffic safety expert, can devise a plan which can make a street handle more traffic than it was built for - - unless that street is changed physically. To meet this crisis on our streets calls for bold action."

With the general conclusion so stated there can be no dispute. However, experience has shown that rapid transit (elevated- subway), free from surface congestion, is essential to an effective urban transportation system in any large, densely populated area.

The solution of Chicago's traffic congestion problem seems to divide itself naturally into three phases, namely:

1. More efficient utilization of street space. Some solutions were proposed in Chapter 7 of this study, particularly with reference to conditions in the central business district; others are discussed herein.

2. Construction of new arterial streets, grade separations, thru-lane overpasses and other improvements contemplated under the Five-Year Plan for Street Improvements, as outlined by the Mayor of Chicago in the address heretofore referred to, and

3. Extension and improvements of Chicago's Rapid Transit System. Requirements within its present corporate confines will be discussed in this chapter.

BASIC PROBLEM

The basic problem is the inadequacy of the present street system. There are just too many people in autos, buses and other conveyances and trucks transporting goods, all trying to use the streets at the same time. Moreover,

during the period of greatest demand for the primary function of moving people and goods, from 1/3 to 1/2 of present street capacity is confiscated, in many cases illegally, by a minority group for use as day-time garages.

One of the big problems is the extremely heavy concentration of traffic in the two rush hour periods of the day. Prior to 7:30 o'clock in the morning most streets in Chicago and vicinity are fairly easy to travel and speeds that can be attained are quite satisfactory. But between 8:00 and 9:00 in the morning there is an out-pouring of traffic which causes congestion on every main thoroughfare of the City. Again, there are periods during the mid-day when traffic flows freely, but beginning about 4:15 in the afternoon and continuing for one hour or more, there is again a thickening of traffic which makes driving difficult and the attainment of reasonable speed almost impossible.

The reason a vast majority of the population wishes to use the same streets during the same time, morning and evening, is due to the development of certain work and travel habits in the city which might be corrected somewhat by staggered work hours. If the traffic peaks could be reduced by spreading them over twice the time, the safety and ease of transportation would be improved immeasurably and its speed greatly increased.

The history of street and highway improvements has not provided a solution of this problem. The building of more streets does not hold the promise of solving it. But if the working hours of the population of Chicago could be effectively staggered, even by a 30 or 45 minute spread, a great improvement would immediately become apparent.

INCREASES IN EFFICIENCY

One interested solely in public mass transportation might suggest that by law the use of the streets be limited for a short period during the two peak traffic periods of each day to the exclusive use of vehicles that carry the most people, namely, the mass transportation vehicles. But unless the public is interested in cooperating to make that possible, no police force can enforce such a plan of street usage on the part of the public.

Chapter 7 of this study has suggested some improvements in the Loop, which at a relatively small cost would, it is believed, greatly improve the efficiency of transportation in the Loop area.

Now we present suggestions, worked out in cooperation with staff engineers of the Transit Authority, which we believe would augment the capacity of streets in other congested areas of the city.

Every plan for traffic improvement must necessarily be tentative. Much experimentation on the part of the city government and the Transit Authority is required to attain the maximum usage of the streets in a more efficient manner. Perhaps a justifiable criticism would be that none of us has been suffi-

ciently bold in trying out experimental measures to see how well they would work. The attempted use of the plans we are proposing, even if not completely successful, would doubtless suggest other plans or improvements that would eventually reduce materially the strangling traffic congestion now existing.

In any event, the eventual solution of the problem in Chicago and in other places cannot be attained merely by the expenditure of vast additional sums for streets and improvements. Traffic must be regulated and rearranged so as to get the highest and best use out of the millions of dollars that have already been spent and the additional millions that are proposed to be spent.

PRESENT PROBLEMS OUTSIDE CENTRAL BUSINESS AREA

The problem of moving people and goods is not peculiar to the central business district alone. Chicago has some 75 outlying business centers, many of which do a volume of business comparable to that of a small city, and each of these has traffic and transportation problems similar in most respects to those of the Loop area.

Some of the problems in the use of the present streets and those proposed to be built are as follows:

1. Many outlying intersections now lack street capacity to handle the present demands of thru traffic, plus the turning movements now permitted, without considerable delay. At some locations this deficiency exists only during rush periods 5 or 6 days per week. At other locations the deficiency occurs over longer periods.

2. The left-turn movements now permitted at many busy intersections contribute substantially to the traffic delay.

3. Heavy pedestrian movements at many intersections restrict the flow of thru and right-turn vehicular traffic and thus contribute to delay at these points. The heavy transfer traffic between CTA routes is an important factor in these pedestrian movements during rush periods at many locations.

4. Because of the delay occurring at busy intersections, many autos, light trucks and even trailer trucks in some instances are using side streets to bypass the busy intersections or groups of intersections. This occurs principally during rush hours on weekdays and Saturdays.

PRELIMINARY SUGGESTIONS TO MEET THE PROBLEMS

Extensive studies have indicated and given rise to the following suggestions to increase the use of present street capacity at intersections and to increase the over-all speed of transit vehicles and of other traffic on transit streets.

INITIAL PHASE:

A. TRANSIT LANES - Establish lanes for thru movement of transit vehicles and cabs.

This lane would be separated from the balance of the roadways by a raised fin or other lane marking devices. The length of the lane might vary, probably exceeding a block back of the main intersection in some instances

At some locations use of this special lane perhaps should be continuous throughout the business day 6 days per week, while at other locations the TRANSIT lane would operate only during rush periods 5 or 6 days per week.

B. PARKING CONTROLS - Expand the use of rush-hour parking controls on heavy traffic streets, either in the direction of heavier use, or on both sides, where justifiable.

C. PHYSICAL CHANGES - Curb cutbacks, throat widening, channelization and grade separations where justified.

D. BY-PASS ROUTINGS - Establish by-pass routings over adjacent streets to increase the capacity for thru traffic at many busy intersections by restricting left-turn movements and by reducing the volume of right-turn movements.

E. SPREAD OUT THE RUSH-HOUR - Staggered work hours would tend to level off the rush-hour traffic congestion.

F. FAR SIDE AND NEAR SIDE BUS STOPS AT INTERSECTIONS - Study the relative advantages of near side and far side bus stops at intersections.

G. BUS TERMINALS AND CAB STANDS - Where practical, move "on-street" bus terminals and cab stands away from Bus Stops at busy intersections justifying treatment of the types outlined above.

TEST OF PLAN

1. First, it is suggested that an extensive section of one street be selected to test the practicability of all phases of the plan, the resulting reductions in delay at intersections, and improvements in speed over a section of street. For this check a section of Ashland Avenue south of Irving Park is proposed.

2. Second, it is suggested that the plan be tested at certain isolated outlying intersections, such as Milwaukee, Cicero and Irving Park.

Increasing the traffic handling capacity of heavy traffic streets and intersections by traffic signal modernization and synchronization, construction of channelization, throat widening, thru lane overpasses and grade separations has been studied by the City of Chicago Traffic Engineer's Office and a definite program for the desirable long-range treatment of preferential streets in the city has been proposed.

Selection of the specific busy intersections, thru traffic streets and bypass streets for treatment as recommended here should be made by the Traffic Engineering Department of the City of Chicago with Chicago Park District and Chicago Transit Authority cooperating where they are involved. Traffic checks and parking surveys will be essential foundation material in many instances.

EXCLUSIVE TRANSIT LANES

It seems inevitable that more effective use of the public highways is bound to have a large place in the planning of City and Transit officials. The exclusive transit lane, at least for the rush-hour periods, is a plan that must be tried and given a fair experimental period in order that its possibilities may be fully tested.

In Nashville, Tennessee, such a plan has been recently put in operation in three given one-way streets leading to and from Memorial Square in downtown Nashville. Passenger Transport, a weekly newspaper published by American Transit Association, reported in the January 6, 1956 issue:

> "A representative of Nashville Transit Co. said the innovation - - long advocated by the transit industry but just now being tried on a planned basis for the first time anywhere - - has produced results that exceed the hopes and expectations of even the most enthusiastic supporters of the idea."

THE PLAN:

> "The right-hand lane of each of the three streets is reserved for buses from 7 to 9 A.M. and from 4 to 6 P.M. Overhead neon signs are illuminated during those hours to warn motorists to stay out of the bus lanes. The city soon will paint a yellow stripe between the bus lanes and the auto lanes and paint 'Buses only- -7-9 A.M. and 4-6 P.M.' on the surface of the bus lanes."

Further Comment:

> "'Bus operators report they have never been able to enter and leave the downtown area so rapidly, ' said a Nashville Transit Co. representative on the first day of the exclusive lanes. It was also noted that bus passengers are tending to congregate at transfer points around the Square, thus minimizing delays at other stopping points, as a result of the re-

routing of all lines and the opening of the shelters."

Later, the following report was made on the Nashville experiment (Passenger Transport, January 13, 1956):

> "W. H. Mann, city traffic engineer, said the use of special bus lanes on downtown streets, introduced here last week, made traffic flow easier and faster."
>
> "He said the lanes have made it possible for private autos to move faster, and Carmack Cochrane, Nashville Transit Co. President, said the innovations has enabled buses to keep on schedule all day."

The Pittsburgh Post-Gazette, in an editorial discussion of the same idea, has recently commented as follows:

> "One proposal under consideration has much merit. It would provide a high-speed curb lane for mass transit vehicles only. That would permit transit vehicles to keep their schedules, instead of becoming mired in traffic, and make bus service more attractive. And that, in turn, might mean fewer automobiles adding to traffic congestion."

Chicago itself is getting ready for an experiment (Passenger Transport, January 27, 1956):

> "'We were interested in observing the operation of the Nashville plan, ' Mr. Gunlock said, 'because preparations are underway in Chicago to try out the exclusive bus lane plan in Chicago's Loop, probably in Washington Street from Franklin Street to State Street, or to Michigan Avenue."
>
> "Experimental operation of an exclusive bus lane in Washington Street in the Loop was recommended about a year ago by the Chicago Street Traffic Commission on representations made by the CTA, " Mr. Gunlock said.

Should this contemplated experiment prove as effective and beneficial as its proponents believe, and as experience in other cities indicates, the benefits of exclusive transit lanes should not be confined to the central business district alone, but should be instituted on a city-wide basis, wherever traffic conditions warrant.

PARKING BANS IN CERTAIN AREAS

Another effort that must be made is to prohibit the widespread use of streets for parking areas. As pointed out in Chapter 7, nothing is more expensive than the use of costly public highways and streets for parking places. It is a case of an individual convenience hampering large public use.

The need for parking bans in Chicago's central business district was recog-

nized and placed into effect many years ago and more recently has been extended to other congested business areas throughout the city. On a substantial number of heavily traveled streets, parking is restricted on the side of the prevailing traffic movement during the respective rush-hour periods.

Toledo is in the midst of an experiment restricting street parking. The regulations presently in effect prohibit on-street parking in a 16-block core of the business district from 7:00 A. M. to 6:00 P. M., and bar parking in the morning and evening rush hours on eight major streets providing routes to and from the business district. It was recently reported (Passenger Transport, January 13, 1956):

> "Vice Mayor Ned Skeldon, who sponsored the no-parking program, declared that the first 30-day test was beneficial to the majority of Toledoans and said council should not be stampeded into abandoning the program."
>
> "He added that three out of five downtown shoppers ride buses, and that the parking restrictions had made it possible for buses to move on schedule for the first time in history. This, he stated, was one of the original objectives."

Gary, Indiana, also has put into effect a rush-hour parking ban on one side of a comparatively short section of Broadway. It is reported that this has resulted in a significant speed-up of traffic in the heart of Gary. Buses and automobiles alike have benefited (Passenger Transport, January 20, 1956):

> "'This is the most effective forward step that has been taken in our city since the traffic congestion problem reached the acute state, ' said J. W. Davies, Vice-President and Treasurer of Gary Railways, Inc."
>
> "Both City Traffic Engineer, George Pavol and Traffic Commander, Joseph Zimmerman declared that the effectiveness of the ban has exceeded their expectations. "
>
> "Traveling time along Broadway has been cut at least in half, both for transit vehicles and private autos, it was stated."

PHYSICAL CHANGES AND BY-PASS ROUTINGS

The advantage of curb cut backs, of throat widening at intersections and of channelization- -that is, dividing the highway into channels for the purpose of classifying use by different types of vehicles, would seem to be obvious.

Grade separations and through-lane overpasses have drawn some fire of opposition. These facilities, of course, would be constructed at busy intersections.

It is believed by some of the merchants at these intersections that over-

passes or grade separations would injure the business value of the property in the vicinity.

In this connection it is not amiss to remember the attitude of cities and villages on through highways. Thirty years ago every municipality wanted to have through traffic routed on the main street, in the belief that this would increase local business. However, it was discovered that the drivers and occupants of cars who have destinations beyond a locality do not stop to do business unless they had originally intended to do so. Above all, it was found that the through traffic caused a serious delay and congestion of the local traffic which primarily serves the local residents and consequently is of greatest benefit to local business. After some years of trial and error, the movement went in the opposite direction. Now the clamor is to have the main highways bypass the cities or villages with appropriate local connections between the through highways and the local business areas. This has worked out far more satisfactorily, both to through travelers and to the local residents and businessmen.

It is believed that the same would be the situation at important intersections in the city. Business is not derived from the passing of a car. Business is done by individuals. If the individual wishes to stop at a given intersection to do business, he may do so, and nothing is lost. On the other hand, the through traffic congests the local streets and makes it more difficult for pedestrians - - who are the customers who patronize the local stores.

Undoubtedly, experience will show that the business of an important intersection is improved rather than diminished by giving through traffic the opportunity to move speedily out of the way of those who wish to use the four (or six) corners of an intersection for the transaction of business.

Without doubt, the building of overpasses or grade separations at these intersections would be of enormous benefit to travel in general, and in all probability also to the local business interests.

SPREADING OUT THE RUSH-HOUR

Other cities too have found that the rush-hour is one of the big problems. The Chairman of the New York City Transit Authority is making efforts to have 4:45 P. M. set as the quitting time for all workers in the new 42-story skyscraper being erected between 41st and 42nd Streets and from Lexington to 3rd Avenues in New York. The purpose of this is to relieve a prospective jam at the Grand Central subway station.

The New York Authority is also encouraging other business houses in the same general area to stagger working hours, the purpose being to relieve peak-hour travel congestion. Another step being taken by the New York Authority is to interest department stores in running sales in off-peak travel hours.

The Authority believes the latter would influence housewives to keep out of subways and buses when congestion is at its worst.

Measures such as these, if adopted in Chicago, would help in making travel on mass transportation vehicles more comfortable and more expeditious.

But the prospects are not altogether rosy. Some effort has been made to stagger work hours in Chicago. This was done in the latter part of World War II and immediately after. It was not too successful, for, while employers cooperated reasonably well, the employees, when they got out of work 15 to 30 minutes early, seemed to be inclined to spend their time in the Loop and to go home at about the regular time to which they had been accustomed through the years. It will require cooperation on the part of a great number of people to make such a plan effective. However, the difficulties should not stop experimental efforts to bring about a spread-out of the rush-hours, both in the evening and in the morning.

Again the suggestion becomes relevant that if mass transportation were given a short period of exclusive operation in the rush hours, both in the morning and in the evening, and the private automobiles were obliged to travel either earlier or later, there would automatically be a spreading-out of the rush hour which would be beneficial to everybody. The good will and cooperation of the public is an essential element in bringing this about.

RELATIVE ADVANTAGES OF NEAR SIDE AND FAR SIDE BUS STOPS

The location of bus stops has been a controversial subject ever since the abandonment of horsecars and early railway cars that had their common entrance and exit doors at the rear and, in stopping at the far side, passengers were enabled to use the crosswalk in entering and leaving cars. In those days the crosswalk was generally the best paved portion of the street - sometimes the only paved portion - and, under such conditions, it was quite logical that far side stops should be widely used.

As time went on, streets became more generally paved and front entrance and exit doors were used more generally. There was, therefore, a wholesale abandonment of the far-side stop inasmuch as the reasons originally dictating its adoption had disappeared. Furthermore, it was found that the increasing volume of vehicle traffic greatly reduced schedule speeds because of the frequent necessity of stopping on the near side to allow crossing traffic to move, followed by a second stop to pick up and discharge passengers on the far side of the street. These double stops at an intersection also confused the prospective passengers as well as placed a strain on public relations. It became increasingly difficult for operators to explain to passengers that company rules prohibited opening the doors at near-side stops, and many an angry passenger was carried to the far-side stop when he had demanded to be allowed to alight at the near-side and there had been ample time to grant his wish.

With the advent of city bus operation, most companies adopted the near-side stops which had, by that time, become practically universal for street cars.

While it is true at the present time that near-side stops are practically universal in the transit field, far-side stops have not been completely eliminated. In fact, some CTA routes, notably those along boulevards, have long had far-side stops. In other streets, due to the traffic pattern at certain points, particularly at irregular intersections and locations where buses turn right or left, far-side stops have been established.

In other cities, notably Milwaukee, Wisconsin, mid-block stops have been introduced in sections of the central business district in an attempt to reduce traffic congestion at intersections.

All of these deviations from basic stop patterns have been inspired by a desire to expedite the heavy and rapidly increasing volume of traffic. Whether a complete revision of the basic stop pattern might materially speed the flow of traffic, and increase the effectiveness of traffic regulatory measures, is a matter of growing concern.

The CTA is now engaged in a comprehensive study to determine whether such a far-flung change in the basic stop pattern is warranted. This study should be co-ordinated with surveys and studies conducted by traffic engineers of other public agencies.

Any wholesale change in the basic stop pattern is certain to have a tremendous impact upon users of local transit service. Consequently, before such a drastic step is taken, the traffic engineers involved should be in general agreement, based upon the results of their studies, surveys and tests, that the change is warranted in the public interest.

SECOND PHASE:

FIVE-YEAR PLAN FOR STREET IMPROVEMENTS

The Mayor of Chicago in the address heretofore referred to has outlined a five-year plan in these words:

> "The new five-year plan calls for an expenditure of $116,000,000. Of this, $58,000,000 is to be supplied by city revenues and the remainder by county, state and federal and other agencies. All of the money will be spent within Chicago.
>
> "It is planned to build 61 street grade separations, 39 through lane overpasses, 115 channelizations, 71 'throat widenings', 71 miles of traffic dividers and 61 miles of street widening and paving, de-

signed to modernize our streets for present traffic conditions. This street widening and paving program is in addition to the proposed plan of construction and reconstructing 250 miles of arterial streets, of which 50 miles will be completed in 1956.

"This is one of the city's major programs because it will directly contribute to the saving of lives, it will save hundreds of millions of dollars in time, and it is imperative to the future of our mass transportation systems. This is a program which affects the interests of every citizen of our city.

"Hand in hand with this vast city traffic modernization program will be the invaluable work of Cook County in its allocation of $245,000,000 for street and highway improvement. It is expected that a substantial proportion of this fund will be used for work on Chicago's highways."

What has been said in those words is of great interest to all who are concerned with the solving of this vitally important matter of traffic congestion. In themselves, even those improvements will not give the final answer, unless something can be done to increase the efficiency in the use of the streets and highways that we now have and those that are proposed to be built at great cost in the next five years.

THIRD PHASE:

Regardless of how great the improvement and speed realized by surface vehicles as a result of the solutions heretofore discussed, surface mass transportation can never match the speed, comfort and safety of mass transportation over a private right-of-way. Relative speed data presented in Chapter 5 of this study showed that rapid transit operations average in the neighborhood of 22 miles per hour. For the year 1955, C.T.A. surface operations averaged only 10.24 miles per hour. Thus we see that those able to avail themselves of rapid transit service spend less than half as much travel time as those who must use surface transit exclusively.

Public acceptance and appreciation of rapid transit facilities are best illustrated by the following statistics:

Year	Total Originating Passengers (In Thousands) Surface System	El-Subway System	Total Chicago*	Per Cent of Total Surface System	El-Subway System
1950	722,509	110,603	833,112	86.7%	13.3%
1955	510,604	112,890	623,494	81.9%	18.1
Increase or (Decrease					
1955 over 1950	(211,905)	2,287	(209,618)	(4.8%)	4.8%
Per Cent	(29.3%)	2.1%	(25.2%)		

* Includes Chicago Motor Coach Company traffic in 1950, prior to acquisition on October 1, 1952.
( ) Denotes Red Figures

Comparison with 1950 is made because 1950 was the first full year of operation following speed-ups in rapid transit service due to installation of express service, inauguration of A and B stops, abandonment of certain lightly used stations, and other operational procedures. 1950 was also the first year when new rolling stock was placed in service on rapid transit lines, the forerunners of 474 new, all metal cars in service at the close of 1955.

It can only be the excellence and speed of rapid transit (elevated- subway) service that caused the rapid transit system to effect a gain of 2.1% in originating passengers and 4.8% of total C.T.A. riders, while during the same period the surface system served nearly 212 million fewer riders, a loss of 29.3%.

From its inception, Chicago Transit Authority has advocated private right-of-way extensions of mass transit as the most practical, most beneficial, most economical means of providing urgently needed additional transportation facilities for corporate Chicago and its satellite communities.

On frequent occasions, too, Chicago Transit Authority has pointed out that capital costs of these urgently needed extensions, if they are to be built, must be financed by agencies other than C.T.A.

Chicago Transit Authority is required by law to operate on a service-at-cost basis. Obviously this prevents Chicago Transit Authority from compelling its patrons, through their fares, to finance the needed extensions. Furthermore, it would be utterly impractical to do so, because fares would have to be raised to prohibitive levels.

Neither can Chicago Transit Authority issue parity revenue bonds to finance any appreciable extensions of its private right-of-way rapid transit

facilities. The trust indentures under which Chicago Transit Authority's outstanding bonds were issued preclude this approach by requiring that potential earnings from contemplated extensions must be demonstrably more than sufficient to service each new issue without impairing the servicing of the bonds previously issued. At best, few, if any, extensions can meet this condition, at least during the early years of their operation.

Financing of extension, therefore, must be assumed by agencies other than Chicago Transit Authority. In the final analysis, it is a community responsibility, since all of the community will reap the benefits. Public financing of these extensions is just as much the responsibility of the community as public financing of police, fire and health services, parks and playgrounds, airports, and other facilities.

The City of Chicago has recognized and accepted this responsibility by providing $100,000,000 for extensions of existing rapid transit facilities. Two of these extensions, the State Street subway and the Dearborn Street-Milwaukee Avenue subway, have been in use for some years. The third, the West Side subway in the median strip of the Congress Expressway, will be in operation before long.

These extensions, however, are only a modest beginning of the comprehensive program that is necessary, if Chicago and its adjoining communities are to overcome the paralysis of traffic congestion, and are to preserve and enhance urban concentrations of employment, industry and commerce.

To stimulate public discussion leading to prompt, positive action on a comprehensive, publicly financed program, a number of private right-of-way extensions of rapid transit have been proposed within the last two years.

Public response to these informal, unofficial proposals has been gratifying. Newspapers in Chicago and in adjoining communities have editorialized on the urgent need of more private right-of-way rapid transit facilities. Civic leaders, and the public generally, also recognize the need for extensions. The demand for immediate, co-ordinated positive action is strong, and growing stronger.

There seems to be widespread agreement that Chicago's transportation facilities -- streets, boulevards, expressways (existing or planned) and its mass transit facilities are seriously unbalanced. More facilities for mass transit, particularly off-the-street mass transit, are urgently needed.

Now is the appropriate time, therefore, to undertake the planning and preparation of a comprehensive program of future mass transit developments with emphasis on construction of long-needed extensions of off-the-street rapid transit facilities.

This tremendous planning job should be a joint, co-ordinated effort of the public agencies - - the city, county, state, federal government and CTA - - aided by the advice and counsel of civic and citizens' planning groups.

The end product of this comprehensive planning should be a program for the immediate, intermediate and long-range future complete with the ways and means of financing each and all of its component parts.

Among the potential projects that should be studied by this joint, co-ordinated planning group are off-the-street rapid transit extensions that have been informally suggested in the recent past. These include the following:

Northwest Expressway:	Extend the Logan Square rapid transit route (Milwaukee Avenue-Dearborn Street subway) North and West in California Avenue and in the median strip of the Northwest Expressway; initial extension to the vicinity of the city limits at Canfield Avenue; later extension to O'Hare International Airport, if warranted. (Note: The City Council has just designated this extension an official project.)
Lake Street:	(a) In the immediate future, elevate the Lake Street rapid transit route west of Laramie Avenue by arranging to use a portion of the adjoining elevated right-of-way of the Chicago and North Western railway. (b) Later reroute Lake Street route south near Kenton Avenue (4600 West) and into the West side subway, the rapid transit facility now being built in the median strip of the Congress Street Expressway.
South Expressway:	Provide rail rapid transit in the South Expressway to a point in the far south side appropriate for feeder-bus connections. This rail service could connect with the State Street subway extended south from Roosevelt Road to the point where the expressway is planned to enter or parallel State Street.
Englewood:	Extend the Englewood Branch of the North-South "L"-Subway route westward from Loomis Boulevard to the Clearing Industrial District near Cicero Avenue and Midway Airport.

Southeast Extension:	Extend the Jackson Park Branch of the North-South "L"-Subway southeast from South Parkway or Prairie Avenue to 92nd Street and Commercial Avenue via South Chicago Avenue.
Southeast Expressway:	(Alternative) Provide express bus facilities from the Jackson Park branch of the North-South "L"-Subway to the Southeast Expressway, and then in the median strip of the expressway to South Chicago or beyond.
Cross Town Rail Rapid Transit:	(a) Extend rail rapid transit via California and Western Avenues from the proposed Northwest Expressway extension to the proposed extension of the Englewood branch of the North-South "L"-Subway route. (b) Extend rail rapid transit southward from the proposed Northwest Expressway route at about 4600 West to a connection near 63rd St. and Cicero Avenue with the proposed westward extension of the Englewood branch of the North-South "L"-Subway route.
Southwest Expressway:	Provide facilities in the Southwest Expressway for express bus service between the Loop and the Clearing Industrial District and Midway Airport area.
West Side Subway:	Extend CTA service, either rail or bus, westward from DesPlaines Avenue, Forest Park, where the median strip rapid transit facility in the Congress Expressway is now planned to end.
Subways in Central Business District:	(a) Construct a bus subway in Washington St. between Jefferson Street and Grant Park. (b) Construct a two-track subway in the Loop to replace the elevated loop. This subway would permit Ravenswood and Evanston trains to enter the Loop and turn back via Kinzie, LaSalle, Jackson Boulevard, Grant Park, and Randolph St. Another subway in Clinton Street and in Jackson Boulevard, between Clinton and LaSalle, would permit part of the West Side subway trains to turn-back via Clinton, Jackson, Grant Park, Randolph and LaSalle.

CONCLUSION

In this chapter and the preceding one considerable space has been devoted to suggestions for changes in street usage and in travel habits.

As indicated from time to time in these chapters, these suggestions are experimental; their practicability and value can only be determined by putting them into operation on a limited basis, and assessing the results.

It is certain that greater efficiency in the use of street space is desired by all interests. Enormous savings in capital outlays, in maintenance and in travel time can be obtained by a vigorous, open-minded approach to attain the objective- -great efficiency in the use of existing streets.

More efficient use of street space alone will not solve our urban transportation problems, however. Chicago's inadequate private right-of-way rapid transit facilities must be extended. Positive action has already been delayed too long. We must now undertake the job of planning, financing and constructing rapid transit extensions, if Chicago is to increase its economic vigor by surging forward in the fields of commerce, finance, manufacturing and industry. For this reason, a large segment of this chapter was devoted to the urgency of rapid transit extensions.

Subsequent chapters will deal with long-range transportation requirements of the metropolitan area, and related problems.

CHAPTER IX

FINANCING CONSTRUCTION OF TRANSIT FACILITIES

For Release to Morning Papers of Thursday, May 31, 1956
and All Papers Thereafter

Creation of a new municipal corporation or corporations empowered to finance construction of urgently needed transportation facilities--both mass transit and highways--was proposed yesterday (Wednesday, May 30) for consideration as a solution of Chicago Metropolitan Area's transportation problems.

Author of the suggestion is Werner W. Schroeder, member and vice-chairman of Chicago Transit Board, who, however, emphasized that he was expressing his personal views only in the interest of promoting speedy solution of the area's transportation problems.

The proposal was outlined in the ninth chapter of a transit research study being conducted by Mr. Schroeder as a personal project. This chapter was released for publication today.

Transportation problems of the area, which covers approximately 3,600 square miles, have become extremely acute because of the sharp increase in area population, and because of the high rate of decentralization, particularly the developments in unincorporated areas, Mr. Schroeder said.

The new municipal agency or agencies would cover all of the major part of Cook County, and the major parts at least of Lake, Kane, Du Page and Will Counties.

General obligation bonds would be issued by the new agency or agencies to finance construction of transportation facilities. Taxes would be levied to retire the bonds and pay administrative costs. The bonded debt limitation initially would be set at one or one and a half per cent of the assessed valuation of the areas covered.

Inasmuch as the program would involve expenditure of millions of dollars, Mr. Schroeder indicated there should also be financial participation from the state, and from the present county and municipal governments that might be served by the new transportation facilities.

Chicago Transit Authority would operate the new mass transit facilities- -elevated, subway or surface routes- -provided by this plan. It would lease the facilities rent-free until earnings exceed operating and maintenance costs. Chicago Transit Authority's present territory limits would be expanded to cover the area of each of the new agencies.

The principal provisions of the plan follow:

(1) A board to exercise the legislative and administrative powers of each new municipal corporation would be created with each county having at least one member, and the largest county a larger number, (dependent on the relative population) some coming from the country towns and some coming from Chicago. Either these members would have to be elected by popular vote or appointed in a manner to which the people of the area give assent.

(2) Each such municipality would be authorized to build mass transportation facilities, such as surface railroads, elevated railroads, subways, highways or parts of highways within the area covered by the municipality. Provision should be made for the addition of territory to the municipality of methods used in the annexation of territory to cities and villages.

(3) Each municipality would be authorized to permit the use of those facilities by mass transportation organizations, including municipalities now or hereafter organized for the operation of mass transportation. There would be no provision for letting such facilities to private corporations. No rental would be payable by the public body operating mass transportation in or upon the facilities so constructed, but a provision could be made for the payment of compensation if as and when the earnings exceed operating costs and maintenance; the formula to be subject to agreement between each such municipality and the operating unit or units. In this connection the power of the Chicago Transit Authority to operate should be extended to cover the area of each new municipal corporation.

(4) Each municipality should be given the power of eminent domain and the other powers that are necessary to carry out its purposes.

(5) The amount that may be spent for salaries, wages and overheads should be strictly limited and a specific tax levy to cover these expenses should be provided. The levy necessary to pay the principal and interest on the bonds should be distinct and separate.

(6) No power of issuing revenue bonds should be given as such municipalities would have no revenue that could be made applicable to the payment of the bonds and interest. Under these circumstances revenue bonds would not be saleable on the market.

(7) Each municipality should be given the power to construct mass transportation strips at its expense as part of a highway being constructed by the State, county, city or village, or by two or more of them, at the time that the highway is being constructed by any such agency. The determination of the location and size of such strip and whether the construction thereof is feasible should probably be subject to approval by the State Department of Public Works and Buildings, or some other practical means of obtaining co-operation should be provided.

Discussing the need for the plan, Mr. Schroeder said:

"The relentless forces contributing to traffic strangulation are gradually closing in on the Chicago Metropolitan Area. Each street widening, each new expressway, each new overpass, each new parking garage increases the number of automobiles being jammed on to city streets inadequate to carry the load.

"Each year mass transit facilities carry fewer passengers; each year traffic congestion becomes greater and surface speeds diminish; each year wages and operating costs increase, all contributing to the vicious circle which compels public carriers to cut service and raise fares in order to maintain their equipment to the high standards of safety and mechanical perfection required by regulatory bodies. Little, if any, surplus earnings are available for modernization and expansion.

"Chicago and the suburban areas are now at the crossroads. They must forget petty differences and jealousies that impede one another's growth and embark upon a program of close co-operation in planning for the future in keeping with the natural resources of the area, including its magnificent central location in the nation, a water supply unexcelled in any city in the world, and an invigorating climate. They must initiate plans for development of a comprehensive transit system and other facilities to serve the whole area.

"The great future predicted for the Chicago area can be attained by working co-operatively for the welfare of all of the communities in the metropolitan area."

Many farsighted Chicagoans, Mr. Schroeder concluded, have long recognized that the problems of commerce, finance and industry would eventually have to be approached on a metropolitan area basis with efficient rapid transit systems to integrate the suburban area and the core city.

* * * * *

CHAPTER IX

FINANCING CONSTRUCTION OF TRANSIT FACILITIES

Chicago has been mindful of its transit needs throughout much of its life. During the past 50 years, a number of extensive engineering investigations were made with recommendations for improvements and extensions, some of which are now a part of CTA. Illustrative of these plans and the realization of the need were the following, among others:

Report of the Chicago Traction and Subway Commission, submitted in 1916.

Report of Ulysses S. Schwartz on a Plan for Municipal Ownership - 1922.

Report of R. F. Kelker, Jr., on a Physical Plan for a Unified Transportation System - 1923.

Report of R. F. Kelker, Jr., on a Plan for an Independent System of Rapid Transit Lines - 1924.

Dever Plan - 1923.

Plan for Elevated Railroad Extensions by Samuel Insull.

Plan for a Comprehensive Unified System by Henry A. Blair.

Suggestions for Solving Traction Problems by Leonard A. Busby.

Proposal for a Comprehensive Subway System - 1924

Report of committee on local Transportation for a Comprehensive Municipal Local Transportation System - 1925.

Report of the Subway Advisory Commission to the Committee on Local Transportation - 1926.

Comprehensive Traction Ordinance for a Unified System - 1930.

Reorganization Plans for Consolidation of Elevated and Surface Lines - 1930-1935.

A Comprehensive Local Transportation Plan for the City of Chicago - Philip Harrington, R. F. Kelker, Jr., and Charles E. DeLeuw - 1937.

A Comprehensive Plan for the Extension of the Subway System - 1939.

Some of the suggestions which grew out of these extensive studies were embodied in the Chicago Transit Authority Plan and in the improvements and changes which it has brought about. However, some of the matters in those reports are now obsolete due to the vast change in conditions, such as the unexpected growth in the use of automobiles, the vastly increased rate of wages and numerous physical changes that have occurred in the City of Chicago.

Preceding chapters of this study have echoed public discussions, newspaper articles, studies by members of the Chicago Transit Authority staff and other sources that have considered the extension of rapid transit facilities in the Chicago area. That such facilities, which do not utilize public travel space, have many arguments in their favor cannot be denied. The Congress Street median strip and later the Northwest Expressway median strip will undoubtedly revolutionize transportation in those respective areas.

However, some of the more extensive, and in some instances grandiose, plans are confronted by two obstacles:

(A) No transportation system with present rates of salaries and wages, present cost of equipment and repairs, and the already high level of fares (which cannot be increased without vigorous public opposition) could possibly finance such extension.

(B) The second obstacle is in the growing tendency which has been observed at various points in these chapters for public transportation media to be used to capacity--and sometimes even beyond--during the rush hours, morning and evening, and then used practically not at all during the remaining 20 or 21 hours a day.

The capital financing of extensive improvements engaged the attention of Mr. Ralph Budd while he was Chairman of the Chicago Transit Board. In his letter to the Mayor on June 29, 1954, Mr. Budd said in part:

> " Financing of these vital extensions of rapid transit is a community responsibility, just as is the financing of other essential services such as waterworks, sanitation, and street facilities, and parks, because providing traffic-ways for moving people and goods is historically an obligation of the entire community.
>
> " Obviously it would be unfair to compel local transit riders alone to bear the heavy cost of these vitally necessary rapid transit extensions. Fares would have to be raised to a prohibitive level, and even then the revenues would be grossly inadequate. What the situation requires is a large amount of capital immediately available."

The Chicago problem is limited not only to the City. It extends into the balance of Cook County and into adjoining counties. This is shown by the population situation.

Although Chicago proper is now comprised of about 210 square miles with a population of 3-3/4 million, the regional area, which includes Cook, Will, Lake Kane, and DuPage Counties in Illinois, and Lake County in Indiana, covers approximately 3,600 square miles with a population of about 5-3/4 million.

Chicago's population has increased only about 20% since 1926; whereas, in the regional area outside of the city, the increase has been an estimated 85% during the same period.

Wise planning would seem to indicate that any expenditures should contemplate also the possibility of service to the outlying areas.

The building of transit facilities, such as elevated tracks, subways, superhighways or highway strips along the routes and to the extent under discussion would obviously involve millions of dollars.

Existing governmental units that might be considered in planning this financing are (a) the State, (b) the counties and (c) the municipalities that might be served. It would seem probable that Lake County, Indiana, must, at least temporarily be omitted from consideration, as the government of one state has no power beyond the state line.*

The State may assist in this financing, but state financial participation by general obligation bonds probably is not feasible inasmuch as these bonds would have to be approved at a state-wide referendum.

The counties and municipalities of Illinois are each limited by the constitution to a total indebtedness of five percent of the assessed valuation of property within their respective areas. While most of them probably still have a residue borrowing power, it is not likely that it would be sufficient to enable each of them to finance substantial participation in a local transit expansion program within their respective areas.

The only alternative would seem to be the creation of one or more new districts or municipalities with bonding power and a sufficient tax rate to retire the bond as they become due. Such an organization could be created by the Legislature, but if created would be subject to certain constitutional limitations already discussed and certain other practical limitations, which will also now be mentioned.

*Except by consent of the Congress for specific and limited purposes. See legislation establishing Port of New York Authority, Bush Terminal Co. v New York, 282 N. Y. 306; Commissioner v Shamber's Estate, 144 Fed. 2d 998.

In outlining this possibility, it is set forth merely as that - - a possibility. It has not been approved by Chicago Transit Board or any other public body. It is submitted as subject matter for discussion and consideration and not as a fully developed plan. An outline of such a municipality or municipalities would include the following features and limitations:

(1) There would be created one or more municipal corporations, bodies politic and corporate, including all or a part of Cook County and all or at least a major part of the following counties in Illinois: Lake, Kane, DuPage and Will Counties. These municipalities would have power to borrow money on general obligation bonds. It is suggested that in the first instance the indebtedness limit be set below the 5% constitutional limit; probably l% or 1-1/2% would initially be sufficient. With this should be the power to levy a tax or taxes to cover the administrative expenses of each municipality, its salaries, and sufficient to pay the principal and interest on the bonds as they mature, which would be within 20 years.

(2) A board to exercise the legislative and administrative powers of each new municipal corporation would be created, with each county having at least one member, and the largest county a larger number, (dependent on the relative population) some coming from the country towns and some from the City of Chicago. Either these members would have to be elected by popular vote or appointed in a manner to which the people of the area give assent.*

(3) Each such municipality would be authorized to build mass transportation facilities, such as surface railroads, elevated railroads, subways, highways or parts of highways within the area covered by the municipality. Provision should be made for the addition of territory to the municipality by methods used in the annexation of territory to cities and villages.

(4) Each municipality would be authorized to permit the use of those facilities by mass transportation organizations, including municipalities now or hereafter organized for the operation of mass transportation. There would be no provision for letting such facilities to private corporations. No rental would be payable by a public body operating mass transportation in or upon the facilities so constructed, but a provision could be made for the payment of compensation if, as and when the earnings exceed operating costs and maintenance; the formula to be subject to agreement between each such municipality and the operating unit or units. In this connection the power of the Chicago Transit Authority to operate should be extended to cover the area of each new municipal corporation.

(5) Each municipality should be given the power of eminent domain and the other powers that are necessary to carry out its purposes.

*People v Bartholf, 338 Ill. 445,457.
Cornell v People, 107 Ill. 372.
Morgan v Schusselle, 228 Ill. 106.

(6) The amount that may be spent for salaries, wages and overheads should be strictly limited and a specific tax levy to cover those expenses should be provided. The levy necessary to pay the principal and interest on the bonds should be distinct and separate.

(7) No power of issuing revenue bonds should be given as such municipalities would have no revenue that could be made applicable to the payment of the bonds and interest. Under these circumstances revenue bonds would not be saleable on the market

(8) Each municipality should be given power to construct mass transportation strips at its expense as part of a highway being constructed by State, county, city or village, or by any two or more of them, at the time that the highway is being constructed by any such agency. The determination of the location and size of such strip and whether the construction thereof is feasible should probably be made subject to approval by the State Department of Public Works and buildings, -- or some other practical means of obtaining cooperative action should be provided.

Pros and Cons

The extent to which such a municipality should enter into the project of constructing elevated railroads and subways would necessarily be subject to debate. While the elevated-subway system now being operated by CTA has not lost patronage as rapidly since the War as has the surface system; nevertheless, there has been a substantial loss. Before any vast sums are invested for these purposes, a most careful study should in each case be made of prospective revenues from operation.

A requirement that the projects be submitted to a popular vote in the entire municipality would probably act as a brake upon too rapid construction of such facilities.

The rush hour problem constitutes a major handicap to the building of expensive facilities. There are undoubtedly parts of the CTA elevated-subway system that offer mass transportation as good as can be found anywhere in the world today. During the rush hour, extending from 1-1/2 to 2 hours both morning and evening, the facilities are used to capacity, but during the other 20 to 21 hours a day, there is extremely light usage. Ordinarily a manufacturer contemplating investment in and construction of an expensive plant would hesitate if the facilities were useable only three or four hours a day and stood almost idle the other 20 or 21 hours. Financially this is the great illness in the transit industry.

The use of separate median strips in highways would seem to offer a great possibility due to the fact that the costs inevitably would be less than in the other type of facilities. The experiment soon to begin in the Congress Street Superhighway should rather quickly answer the question whether such facilities will reattract transit riders to such service and take them from the use of their automobiles. It will probably be found through the course of years that the development

of transit strips an superhighways holds the best possibility of solution at the most reasonable cost. But these are matters that only future experiments and further study can definitely answer.

But one thing seems certain - that the creation of such municipal organizations will be found essential to making the major improvements that are necessary to a comprehensive transportation system in the area. Within the framework of our constitution no other plan appears feasible.

USE OF STUDIES OF OTHER AGENCIES

In comprehensive transit planning for the Chicago area, full use should be made of the studies and conclusions that will be produced by other agencies which have been or may be set up in this State and in other states. Some of these are the following:

(1) Chicago Area Transportation Study, under which an intergovernmental group is sponsoring a survey in Chicago and a four-county suburban area, radiating 25 miles from the Loop, to determine the traffic pattern and volume of the Chicago area. The sponsors of this survey are the U. S. Bureau of Public Roads, the Division of Highways of the State of Illinois, the Cook County Highway Department and the City of Chicago. These governmental agencies hope to calculate the needs of all types of transportation in the next 25 years and to work out a long-range plan of major improvements. This survey will cost $1,850,000. The final report and recommendations are not expected to be ready until the fall of 1958.

(2) Another study group, The Northeastern Illinois Metropolitan Area Local Governmental Services Commission, a new 21 man state commission, has undertaken to discover whether more efficient local governmental services can be supplied to approximately 940 political units in the northeastern Illinois metropolitan area of Cook, Lake, McHenry, DuPage, and Will Counties. This Commission will explore the possibility of inter-governmental agreements, consolidation of governmental units, and/or setting up of new governmental entities to provide more satisfactory and economical civic functions such as water supply, sewage surface drainage, highway planning, police and fire protection, education and public health and welfare service.

(3) A group of Chicago industrialists, merchants and bankers has recently formed a new organization - The Chicago Central Area Committee - which announces that its purpose is to preserve, improve and beautify the downtown district of Chicago. An editorial in the January 18, 1956 Chicago Tribune, commenting on the problems confronting this committee, points out that:

> "Sound planning for the downtown district of a large city depends on two assumptions. First, such a district can prosper only as the area which it serves prospers. The committee, therefore, is likely to find itself involved with projects affecting the growth and health of

the entire metropolitan area. Good transportation, for example, is an essential for a central business district but it is a matter for metropolitan planning.

"Second, as cities become very large, strong influences toward de-centralization of business and industry are created. These influences may be healthy for the metropolis, though damaging to the downtown district, and, at any rate, they may be too strong to stop. Plans made without a realistic appraisal of the function of the downtown district and its relation to other parts of the metropolis are likely to be futile."

Many farsighted Chicagoans have long recognized that the problems of commerce, finance and industry would eventually have to be approached on a metropolitan area basis with efficient rapid transit systems to integrate the suburban areas and the core city.

(4) The city of San Francisco foresaw the traffic and transportation predicament shortly after the close of World War II and started positive action in 1951 when the San Francisco Bay Area Rapid Transit Commission was created by the California legislature and furnished funds to carry out a study. In early January 1956, this Commission presented a proposal for a comprehensive rail rapid transit system to serve the nine counties bordering on San Francisco Bay.

This proposal is the result of two years of studies, surveys, projections, graphs and technical reports by a New York engineering firm, which designed the New York subway system and transit programs in other major cities in the United States and abroad.

The recommendation calls for a system of high-speed automatic electric trains serving the 7,500 square mile area, with San Francisco and Oakland as twin centers on opposite sides of the Bay. The program contemplates expansion in three stages.

By 1962 electric trains, speeding up to 70 miles an hour - averaging 45 M. P. H., including stops - would link the six counties of San Francisco, Alameda (Oakland), Marin, Contra Costa, San Mateo and Santa Clara, at a cost of $716,500,000. This would be a 123 mile network. Its core would be a tube beneath the Bay for high speed subways between San Francisco and Oakland. Trains beyond these congested districts would be elevated and in rural areas would operate on the surface.

By 1970 an additional 42 miles of track would expand the system into the counties of Sonama, Solano and Napa. Further extensions, under the engineers' program would be made during the ensuing 20 years to complete the eventual 390 miles of double track facilities by 1990.

The engineers declared that the project is essential if the standard of living in this area is to be preserved. The rapid transit system, they said, would

fulfill the accelerating demand for single-family houses in dispersed suburban areas and, at the same time, enhance "the urban concentrations of employment and commerce, where the means to earn that standard of living must largely focus." The report envisioned fast, comfortable, low-fare rapid transit service which would take hundreds of thousands of interurban motorists off the highways.

The full cost of the 390 mile network is estimated at 1.5 billion dollars, exclusive of rolling stock. Streamlined cars will cost an estimated $122,900 each. The total cost for the entire system rolling stock, interest during construction and other capital outlays is estimated at 1 billion 890 million dollars.

In March 1956, the Commission presented plans for financing this huge outlay based on the product of a 16 months' study by the Stanford Research Institute.

It suggests that the service be paid for by all the people who will benefit from it, using a combination of fares and other revenue sources. It said these could include bridge tolls and special taxes on property, sales, gasoline, income, gross receipts and payrolls, all levied on a regional basis.

The Stanford report points out that the cost to each Bay area citizen for the transit system would amount to $18.50 a year over a period of 34 years or, if by 1990 the population reaches a high estimate of seven million, the per capita cost would amount to less than half that amount.

The study assumes that financing will be by means of 5 to 30 year serial bonds, with an average interest cost of 2-1/2 per cent.

If the Governor and the state legislators are favorably impressed by the engineer's recommendations and the Stanford report, the voters of the nine Bay counties may decide in 1957 whether they will attempt the system.

(5) The City of Philadelphia is also moving toward a solution of its traffic strangulation problem. Early in 1954 the Mayor of Philadelphia appointed a twenty-man advisory Board to search out ways of solving mounting mobility problems in the area. In December 1955, this Urban Traffic and Transportation Board issued a preview of its two-year findings. Summarizing its forthcoming comprehensive statement of facts and recommendations, the Board declared:

> "The Philadelphia region is becoming mired in a traffic problem so intense that the region's livability, its efficient functioning, and its competitive power to attract population and industry are all seriously impaired."

Deploring superficial efforts to treat the traffic symptoms that annoy them, the Board urged:

> "We must provide a modern, integrated transportation system and find ways of financing that system, and we must gear ourselves

to accomplish our aims through new concepts of organization and better administration."

The Board foresees a population growth in the area of 1,500,000 more people by 1980, a 200,000 increase in employment with its resultant effect on the rush-hour jam, an increase in automobile travel to the Central Business District of at least 25%, and the requirement for 12,000,000 additional square feet of building space in the Central Business District. It emphasizes that new demands of the future, added to present requirements for modernization of the public transportation system, call for an extensive program of new rapid transit and surface transportation facilities, express highways and other arterial roads, and parking space planned on a region-wide basis, and comments:

> "Our vision and understanding have been too limited. Instead of planning and building individual highway and transit projects which do not match other necessary improvements, we should plan, finance and build a system of transportation facilities in which the various parts fit together and are scheduled so they may serve each other.
>
> "Such a highway and transit system will require years to complete. Meanwhile, every device of traffic engineering should be used and enforced to speed the flow of vehicles on existing streets."

The metropolitan area under review embraces eight counties - Chester, Bucks, Montgomery, Delaware and Philadelphia in Pennsylvania, and Burlington, Camden and Gloucester in New Jersey. If desirable, Mercer and Salem counties in New Jersey, and New Castle county in Delaware may be added later.

Current estimates place the cost of a modern transportation system for the eight-county area at $1.6 billion in new capital outlays. The costs for the five-county area in Pennsylvania are:

Expressways	$ 780,000,000
Other Highways	280,000,000
Transit Improvements	350,000,000
Parking, etc.	85,000,000
Total	$1,495,000,000

The board directs attention to the important fact that rights-of-way for needed expressways and arterial highways in undeveloped or changing areas should be reserved as soon as possible; that millions of dollars can be saved in future highway costs if rights-of-way are set aside in advance of development, and suggests that the Pennsylvania and New Jersey Highway Departments should be authorized at once to set up revolving funds from which advance acquisition of rights-of-way can be financed, and to which the funds can be returned later, out of construction.

allocations.

The Board also recommends the creation of a regional transportation organization with power over an area-wide transport system. Described as "The only logical means" of relieving traffic congestion and implementing urgently-needed road, transit and rail improvements, the proposed new over-all agency is envisioned as operating under the direction of a representative council elected from the eight-county metropolitan area.

The Board insists that transportation services in the metropolitan area should be maintained on a self-supporting basis because the cities, counties, townships and boroughs of the area are now in desperate need of operating and capital funds for governmental purposes, housing and re-development. It does, however, recognize that the necessary additional capital investments in rapid transit cannot be made by private capital while competition from the automobile persists in its present form, and that some kind of financial assistance is required.

Recognition is also given to the fact that public transit is essential to alleviating highway congestion, and that greater use at the former reduces the need for highway construction, and that motorists should contribute to the cost of public transit:

> "To the extent that people can be attracted to public transit riding, particularly in peak hours, public expenditures for highway construction and maintenance are reduced.
>
> "Peak-hour highway facilities per person cost several times as much as peak-hour public-transit facilities, Public assistance to improve highways must be accompanied by equivalent action to improve public transit.
>
> "Higher charges on transit should be feasible in a general transportation price system in which motor vehicle users pay the full marginal cost of the facilities they require. This means, in short, that the driver of the private car who insists on taking it to work daily in the central city must pay a price for this convenience that is high enough both to help support the public-transit facilities available to him, or to help maintain the roadways he uses, or - - most important of all -- to persuade him to consider public transit as an alternative."

It is known that a public source of funds will probably have to provide credit for most of the large required transit investment. The Company (privately owned) has already indicated to the City that it is not prepared to make most of the necessary investment.

(6) New York City is also on the way to working out a solution for its traffic and transportation problems, as indicated by this news item which appeared in the March 9, 1956 issue of Passenger Transport:

"The Metropolitan Rapid Transit Commission last week announced it was negotiating contracts for rapid transit studies, to begin in the immediate future, in Westchester, Staten Island and Long Island.

"The surveys will be designed to determine present and future traffic demands for mass transportation between these areas and New York City, as well as other points in the Metropolitan Area. The feasibility of specific proposals for transit improvements in these sections will also be considered.

"The New York intrastate studies, financed by a $150,000 state appropriation, are in addition to the study of rapid transit needs between New Jersey and New York now being conducted with the financial assistance of the Port of New York Authority.

"In a report to the governors and legislatures of New York and New Jersey, the Commission stated:

'There must be no public illusion. The choice is not between, on the one hand, keeping what we have or, on the other hand, getting something better. Actually, the choice is between a continuous worsening of what we have or going all out for the best. No large Metropolitan Area can live without transit; and no transit can live without planning and adequate financial support . . .

Emphasis on Highways Decried

'Many imposing portrayals of the future of this Metropolitan Area are being widely publicized; but they all seem to be build upon an ever-expanding network of vehicular superhighways financed with billions of dollars through public taxes, public subsidies in the form of tax exemptions, and private taxes in the form of tolls sufficient to liquidate all indebtedness and costs. Nowhere in these impressive visions for vehicular traffic is there the element of rapid transit for people.

'It is the mandate and the hope of the . . . commission to find and propose ways to reverse the increasing stagnation and decline of interurban rapid transit, and the consequent interferences with natural growth and the free movement of people and commerce under the resultant attack of the avalanche of automobiles.' "

The foregoing summarization of traffic and transportation planning in San Francisco, Philadelphia and New York City has been presented to show the trend of thinking throughout the country - the problem, the solution under consideration, the approximate cost and related matters.

Even though great things have been accomplished in Chicago Transit during

the past 10 years, the rapid transit expansion that is so vitally necessary is entirely impossible without extensive financial assistance from other agencies. Most cities, and particularly the three reviewed herein, had only normal population and industry growth to contend with as they related to their suburban expansion and traffic congestion. Chicago, however, has the possibility of becoming the greatest city the world has ever known. Chicago is booming and bursting at the seams from current normal population and industrial growth. A survey released by the post office department in March 1956 disclosed that 47,936 families were added to the population of 131 suburban communities within 50 miles of the Chicago city limits during the year 1955, and that 1,305 new businesses were opened in these suburbs during the year. Each of the 131 postmasters estimated the number of businesses and the increase in families expected for 1956. The predictions for 1956 totaled 1,316 new businesses and nearly 79,300 new families.

Add to this phenomenal normal growth the expansion which will occur almost simultaneously with the opening of the St. Lawrence Seaway, when Chicago will probably become one of the world's largest cities and sea ports, and some idea of the problems confronting the area may be visualized.

The Association of Commerce and Industry calculates that, within 15 years after the seaway is finished, the metropolitan area's wholesale trade will rise from $16.5 billion a year to $22 billion. New industry stimulated one way or another by the seaway may pour $10 billion into land, buildings and equipment. Almost 900,000 new jobs will be created, enough to support an added two million population.

Paul Heddon, executive director of the Chicago Planning Commission, estimates that Chicago and suburban areas will require dwellings for 310,000 new families, will spend $200 million on 4,150 new class rooms, will provide a like number of teachers, and will add 2,500 more policemen and 1,150 firemen. This is a conservative estimate, he said, counting on a population growth of only 1 million as a result of new port activity.

The Quarterly News Bulletin, April 1956, of the Industrial Development Division of Chicago Association of Commerce and Industry stated that industrial plant investments, reported for the quarter in the Chicago area, were the largest in amount ever recorded and four times as large as the investments reported in the first quarter of 1955. The Bulletin also stated that the investment topped the figure for all but three of the entire years since the war and is nearly one-half the total investment announced last year - the biggest year for industrial expanision in Chicagoland history.

In a recent speech before the American Statistical Association, Professor Harold M. Meyer, University of Chicago geographer, predicted that tremendous industrial development will be stimulated by Chicago's barge and ship terminal in Lake Calumet. He anticipates a population increase in the area of at least 1,200,000 and possibly 2,000,000 in the next generation. This industrial expan-

sion will attract a labor force from the coal mines of Southern Illinois, from Puerto Rico, and from the rural south and will create many problems, such as housing, schools, police protection and social services, Professor Meyer said. He predicted a great suburban expansion in the southern part of Cook County. White collar workers in maritime services, such as banking and insurance, also will require housing and related services and will stimulate growth of the northern and western suburbs, he said.

It is significant to note that most discussions about Chicago's future expansion refer to the problems of housing, schools, police and fire protection, and social services, but little emphasis is placed on transportation - the indispensable flux that must be incorporated with the other elements to produce the greater metropolitan area predicted for the future. As usual, transportation is the orphan that is expected to be available if and when needed but is often times neglected in earlier planning.

In the early years of urban and transportation development cities were compact and transportation was patterned to serve the people within the various corporate areas and, as the cities expanded, transportation followed. Later on the trend toward suburban development led to building homes and business establishments where electric interurban and steam railway transportation was available. As these suburban communities grew, local transportation became necessary and was provided by numerous small independent companies.

None of these suburban communities was self-sustaining nor self-sufficient. The majority of their populace was, and still is, dependent upon the core city for the income necessary to provide the standard of living to which they aspire. Conversely, the core city is dependent upon the suburbanites for a considerable amount of the skilled, clerical and executive personnel necessary to maintain its position in the fields of commerce, finance and industry. There is, therefore, an inter-dependence that welds the core city and suburbs into an integrated entity bound together by common interests, and mass transportation represents the arteries and veins of the metroplitan body.

The complaints from suburbanites when the Chicago, North Shore and Milwaukee Railway Company ceased operation of its Shore Line Route in 1955, and when the Chicago Aurora and Elgin Railway stopped running to the Loop in 1953, because Congress Street Expressway construction interfered with its right-of-way on the Garfield Park elevated structure, indicate that rapid transit is important to thousands of suburbanites. More recently, the residents of Skokie have clamored for relief from their transit problems.

The relentless forces contributing to traffic strangulation are gradually closing in on the Chicago Metropolitan Area. Each street widening, each new expressway, each new overpass, each new parking garage, increases the number of automobiles being jammed onto city streets inadequate to carry the load. Each year mass transit facilities carry fewer passengers; each year traffic congestion becomes greater and surface speeds diminish; each year wages

and operating costs increase, all contributing to the vicious circle which compels public carriers to cut service and raise fares in order to maintain their equipment to the high standards of safety and mechanical perfection required by regulatory bodies. Little, if any, surplus earnings are available for modernization and expansion.

Chicago and the suburban areas are now at the crossroads. They must forget petty differences and jealousies that impede one another's growth and embark upon a program of close cooperation in planning for the future in keeping with the natural resources of the area, including its magnificent central location in the nation, a water supply unexcelled in any city of the world, and an invigorating climate. They must initiate plans for development of a comprehensive transit system and other facilities to serve the whole area.

The great future predicted for the Chicago area can be attained by working cooperatively for the welfare of all of the communities in the metropolitan area.

CHAPTER X

INJURIES - - PROPERTY DAMAGE - - COST - - DELAYS - - POSSIBLE REMEDIES

For Release to Afternoon Papers of Thursday, August 9, 1956 and

All Papers Thereafter

Administrative commission settlement of accident claims that nationally now cost about four and a half billion dollars yearly was outlined here today as an effective means of reducing the costs and eliminating glaring inequities in present settlement procedures.

The commissions, if authorized by legislative enactments, would operate similarly to Workmen's Compensation Commissions and would make claims' settlements on the basis of predetermined scales of values for each type of accident claim.

Werner W. Schroeder, vice-chairman and member of Chicago Transit Board, outlined the plan in the tenth chapter of the transit research study he is conducting as a personal, unofficial project.

Intolerable evils of existing procedures, including ambulance chasing, wide variance in awards, long and costly delays in obtaining and collecting judgments, and over-loading of the courts, would be eliminated or substantially reduced, according to Mr. Schroeder.

In Chicago, Mr. Schroeder said, more than 42 per cent of the time of the Superior and Circuit Courts must be devoted to personal injury cases, and four to five years elapse before newly filed cases can be advanced to trial.

"The cost of injuries and damages resulting from the transportation of people and goods on streets and highways is a major expense in American economic life," Mr. Schroeder said, "and is burdening courts in a manner without precedent in judicial history.

"Ten years ago, " Mr. Schroeder added, "four per cent of the transit gross in Chicago was sufficient to pay for personal injuries, property damage and workmen's compensation awards. Now this has risen to six and three quarters per cent of the gross - - in terms of dollars, to over eight millions annually.

"This upward trend," Mr. Schroeder continued, "is not peculiar to CTA or the transit industry. Chicago automobile insurance rates for bodily injury ($5, 000 to $10, 000 coverage) have increased from $21 in 1946 to $36 in 1956. Nationally the estimated cost of 1955 accidents is $4.5 billion as against an estimate of $2.2 billion in 1946.

The commission plan, Mr. Schroeder said, could apply exclusively to municipal corporation, like CTA and the City of Chicago, or could be broadened to cover the entire area of personal injury and property damage.

If the compensation system were limited to municipal corporations, Mr. Schroeder said, a provision for proof of ability to pay similar to the one in the Workmen's Compensation Law would be adequate, although it might not be amiss to permit municipal corporations to insure their liability if they chose to do so.

"As to motorists generally, if such a law were applied to them," Mr. Schroeder said, "it is hoped that the risks in each case would be insured and that the law would so provide. This would keep that part of the system within the realm of private enterprise.

"It might be advisable," Mr. Schroeder continued, "to make a statutory requirement that rates be adjusted from time to time on the basis of experience. The result of this, if properly administered, would be that rates for those who have a record of careful driving would decrease. This would be somewhat similar to the adjustment of rates provided in the Illinois State Unemployment Compensation Act.

"The insurance phase of the plan," Mr. Schroeder continued, "could be administered by the State through a department or a non-profit organization which would be ordered wherever possible to reinsure the risks in private insurance carriers." This would combine a public administration of the affairs with a risk carried in the last analysis by private industry.

"Whatever method of insuring financial responsibility is adopted," Mr. Schroeder said, "whether by proof of ability to pay or by a mandatory requirement for insurance coverage, it should be a condition precedent to the issuance of an automobile license."

Pointing to the economic waste of the jury system of adjudicating claims, Mr. Schroeder said that a minimum of 20 persons are required in the trial of one jury case, and that the court costs, including salaries of the judge, bailiffs, clerk and the per diem of jurors is $152 per case.

"If the costs of jury trials were subjected to the well-known American custom of slashing unnecessary expense," Mr. Schroeder said, "there can be no doubt that the jury system would be subject to great change. Yet the demands placed upon legal machinery by modern social and economic develop-

ments have dispensed with the jury system in many instances."

He cited as examples, the following:

(1) Cases involving injury to workmen are tried under the Workmen's Compensation Law without intervention of a jury.

(2) Matters involving the fixing of utility rates come within the jurisdiction of commissions where the decision is made without the thought of a jury - - yet the amounts involved probably far exceed those arising out of the operation of the jury system.

(3) Taxes of every kind - - real estate, personal property, sales taxes, income taxes and a multitude of other levies aggregating countless millions - - are decided, assessed and collected without the wisdom of a jury to fix the amount of the taxes.

(4) The licensing of scores of professions, skills and occupations, and the termination of such licenses, is done without submission of the issues to a jury.

(5) Estates aggregating millions of dollars are administered by courts without the aid of juries, except in limited scope.

(6) The chancery jurisdiction of the courts, which in the main is exerted without aid of a jury, involves property and rights of incalculable value.

Among the elements contributing to the inefficiency of the jury system, Mr. Schroeder listed the following:

(1) Where, as in personal injury cases, negligence is an important element, the judgment of the jury is far from infallible. The norm established for the determination of negligence is of such an indefinite character that almost any juror is entitled to his own guess as to whether there was or was not negligence. Persons untrained in the legal concepts of "due care" are required to apply that test to complicated states of fact. It may well be doubted whether such persons are as competent to do this as would be those who have had training and experience in this and other legal concepts.

(2) The variations in verdicts rendered by different juries suggest the probability of injustice in the amounts awarded as between various claimants having sustained substantially similar injuries or damages. This is due in part to the non-uniformity as respects (a) generosity with other people's money; (b) the greater ability of some lawyers in presenting injuries in comparison with the abilities of other lawyers; (c) the difference in doctors who are called as witnesses for the plaintiffs as between various cases, and as

between those called for the plaintiff and those called for the defendant in individual cases; (d) the personality of the individual plaintiff, and the impression that he makes upon the jury; (e) whether the attorney for the plaintiff is more impressive to the jury and more successful in gaining its confidence than the attorney for the defendant; (f) in a limited number of cases, the amounts may be affected by unscrupulous tactics which may be employed by attorneys or doctors in the presentation of the case, either for the plaintiffs or for the defendants.

In conclusion, Mr. Schroeder observed that difficulties undoubtedly would confront any one who attempted adoption of the plan he outlined, but he predicted that the injustices of the present system of handling accident claims will sooner or later force some drastic change - possibly to the system he outlined.

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CHAPTER X

INJURIES - - PROPERTY DAMAGE - - COST - - DELAYS - - POSSIBLE REMEDIES

The cost of injuries and property damage has become one of the great expenses of local transit operation. Not only has this cost increased in marked degree in transit operation; it has similarly increased in the operation of privately owned automobiles and trucks.

Today the cost of injuries and damages resulting from the transportation of people and goods on streets and highways is a major expense in American economic life, and the adjudication of personal injury and property damage cases is burdening the courts in a manner without precedent in judicial history.

Ten years ago, 4% of the transit gross in Chicago was sufficient to pay for personal injuries*, property damage, and workmen's compensation awards. Now this has risen to 6-3/4% of the gross - - in terms of dollars, to over 8 million dollars per year.

GENERAL TREND AND COST

This upward trend is not peculiar to C.T.A. or to the transit industry. It is general throughout American activity. Chicago automobile insurance rates for bodily injury ($5/10,000) have increased from $21 in 1946 to $36 in 1956, or 71%. This is almost exactly the same percentage of increase experienced by Chicago transit - - 69% - - during the same period and has resulted in a terrific impact upon the national economy.

The National Safety Council has estimated that in 1955, 9,913,100 automobile accidents took place, resulting in death, personal injuries or property damage, as compared to their estimate of 6,150,000 automobile accidents in 1946, an increase of 61%. It also estimated the cost of the 1955 accidents to be $4.52 Billion Dollars as against an estimate of $2.20 Billion Dollars in 1946, an increase of 105%.

It will be noted the estimated cost increase between 1946 and 1955 is 44% greater than the percentage of increase in accidents, which clearly illustrates the effect of the inflationary trend during the intervening years.

The 1955 accidents are classified as:

Fatal accidents	33,100
Non-fatal personal injury accidents	880,000
Property damage of over $25.	3,600,000
Property damage of less than $25.	5,400,000
	9,913,100

* In this chapter "personal injuries" include death by wrongful act.

The estimated cost consists of:

Wages losses	$1.35 Billion
Medical expenses	.12 Billion
Property damage	1.35 Billion
Insurance overhead (other than settlements for personal injuries and property damage)	1.70 Billion
Total estimated cost	$4.52 Billion

The Travelers Insurance Company, in its 1956 book of street and highway accident data, reports 37,800 deaths and 2,158,000 injuries in 1955 as a result of automobile accidents.

The monetary estimates set forth in the National Safety Council figures do not include losses to individuals or to families other than those for losses of wages, medical expense and property damage. In addition, there is the loss to the public.

The time of the courts spent on public liability and property damage cases amounts to a substantial burden on the taxpayer, of which he has little or no knowledge. An analysis of estimated revenues from fee offices and appropriation for operation of the Cook County, Illinois, Superior and Circuit Courts for the year 1956 reveals that the average net cost per court case disposed of amounts to $152., and that 42-1/2% of the time of these courts is consumed in the disposition of personal injury cases.

Court Delays

Another public cost, impossible to estimate, is the delay that has been caused in court cases.

The following statistical data show why there is delay in bringing automobile accident claims to trial:

	Cook County, Ill.		
	Superior Court	Circuit Court	Combined
New law cases filed in 1955	5,982	10,806	16,788
Law cases disposed of in 1955	7,389	7,723	15,112
Law suits pending at close of 1955 (includes those filed in 1955 and prior years)	15,397	17,749	33,146*
Approximate per cent of personal injury cases to total cases	35%	53%	42.5%

* Does not include chancery cases.

From the foregoing we note the two courts combined had more cases filed than were disposed of, and that if no more cases were filed, it would require more than two years to dispose of the cases pending at the year end.

Because of the large backlog of law cases, it is estimated that a period of four to five years will, on the average, elapse between the filing and trial of newly-filed cases.

The estimated cost of $152. per case given above is not complete. It does not include certain overhead costs, such as capital investments in court houses and courtrooms. There is at the present time a move to build an additional court house which would run into many millions of dollars. This apparently has been made necessary in part at least by the large increase in personal injury cases. Furthermore, the estimate is inadequate as personal injury cases consume more court time on the average than other cases, because of the frequency of jury trails in that type of litigation.

Concentration of Cases

It might seem that with over 7,000 lawyers in actual practice in and near Chicago, there would be a spread of personal injury cases among this group. However, the vast bulk of personal injury cases are concentrated in the hands of fewer than 100 lawyers or law firms who seem to specialize in that type of work. The result is that often there is continuance after continuance in the trial of this type of case. This is due to a rule of the courts that if a lawyer is engaged in one court, he cannot be forced to trial in another court. Rarely, if ever, do the courts compel him to hire another lawyer to try the case in the second or third court in which one of his cases may be up for trial. Because of the great concentration of the cases in the hands of a few and the innumerable continuances that result from this situation, the average delay period in disposition of personal injury cases has greatly increased.

The reasons for the concentration in the hands of a few are not uniform. In some cases individual lawyers have developed great talent in the handling of these cases. This talent naturally attracts additional employment. On the other hand, there are some whose talents are greater in the acquisition of such cases than in the actual disposition. Such lawyers are good at making settlements, and in extremities hire specialists to try the cases when there are no other ways out. There are reports that some lawyers have what are called "ambulance chasers" to solicit injured persons, which, if true, would account for some of the concentration of this type of law work in a small number of offices.

If both sides were in a mood to dispose of a case by settlement, the pretrial procedure, which is made available in the courts, would be effective in cutting down the number of cases.

Some years ago the CTA, at the request of the Executive Committees of the Circuit and Superior Courts of Cook County, set up a special pre-trial procedure for the disposition of cases and their settlement through that means. The results have been excellent. In the first year in which this plan was adopted, the CTA disposed of more than 425 cases - - and that was only part of a full court-year. Since then, the CTA has increased the number of men working on the preparation of pre-trials, and in one year as many as 536 cases were disposed of in this manner. The City also has cooperated in pre-trial procedure.

Many defendants and their insurance carriers are not interested in the early and rapid disposition of cases, and there is no way to compel them under the present rules to attend pre-trial conferences, and certainly no way to force them into making a settlement. This lack of cooperation by such defendants, added to the concentration of many plaintiffs' cases in the hands of a few lawyers and law firms, is one of the large causes for the congestion of court calendars.

Some Causes of Increased Personal Injury and Property Damage Costs

The increased number of cases has been only one, and perhaps the lesser cause, of the over-all increase in the cost of personal injury and property damage cases. Among other causes, which are even more pertinent, are the following:

(1) The cost of medical and hospital services has greatly increased during the past 20 years. This is a substantial element in the assessment of damages in any personal injury case.

(2) Another element is reimbursement for loss of wages. The last two decades have seen an enormous increase in the wages of individuals. This is also an important factor.

(3) In estimating the future loss of earnings of a person injured, the jury will, of course, take the rate of compensation being paid at the time of the trial for work such as the injured party had been doing. The result of this is to raise the entire basis of the award which the jury is entitled to make.

(4) If there is property damage, such as damage to an automobile, the cost there also has shown a tremendous increase as compared to 20 years ago. If the automobile should be completely destroyed, the cost of replacing it is approximately three times what it was in the earlier period.

(5) With the inflationary tendency clear in every part of economic life, a jury is more liable to be generous in the award of damages for pain, suffering and other intangible elements, particularly when the defendant is a large

corporation, public utility or political entity such as C.T.A. Apparently jurors believe that exorbitant personal injury awards are a direct penalty levied against the insurance companies and are not aware that these costs are spread over all carriers of personal injury insurance and penalize every business and person who carries such insurance. Or that in the case of self-insured organizations, of which C.T.A. is one, exorbitant awards are a direct penalty against the users of their products or services and are passed on to the public in the form of higher cost of goods purchased or, in the case of C.T.A., are reflected in higher fares. At the present time, over 1.3¢ out of every 20¢ fare collected by C.T.A. is required to pay for personal injury, property damage and workmen's compensation awards.

These are some of the principal causes for the increased burden that has been laid upon those who are faced with a continuance of personal injury and property damage liability suits. These that have been listed are probably the greatest causes for the increased cost in this field.

Waste of Personnel in Jury Cases

Nor does the estimate of $152 per case include the value of time of the citizens and litigants who must participate in the disposal of each jury case. The personnel required in the trial of one jury case is the following:

Judge	1
Jurors	12
Bailiffs	2
Clerk	1
Attorneys for plaintiff and defendant (at least)	2
Court Reporters	2

This means that the typical jury trial requires the services of twenty people. The salary of the judge, bailiffs, clerk and the per them of the jurors is included in the $152., but the fees of counsel and the court reporters and the time lost from regular occupations by the jurors are not included. That this constitutes a considerable economic burden cannot be doubted. In addition there are jurors who are excused and who lose time from their occupations to come to court only to be rejected by the court or counsel.

If the costs of jury trials were subjected to the well-known American custom of slashing unnecessary expense, there can be no doubt that the jury system would be subject to great changes. The history of our law has made the jury system sacrosanct in certain areas. Both our habits and thinking, and in some cases constitutional provisions, make a retreat from the traditional system a difficult operation. Yet the demands placed upon legal machinery by modern social and economic developments have dispensed with the jury system in many instances. Some of them are the following:

(1) Cases involving injuries to workmen are tried under the Workmen's Compensation law without intervention of a jury.

(2) Matters involving the fixing of utility rates come within the jurisdiction of commissions where the decision is made without the thought of a jury - - yet the amounts involved probably far exceed those arising out of the operation of the jury system.

(3) Taxes of every kind - - real estate, personal property, sales taxes, income taxes and a multitude of other levies aggregating countless millions are decided, assessed, and collected without the wisdom of a jury to fix the amount of the taxes.

(4) The licensing of scores of professions, skills and occupations and the termination of such licenses is done without submission of the issues to a jury.

(5) Estates aggregating millions of dollars are administered by courts without the aid of juries, except in limited scope.

(6) The chancery jurisdiction of the courts, which in the main is exerted without aid of a jury, involves property and rights of incalculable value to the citizens and to the public.

These are a few instances in which the development of the law has been such as to dispense with the jury trial.

Anglo-Saxon and American ingenuity has found a way to solve these large and difficult problems without the intervention of the twenty persons necessary in a jury trial. If all of these matters were subject to trial by jury, it would probably be impossible to set up enough courts to carry on the work. But in those areas, such as personal injury and other law cases, where a jury has historically been used, people have bowed to the past and considered the jury an indispensable part of the struggle for justice. While the money involved in judgments in jury cases is large and has been growing, the amounts of the judgments or decisions in the other types of proceedings, some of which have been above listed, are inestimably greater and probably affect more segments of our economic and social life.

Is the Jury System Efficient?

Can the continuance of the jury system in the large area of personal injury cases be justified on the basis that the jury system is efficient? Many believe not.

We do not speak now of jury trials in criminal cases. There the experience of mankind has often shown that the opinion of the jury which is in part the result of human experience of the jurors, is most valuable in the de-

termination of the human rights arising in that type of case. But in personal injury cases, different elements are involved. Some of these elements which contribute to the inefficiency of the jury system follow:

(1) Where, as in personal injury cases, negligence is an important element, the judgement of the jury is far from infallible. The norm established for the determination of negligence is of such an indefinite character that almost any juror is entitled to his own guess as to whether there was or was not negligence. Persons untrained in the legal concept of "due care" are required to apply that test to complicated states of fact. It may well be doubted whether such persons are as competent to do this as would be those who have had training and experience in this and other legal concepts.

(2) The variations in verdicts rendered by different juries suggest the probability of injustice in the amounts awarded as between various claimants having sustained substantially similar injuries or damages. This is due in part to non-uniformity as respects (a) generosity with other people's money; (b) the greater ability of some lawyers in presenting injuries in comparison to the ability of other lawyers; (c) the difference in the doctors who are called as witnesses for the plaintiffs as between various cases and as between those called for the plaintiff and those called for the defendant in individual cases; (d) the personality of the individual plaintiff, and the impression which he makes upon the jury; (e) whether the attorney for the plaintiff is more impressive to the jury and more successful in gaining its confidence than is the attorney for the defendant; (f) in a limited number of cases, the amounts may be affected by unscrupulous tactics which may be employed by attorneys or doctors in the presentation of the case, either for the plaintiffs or for the defendants.

The March 1954 issue of Best's Insurance News contains an article entitled "The Casualty Claimant," which clearly gives some reasons why the faulty concept of liability clutters up the courts, often deprives the innocent victim of the casualty compensation which is due him, and results in widely divergent verdicts for like injuries under like circumstances:

> ". . . . . The concept of liability arising out of fault necessarily raises the question, 'When, under the law, is one at fault? ' In attempting to solve this riddle, the field of automobile liability law has become steeped with formalized rules of behavior, exceptions to these rules, excuses for violating the rules, contradictions, and rapidly changing authority. This is apparent in examining cases relating to speed, control, lookout, duties at intersections, passing, following, and regulations concerning lights, brakes, and other equipment. Add to this mixture the various problems relating to due care and proximate cause, the various doctrinal limitations such as contributory negligence, assumption of risk, last clear chance, and res ipsa loquitur, and such statutory extensions or modifications of liability as the guest statutes, owner liability

statutes, and non-resident motorist laws.

> "It can be demonstrated that over fifty issues relating to theories of action, doctrines, or defenses may exist in a single case involving a collision between two automobiles, each carrying a passenger. Insurance companies, courts and lawyers alike attest to the difficulty of predicting, with any degree of accuracy, the outcome of a case as to liability or damages."

These and other similar factors have made the verdicts of juries subject to wide variations and obvious injustices to claimants who appear in different cases, represented by different counsel.

Further Injustice to the Public

There is a further great defect in the treatment of the public in personal injury matters.

Large organizations are generally prompt in the payment of settlements and judgments. They carry 100% of the responsibility which falls upon them under the law. But there are a great number of automobile cases in which serious injury or property damage is inflicted where the injured or damaged person is unable to recover.

Notwithstanding some efforts to pass financial responsibility laws, it is a pitiful fact that 35% of automobile accidents are caused by motorists who are uninsured. If we eliminate the accidents which are charged to the fault of railroads, CTA and other large corporations or organizations, it is probable that in 50% of all of the remaining automobile accidents, the injured or damaged person cannot recover due to the fact that the motorist at fault is not insured.

This causes a great injustice to thousands of persons who are entitled to recover something. Even in states that have attempted compulsory insurance, such as Massachusetts, the solution has not been adequate to meet the problem. In Illinois, there is a type of financial responsibility law which requires the motorist to demonstrate proof of his ability to pay judgments up to a certain amount (which is often inadequate), but only after he has had one judgment against him. Often this is tantamount to locking the barn door after the horse has been stolen.

This lack of financial responsibility on the part of uninsured motorists, and an inability to recover in the case of injuries or damages caused by hit-and-run drivers, cause an injustice in the entire situation for which our law has, up to now, found no adequate remedy.

Where automobile insurance is voluntary, more than 35% of all motorists are uninsured and financially irresponsible; where automobile insurance

is compulsory, the number of uninsured motorists drops to between 5% and 10%; yet insurance men admit that compulsory insurance is not really a solution at all, and, in fact, aggravates rather than solves the problem. Even when persons are injured by insured motorists, there is always the fault concept for measuring liability and oftentimes no compensation is awarded. State financial responsibility laws do not protect the victims of uninsured motorists. Consequently, the national economy is forced to bear an annual loss of approximately $1. 8 billion which rightfully should be borne by motorists.

Possible Remedies

From the foregoing discussion, it is obvious that there are many glaring defects in the present system of determining liability, the dollar amount of the damages, as well as in the collection of judgments, if and when obtained.

Two remedies have been under discussion, and to some extent have been tried. Both are based upon the premise that no license to operate a motor vehicle be granted unless the owner is insured, or (as in the case of workmen's compensation laws) there is proof of ability to pay.

One application of that idea would leave the procedural methods of obtaining compensation for personal injury or property damage unchanged. The other contemplates procedural change so as to place liability arising from the operation of motor vehicles under a system analogous to the workmen's compensation laws.

The system of compulsory insurance, without procedural changes, has not been widely followed and has given rise to some very strong objections.

Henry S. Moser, General Counsel of Allstate Insurance Company, in an article entitled "The Uninsured Motorist" (Best's Insurance News, February 1956 issue) voices his objection from the view-point of the insurance business, and states:

> " . . . . . for over a quarter of a century questions have been raised concerning the presence upon the highways of our country of the so-called 'financially irresponsible motorist.' As long ago as 1927, in the Commonwealth of Massachusetts, the Legislature saw fit to enact a compulsory insurance law. No other state has ever followed this lead.*
>
> "The term 'compulsory insurance' has a public appeal. America has always been a country of slogans and catchy phrases. 'Compulsory Insurance' strikes the average laymen as a simple, complete, reason-

*The State of New York enacted such a law in May 1956.

able and equitable solution for an involved social problem. In truth, it does not have any of these attributes and, in fact, it is not really a solution at all. It affords less protection to the public than so-called voluntary methods. Let me point out some of its shortcomings.

"First, compulsory insurance is far from a complete solution. For example, it cannot afford relief to those who are killed or injured by non-residents. This is a substantial number. It has been determined that 6% of the motor vehicle accidents in the State of New York involved automobiles registered in other states.

"Further, compulsory insurance cannot provide a remedy to persons injured or killed by drivers of stolen vehicles, improperly registered vehicles, nor by those whose insurance has been cancelled. Very recently testimony was presented at the annual compulsory insurance rate meeting in Massachusetts, that in 1954 there were thousands upon thousands of uninsured individuals operating motor vehicles on the Massachusetts highways not withstanding its compulsory law.

"It is also plain, from the Massachusetts experience, that compulsory insurance is not really a solution at all. Under a mirage of simplicity it, in fact, aggravates rather than solves the problem. I say this because it is undisputed that the compulsory law in Massachusetts tends to restrict or decrease the purchase of insurance other than the minimum coverages required by law. Such desirable coverages as passenger medical, guest coverage and excess limits are much more widely purchased in other states than they are in Massachusetts . . . . .

"Finally, there can be no doubt that compulsory insurance throws automobile liability insurance, automobile liability insurance coverages, automobile liability insurance rate making, as well as the settlement of claims, into the realm of politics."

Besides the objections voiced in that quotation, there are the others that a plan of compulsory insurance does not overcome the defects in the jury trial system alluded to earlier in this Chapter.

A Compensation System

The need for improved substantive law as well as improved procedure in the field of injuries and property damage arising out of motor vehicle operation was recognized over twenty-five years ago, when the Columbia University Council for Research in the Social Sciences appointed an impartial committee to study compensation for automobile accidents.

Based upon data "derived not only from official sources and insurance

company records but from a first-hand study of 8, 849 cases of personal injury or death in different parts of the United States and from large numbers of original court records," the Columbia Committee stated its conclusions as follows:

> "The generally prevailing system of providing damages for motor vehicle accidents is inadequate to meet existing conditions. It is based on the principle of liability for fault which is difficult to apply and often socially undesirable in its application; its administration through the courts is costly and slow, and it makes no provision to ensure the financial responsibility of those who are found to be liable.
>
> "The data obtained from the case studies indicate that uninsured owners of motor vehicles as a class pay for only a very small proportion of the damage which their motor vehicles cause. Financial responsibility laws do little to correct this injustice. *****
>
> "The Committee believes that the remedy must go further than the compulsory liability insurance law, and that no system based on liability for fault is adequate to meet existing conditions. The Committee favors the plan of compensation with limited liability and without regard to fault, analogous to that of the Workmen's Compensation laws. Such a plan would eliminate the use of the principle of negligence, would place the burden of economic loss on the owner or operator to whose activity the loss is chiefly due, would provide for an equitable distribution of the insurance fund according to the extent of the economic loss, and would provide a prompt remedy at small cost to the injured person or his family. The operation of such a plan would be of special benefit in the majority of cases of serious injury or death. The Committee believes that such a compensation plan would be workable, that its cost to motor vehicle owners need not be unreasonable and that it would not violate the due process clause of the federal constitution."

The desirability of compulsory compensation insurance, so evident in 1932, is no less today, and no better solution to the problem has been found as a result of several impartial studies conducted since 1932 than was suggested by the original Columbia Committee.

Several excellent articles on this subject have appeared in recent publications. The most noteworthy have been: "Let's Put Sense in the Accident Laws" by Samuel H. Hofstadter, Justice of the New York Supreme Court (Saturday Evening Post of October 22, 1955), and "Motorism" by Robert S. Marx (American Bar Association Journal, May 1956 issue). Both gentlemen are distinguished American jurists who have presided over the trials of hundreds of automobile accident cases and are fully aware of the intolerable evils of the present procedure for handling personal injury cases. Each is convinced that we must get automobile accident lawsuits

out of our over-burdened courts and dispose of them in a sound and up-to-date manner patterned after the widely accepted system of workmen's compensation.

As is the case in all controversial subjects, there are many prominent men who are as firmly convinced that compulsory insurance of any kind is not the solution of the problem. Messrs. Lewis C. Ryan and Bruno H. Greene, of the New York Bar, collaborated to write an article entitled "Pedestrianism: A Strange Philosophy," which appeared in the February 1956 issue of the American Bar Association Journal. The authors of this article are strongly opposed to the substitution of the principle of "liability and limited compensation without fault" for the deeply rooted legal principle allowing recovery of full damages for actionable wrongs causing motor vehicle accidents. They also assail as unworkable any plan for indemnification which resembles workmen's compensation laws.

Right of Trial By Jury

One objection which would be made to a law covering all automobile accidents and having a coverage and theory analogous to the workmen's compensation laws would be that the section of the Constitution preserving the right of trial by jury would be violated. That provision, in Section 5, Article II, of the present Illinois Constitution, reads as follows:

> "The right of trial by jury as heretofore enjoyed, shall remain inviolate; but the trial of civil cases before justices of the peace, by a jury of less than twelve men, may be authorized by law."

The same objection was made 36 years ago to the Workmen's Compensation Act. It was considered in Grand Trunk West Ry. v. Indus. Com., 291 Ill. 167, at 176, and was disposed of in these words:

> "Our constitution provides that the right of trial by jury as heretofore enjoyed shall remain inviolate, but it guarantees that right only to those causes of action recognized by law. The act here in question takes away the cause of action on the one hand and the ground of defense an the other and merges both in a statutory indemnity fixed and certain. If the power to do away with a cause of action in any case exists at all in the exercise of the police power of the State, then the right of trial by jury is therefore no longer involved in such cases. The right of jury trial being incidental to the right of action, to destroy the latter is to leave the former nothing upon which to operate. State v. Clausen, supra; Adams v. Iten Biscuit Co. supra; Moody v Found, 208 Ill. 78; Cunningham v Northwestern Improvement Co. 44 Mont. 180; 119 Pac. 554."

Under this ruling it would appear probable that the courts would up-

hold a statute such as that being discussed and that the discontinuance of jury trials in that type of cases would not be an insuperable constitutional objection.

Another objection might be that such an act would be discriminatory. If a court believed that automobile cases were logically in a separate and distinct classification, this objection would probably have no force. It is, of course, impossible to know how a court would react to that objection under the particular circumstances of the case that might arise. But it is believed that eventually the courts would hold constitutional such a law as against this objection.

Act Applicable Only to Municipal Corporations

Another approach to the problem might be to have an act similar to the Workmen's Compensation Act applicable only to injuries arising out of the activities and operations of municipal corporations. Here the authorities seem to be somewhat clearer. Thus, in Schuman v. Chicago Transit Authority, 407 Ill. 313, a provision of the Transit Authority Act requiring notice and cutting down the period of limitations was upheld. The Court, at page 318 said:

> "In the light of these established principles, it is clear that a reasonable basis obtains for the classification made by the General Assembly in requiring that notice of an accident be given defendant within six months and that actions for personal injuries be commenced within one year from the date the injury was received or the cause of action accrued."

Later in the opinion, at page 319, the Court, quoting from Condon v City of Chicago, 249 Ill. 596, said:

> "'It is essential to the public interests, to economy and the protection of public funds, that rules should be established governing the transactions of such bodies different from those which apply to the affairs of individuals and corporations, and these different conditions form a sufficient basis for the legislation here brought in question.' A like observation may be made with respect to defendant."

On the basis of that case, as well as the case of People v. Chicago Transit Authority, 392 Ill. 77, it is believed that any constitutional objection to an act covering only municipal corporations would be untenable.

Limitations on Municipal Liability

If such a compensation system were adopted and made applicable only to municipalities, one feature would demand attention. There are a number

of cases such as collision between a privately owned automobile and a public transportation vehicle in which the fault is not that of the public carrier but of a third person.

In order to prevent the cost of such injuries being shifted from the third person (or corporation) who is at fault, it would be necessary to provide that fault or negligence on the part of the third person or corporation would be a defense against compensation liability on the part of the municipality. The justice of such provision is obvious and would be necessary to prevent the loading off onto the municipality of the liability which results from the fault of the third person or corporation.

Pros and Cons

A compensation plan applicable to municipal corporations is a drastic departure from practice and from customary thinking. It is not to be expected that it will be embraced with immediate enthusiasm.

Some of the pros and cons may be summarized as follows:

(1) In favor of the idea, it may first be said that it would eliminate many and perhaps all of the inequities that now prevail in the award for personal injuries and property damage.

(2) The fees of attorneys now usually run an the basis of one-third or higher of the recovery. This is an indirect burden upon the municipal corporations which must pay the awards. Under a compensation system, the percentage of attorneys' fees is always much more reasonable.

(3) The courts would be relieved of a tremendous burden of jury cases. The expense to the public of the trial and disposition of jury cases is, as pointed out, very substantial. A large part of this cost would be eliminated by an administrative system of fixing the awards.

(4) Because the courts would be relieved of the great burden of these jury cases, the delays would be cut down to a minimum. An injured person would probably receive his award in one-fifth or less of the time that is required for recovery in the average jury case.

(5) It is impossible to estimate what the financial result of this change in plan would be to the municipal corporation involved, but it is reasonable to suppose that the over-all cost of paying claims would be materially reduced. The cost of handling claims also should be considerably less. This would be an eventual saving to the taxpayers or to the public conveyance riders and should, it is believed, prove a benefit of considerable value.

(6) The disposition of the cases would probably be on a more scientific and therefore on a more equitable basis to the injured parties.

Against the plan, the following objections would probably be urged:

(1) There may be no saving if the basis of claims ceases in some cases to be negligence, because the number of such claims which can be filed will probably be increased somewhat.

(2) That part of the public which hopes for a large jury verdict, and would rather take a chance than to take a smaller amount, probably would be dissatisfied with this plan.

(3) At least one segment of the Bar - - those lawyers who are making considerable income by the handling of personal injury cases - - undoubtedly would be opposed to the plan on account of the curtailment of income that it would bring about.

These or other arguments must be weighed against each other to determine the best plan for the benefit of the general public as well as for those who suffer loss through the activities of municipal corporations.

On the whole it is believed that the arguments in favor of the idea are much more potent.

The injustice and economic burden involved in this great problem are such that it is imperative in the public interest to develop procedures that assure equity and even-handed justice to injured parties.

Covering the Cost of the Compensation System

If the compensation system were limited to municipal corporations, a provision for proof of ability to pay similar to the one in the Workmen's Compensation Law would be adequate, although it might not be amiss to permit the municipal corporations to insure their liability if they chose to do so.

As to motorists generally, if such a law were applied to them, it is hoped that the risks in each case would be insured and that the law would so provide. This would keep that part of the system within the realm of private enterprise. However, it might be advisable to make a statutory requirement that rates be adjusted from time to time on the basis of experience. The result of this, if properly administered, would be that the rates for those who have a record of careful driving would decrease. This would be somewhat similar to the adjustment of rates now provided in the State Unemployment Compensation Act.

The insurance phase of the plan could be administered by the State through a department or a non-profit organization which would be ordered, wherever possible, to reinsure the risks in private insurance carriers. This would combine a public administration of the affairs with a risk carried in the last analysis by private industry. Such a plan would require study as to

detail, but the general outline is suggested in this paragraph.

Whatever method of insuring financial responsibility is adopted, whether by proof of ability to pay or by a mandatory requirement for insurance coverage, it should be a condition precedent to the issuance of an automobile license.

A problem left uncovered would be the method of being certain that out-of-state cars traveling in the State would likewise be covered. It is believed that further study to this problem would bring forth a solution which would be workable and constitutional.

Difficulties in Changing the System

Undoubtedly difficulties confront anyone who would attempt the adoption of the plan outlined in this Chapter. There would most likely be formidable opposition on the part of some plaintiffs' lawyers. Some opposition from the general public might develop. But the injustices of the present system will sooner or later force some drastic change - - possibly to the system which has been here discussed.

CHAPTER XI

TRANSIT OF THE FUTURE

For Release to Morning Papers of Thursday, October 18, 1956 and

All Papers Thereafter

Chicago's pioneering use of expressway median strips for rapid transit must be expanded quickly if local transit is to win or even hold its own in the life-or-death competitive struggle with the private automobile, Werner W. Schroeder, vice-chairman of Chicago Transit Board, said today.

Mr. Schroeder expressed his viewpoints in the eleventh chapter of the transit research study he is conducting as a personal, unofficial project.

Chicago's pioneer expressway median strip rapid transit facility, the West Side subway now being built by the City in the center strip of the Con - gress Expressway, will be in operation between Laramie Avenue (5200 West) and the Loop next year. The remainder of the high-speed, median strip route to Des Plaines Avenue, Forest Park, will be in operation late in 1958 or early 1959.

Plans are also moving ahead, Mr. Schroeder said, to provide high-speed rapid transit facilities in the Northwest Expressway to near the city limits at Canfield Avenue, and to elevate the ground-level section of the Lake Street rapid transit route by using part of the elevated right-of-way of the Chicago and North Western railroad between Laramie Avenue and the east bank of the Des Plaines river. This would also mean an extension of service westward from the present terminal in Forest Park.

In the somewhat more distant future, Mr. Schroeder said, the median strips of the proposed South, Southwest and Cross Town expressways offer possibilities of extending high-speed expressway median strip rapid transit service.

Consideration, he said, is also being given to the use of parts of the elevated rights-of-way of other railroads in the metropolitan area for high-speed, grade-separated rapid transit service.

For the more-distant future, Mr. Schroeder said, there are some un-proven "dream systems" that may enable local transit to achieve the increas-

ed speed that is vital to its continued existence. Any or all of these systems that are developed and proved, Mr. Schroeder said, probably will also be adaptable to automation.

The "dream systems" listed by Mr. Schroeder are as follows:

(1) Split Rail Suspended Railway: Vehicle is suspended from a hollow girder that encloses the running gear. Cars would operate quietly at high speeds and provide good visibility but would present engineering problems to achieve control of swaying motion.

(2) Stabilized Monorail: Vehicle is suspended from a load bearing rail above. Cars would operate quietly at high speeds and provide good visibility. Swaying motion presumably would be overcome by an additional stabilizing rail placed above or below the car body.

(3) Saddle-Type Monorail: Vehicle rides on top of a supporting beam and is maintained in an upright position by means of guiding and stabilizing wheels bearing against each side of the supporting beams. Cars would operate quietly at high speeds and provide good visibility.

(4) Modernized "L": Rubber-tired electric buses operate over elevated paved roadways, drawing power from a steel guide rail in the center of the roadway. Rubber tipped steel idler wheels double-tie both ends of each bus to this rail for safety. Buses would be extremely quiet in operation at high speeds and provide excellent visibility.

(5) Unibus System: Self-propelled platform cars carry buses or trucks piggy-back fashion over a two-rail beamway, or accommodate dual service vehicles which could run on the streets as well as on the beamway. Unibus trains could operate over conventional track where ready-made rights-of-way lend themselves to a comprehensive transit system.

For the foreseeable future, however, Mr. Schroeder said that joint use of expressways by mass transit and the private automobile hold the greatest promise for the transportation needs of large urban communities. He listed these advantages:

"(1) The use of the exclusive strip on which neither cross traffic nor parallel driving can interfere with the public operation will greatly enhance the speed of transit operation. . . . The vehicles to be used, which will be electrically propelled by third rail or trolley, will be capable of attaining substantially higher speeds than a

competing private automobile on city streets and boulevards. This is so because the vehicles will be geared for high speed, and because their operation will be exclusive in the area in which they will move.

"(2) The expense of providing the median strip is obviously less than would be the cost of an elevated structure or the cost of a subway. The costs of elevated or subway construction are such that the cost of adding to the superhighways the width of transit tracks constitutes a very great saving. Capital costs therefore will be substantially less than for the other types of operation discussed.

"(3) Perhaps the greatest importance of the use of median or other strips in superhighways is the probability of longer life-use of the transit facilities.

Elevated or subway structures are immovable in the sense that when once installed at great cost, the expense of relocating the service in other locations is too large. While the elevated, to a degree, tends to hold people in the neighborhood of its effective service, there has nevertheless been at many places a moving away from the area of elevated operation with a consequent loss of utility to the public and the loss of passengers to the carrier system.

In the case of superhighway median strips, it is reasonably to be expected that industry and population will increase materially because of the double-attraction of the super-speed highway and the super-speed transit service. Thus along the Congress Street Superhighway as it now exists there are old buildings, both residential and industrial, which undoubtedly will be removed and replaced by modern structures, both for residence and industry. The result will be that there will be a new life injected into the area so served which should hold great promise not only for the effectiveness of the highway as such but particularly for the practical efficiency and sound operation of the transit facilities which are incorporated as a part.

"(4) There has been much argument in favor of having mass transportation vehicles upon rights-of-way where there is no interference from other vehicular traffic. It has been pointed out that while there has been a steady decrease in passenger usage of surface mass transportation vehicles since the War, the decrease in use of off-street elevated service has not been as great in the same period, and in fact, in the last few years, has shown some increased usage. While this increased usage is not yet sufficient to make the elevated operations profitable at all times, there is

hope that the superior speed of off-street transportation can, under proper circumstances, be made a profitable part of the operation."

Vast numbers of people can be carried on the median strip rapid transit facilities, Mr. Schroeder concluded, and thereby vehicular traffic that is now overburdening the streets, particularly in the central areas, can be very materially reduced.

* * * * *

CHAPTER XI

TRANSIT OF THE FUTURE

There is a growing realization on the part of transit operators, especially in the larger cities, that the transit industry must look forward to institute means of competing with increasing automobile traffic, which has been discussed in previous chapters.

Mass transportation, unlike some other utilities, is subject to tremendous competitive forces. If it ever was a monopoly, in whole or in part, it has ceased to be one as the development of automobiles and superhighways has progressed.

The growing feeling among transit engineers is that the competitive demand on mass transportation must be met principally by increasing the speed of this type of service. The problem of speed is immediately complicated by the fact that the mass transportation vehicle must stop to receive and discharge passengers, which adds a time burden that is not present in the case of privately owned automobiles. Future plans must take into consideration the time lost in these passenger movements. To compete in speed with the private automobile, is, therefore, not easy to do. Two other factors undoubtedly enter into this competitive situation: First is the privacy afforded by the privately owned vehicle - - a feature that is practically impossible to attain in a mass transportation carrier. The other is the flexibility of route which belongs to the private automobile, and which relatively speaking is impossible to be attained by the mass transportation carrier.

In a sense these three burdens - - the on and off movement of passengers, the lack of privacy and the lack of flexibility - - must be offset, if possible, by superior overall speed on the part of the mass transportation car or bus.

Classes of Solutions

Two general classes of solutions are being worked on by mass transportation planners. The first of these is immediate; the second class, however, might be described as being in the dream stage.

The immediate solution is in the process of application in the areas of the CTA in Chicago.

This immediate solution for the attainment of higher speed for the delivery of passengers is the use of superhighways by providing in or along them a strip devoted exclusively to the use of passenger-carrying means on which the movement of vehicles will not be interrupted by cross traffic or by traffic on the highway itself.

At the present time, the use of a median strip seems to be preferred.

Congress Street and Other Chicago Improvement Plans.

In an article by Mr. Stanley D. Forsythe, General Superintendent of Engineering, Chicago Transit Authority, appearing in Mass Transportation, August, 1956, issue, there are described the present advances in Chicago.

The Congress Street plan is described in these words:

> "The rapid transit incorporated in the median strip of the Congress Street or West Route Expressway in Chicago will be ready for operation it is expected late this year or early next year. Welded rails on heavily ballasted track with long radius curves will permit a speed of operation limited only by the distance between stops. Attractive island type stations will be connected by covered ramps to adjacent bridges carrying cross traffic over the expressway. This route extending approximately 10 miles west from the Loop largely replaces an older route that combined elevated and ground line operation using some of the oldest equipment on the system. This route will have a new downtown delivery. Instead of using the present elevated Loop it will be combined with the Logan Square Branch and operate thru the Dearborn Street Subway. It will be extremely interesting to see the effect on traffic volume of new equipment, new right-of-way and a greatly reduced running time."

The hoped for Northwest Route Expressway is discussed as follows:

> "The Northwest Route Expressway which will extend from a point just west of the Loop to the northwest city limits was originally designed without provisions for rapid transit. In the last several years, however, the highway designers themselves have become convinced that rapid transit in the median strip is a vital necessity in order to relieve this expressway of some of its automobile traffic. They feel that without rapid transit the highway will be overloaded the day it is opened. Therefore, the plans were altered and steps are being taken by the City of Chicago to install a two-track rapid transit line with island platform stations approximately every 7/10ths of a mile. This line would extend northwest from the present Logan Square terminal a distance of approximately 7-1/2 miles, and it is presumed that it would be installed in accordance with the formula that has been used by the City and the Chicago Transit Authority since the inception of the Authority whereby the City installs all of the fixed transportation equipment and the Chicago Transit Authority repays the City in

monthly payments over a period of approximately 30 years without interest charges. The cost of the right-of-way and stations is not included in the amount repaid to the City.

"The last three miles of this extension would provide extremely light traffic for normal rapid transit operation. Here the Authority has suggested to the City that if it is desirable to build and operate this extension when the rest of the line is built that the Authority be relieved of any repayment for the cost of fixed transportation equipment at least until the revenues justify such payments."

Use of Railroad Rights-of-Way

A variation of this plan is in an advanced stage of planning as to the west end of the Lake Street Elevated Branch. This is described by Mr. Forsythe as follows:

"Another significant improvement in rapid transit service is being planned for the west end of the Lake Street Branch. The outermost 2-1/2 miles of this line which serves the west side of Chicago and the Village of Oak Park is an operation at grade involving 22 grade crossings. Immediately to the north of the Chicago Transit Authority right-of-way is an elevated six-track right-of-way belonging to the Chicago and North Western Railroad. The railroad has indicated its willingness to lease two tracks to the Chicago Transit Authority and the various governmental and highway agencies interested in this two and one-half mile stretch have indicated their approval of the project and their willingness to share in the expense of eliminating these 22 grade crossings at an estimated total cost not to exceed $4,000,000. This would substantially improve the rapid transit service on this branch as well as immeasurably improve street traffic conditions thru the effected area. There will also be a notable improvement in abutting property values. It is expected that work on this project can be completed within 18 months after formal agreements are signed."

South and Cross Town Expressway Uses

Looking into the more distant future, and yet within reasonable time limits of attainment, Mr. Forsythe describes a south route and a southwest route in the following words:

"The South Route Expressway starts from a point just west of the Loop and after a short swing to the east generally parallels State Street south from the Loop to 99th Street where the highway divides. One branch will serve Beverly Hills and Morgan Park to the southwest while the other branch will serve the Lake Calumet

industrial district to the southeast. Here too it is being planned that a median strip of sufficient width for rapid transit operation will be provided throughout the entire length of the expressway. It is felt that rapid transit operation should be provided in that part of the expressway nearest the central business district at the earliest opportunity and extended south as far and as fast as circumstances permit. In fact the south end of the State Street Subway would be only slightly over 1-1/2 miles from a convenient point of access to this median strip. Or a shorter connection can be made farther south to the south side elevated structure.

"Another opportunity for an important median strip rapid transit operation will present itself when the cross town expressway is built. This is planned to extend in a north-south direction approximately 3-1/2 miles west of and paralleling State Street. It is planned to extend seven miles from the Northwest Expressway on the north to the Southwest Expressway on the south. Rapid Transit operation in this expressway intersecting every rapid transit branch except the North-South and Ravenswood and intersecting 30 section line, half section line and diagonal streets would furnish an excellent north-south trunk line by-passing the central business district but linking a number of outlying commercial, residential and manufacturing districts."

Some Pro Arguments for use of Median Strips in Expressways and on Railroad Rights-of-Way

Great hopes are entertained by the engineering staff and the management of CTA with respect to the median strips in expressways and the limited use at convenient places of railroad rights-of-way. These high expectations are based upon the following considerations, at least in part:

(1) The use of the exclusive strip on which neither cross traffic nor parallel driving can interfere with the public operation will greatly enhance speed of transit operation. While there will still be necessary a number of stops to pick up or discharge passengers, these will be so spaced and arranged that the total number will be less than in present elevated operations. The vehicles to be used, which will be electrically powered, will be capable of attaining substantially higher speeds while in motion than a competing private automobile because the vehicles will be exclusive in the area in which they would move between stations. Therefore, it is hoped and believed that an improved speed, substantially better than that of the privately owned automobile, can be attained in the overall operation.

(2) The expense of providing a median strip is obviously less than would be the cost of erection of an elevated structure or the cost of construction of a subway. The enormous costs of elevated or subway construction are

such that the cost of adding to the superhighways the width of transit tracks constitutes a very great saving. Capital costs will therefore be substantially less than for the other types of operation discussed in later parts of this Chapter.

(3) Perhaps the greatest importance of the use of median or other strips on superhighways is the probability of a longer life-use of the transit facilities.

Elevated or subway structures are immovable in the sense that when once installed at great cost, the expense of moving them to other locations is too large. There has been some experience in Chicago Elevated operation pointing to a shift in population and industry. While the elevated, to a degree, tends to hold people in the neighborhood of its effective service, there has nevertheless been at many places a moving away from the area of elevated operation, with a consequent loss of utility to the public and the loss of passengers to the carrier system.

In the case of superhighway median strips, it is reasonably to be expected that industry and population will increase materially because of the double attraction of the super-speed highway and the super-speed transit service along the same line. Thus along the Congress Street Superhighway as it now exists there are old buildings, both residential and industrial, which will undoubtedly be removed and be replaced by modern structures, both for residence and for industry. The result will be that there will be a new life injected into the area so served which should hold great promise not only for the effectiveness of the highway as such but particularly for the practical efficiency and sound operation of the transit facilities which are incorporated as a part.

(4) There has been much argument in favor of having mass transportation vehicles upon rights-of-way where there is no interference from other vehicular traffic. It has been pointed out that while there has been a steady decrease in passenger usage of surface mass transportation vehicles since the War, the decrease in use of off-street elevated service has not been as great in the same period, and in fact, in the last few years, has shown some increased usage. While this increased usage is not yet sufficient to make the elevated operations at all times profitable, there is hope that the superior speed of off-street transportation can, under proper circumstances, be made a profitable part of the operation.

It is the opinion of this writer that this plan of joint use of expressways holds the greatest promise for the foreseeable future. It is not the solution to the whole problem, but it will be a great contribution.

Contributions will not only come in the vast number of people that can be carried along the median strips, but also in the incidental results of making the private automobile and truck traffic lighter in the areas through which the superhighways run, so that the use of streets will not overburden the central

areas, as would be the case without efficient mass transportation assistance.

The development of mass transportation in connection with superhighways, if successful, may well transform all older concepts of mass transportation planning throughout the United States. Its efficacy will require a few years to prove, but if established, it may turn out to be the turning point in mass transportation of the future.

The only suggestion presently to be offered by this non-engineer writer is that it might prove economical over a long period to provide space for a third set of tracks which could be used for through long-distance service, during the rush hours. One extra set of rails would probably suffice, as the traffic can be carried in one direction in the morning rush hour and in the opposite direction in the evening rush hour.

The Dream Area

We now consider briefly some ideas for far-advanced future construction which might properly be characterized as dreams for the future.

The following five types of elevated systems have been proposed but none has been developed to the stage where transit operators in the United States have been ready to make the large scale investment necessary for application.

Some of the major engineering and financial problems are discussed in subsequent paragraphs:

(1) SPLIT-RAIL SUSPENDED RAILWAY. Vehicle is suspended from a hollow girder that encloses the running gear. Cars would operate quietly at high speeds and provide good visibility but would present engineering problems to achieve control of swaying motion.

(2) STABILIZED MONORAIL. Vehicle is suspended from a load bearing rail above. Cars would operate quietly at high speeds and provide good visibility. Swaying motion presumably would be overcome by an additional stabilizing rail placed above or below the car body.

(3) SADDLE-TYPE MONORAIL. Vehicle rides on top of a supporting beam and is maintained in an upright position by means of guiding and stabilizing wheels bearing against each side of the supporting beams. Cars would operate quietly at high speeds and provide good visibility.

(4) MODERNIZED "L". Rubber-tired electric buses operate over elevated paved roadways, drawing power from a steel guide

rail in the center of the roadway. Rubber tipped steel idler wheels double-tie both ends of each bus to this rail for safety. Buses would be extremely quiet in operation at high speeds and provide excellent visibility.

(5) UNIBUS SYSTEM. Self-propelled platform cars carry buses or trucks piggy-back fashion over a two-rail beamway, or accommodate dual service vehicles which could run on the streets as well as on the beamway. Unibus trains could operate over conventional track where ready made rights-of-way lend themselves to a comprehensive transit system.

The December, 1955 issue of Mass Transportation contains a very informative article entitled "The Architecture of Modern Transit Systems" by John I. Williams, a specialist in architectural planning and design, in which he discussed the several proposed transit systems with respect to their bearing upon important factors of functional design and presented the accompanying table which compares the various existing and proposed systems for mass transit on the basis of (1) freedom from interference with other means of circulation, (2) environmental effects, (3) passenger appeal, (4) susceptibility to automation, and (5) technical problems involved:

Comparative Aspects of Existing and Proposed Systems for Mass Transit

	Freedom from Interference with other Traffic	Depressive Environment and Esthetics	Passenger Appeal Physical and Psychological	Susceptibility to Automation	Technical and Engineering Problems
I Non-segregation					
(1) Street Car	NONE	NEGLIGIBLE. Some noise at crossovers.	WEAK. Positive: low noise level, no fumes, smooth ride: Negative, mid-street loading, no flexibility in traffic, many non-station stops and starts, low speed.	NONE	NONE. But substantial development in surface type vehicles has been largely negated by increasing street traffic density.
(2) Bus	NONE	NEGLIGIBLE. Engine noise and fumes.	WEAK: Positive: curb loading, flexibility in traffic; Negative: many non-station stops and starts, weaving motion, engine noise and fumes, low speed.	NONE	
(3) Trolley Coach	NONE	NEGLIGIBLE	WEAK: Positive: low noise level, curb loading, limited flexibility in traffic: Negative: many non-station stops and starts, weaving motion, low speed.	NONE	
II Horizontal Segregation					
(1) Rail Rapid Transit in Expressway	COMPLETE	NONE. No bad effects in properly landscaped mall as in Shaker Heights Rapid Transit Line in Cleveland and Conway proposal for Detroit.	GOOD. Positive: high speed, limited stops, low noise level, smooth ride: Negative: walkover transfers and waiting time for second vehicle at feeder junctures.	EXCELLENT: Centralized traffic control and automatic operation are possible.	NEGLIGIBLE
(2) Buses on Expressway	LIMITED. Subject to interference at turnouts and traffic tie-ups.	NONE	GOOD. Positive: high speed, local services in dormitory areas with express movement to downtown area, no walkover transfers nor waiting time for second vehicle at expressway junctures, limited stops on expressway: Negative: creeping downtown speed negates high expressway speed, increasing expressway traffic	NONE	NEGLIGIBLE
(3) Suburban Railroads	LIMITED. Subject to interference at grade crossings.	FAIR. Ones bad, but dieselization and electrification helps; generally unattractive form, but improved by good landscaping.	FAIR Positive: high speed, smooth ride, normally an all-seated load; Negative: walkover transfers and waiting time for second vehicle at train stations, long station stops, feeder service usually operated independently and lack of schedule adherence.	GOOD: Centralized traffic control, automatic grade crossing protection.	NEGLIGIBLE
III Vertical Segregation					
(1) Conventional Systems					
(a) Subway	COMPLETE	NONE	FAIR. Positive: high speed, frequent service; Negative: noisy, crowded, poorly ventilated, cold, damp and drafty in winter, excessively hot in summer, walkover transfers and waiting time for second vehicle at feeder junctures, service confined to channels of highest passenger traffic density.	EXCELLENT. Centralized traffic control and automatic operation are possible.	NEGLIGIBLE
(b) Elevated Railway	COMPLETE	BAD. Unattractive structure. Bridges streets, shuts out light and air, impedes flow of street traffic and creates street accident hazards, noisy.	FAIR Positive: high speed, smooth ride, frequent service; Negative: crowded open stations, much stair climbing, walkover transfers and waiting time for second vehicle at feeder junctures, service confined to channels of highest passenger traffic density.	EXCELLENT: Centralized traffic control and automatic operation are possible.	NEGLIGIBLE
(c) Classical Monorail	COMPLETE	LIMITED. High roadway structure (30'-35') arched over street gives bulky appearance, shuts out considerable light from street pavement. However, has very low noise level. (Example: Wuppertal System in Germany)	FAIR: Positive: medium high speed, frequent service, extremely quiet; Negative: crowded, swaying motion of vehicle, open stations, much stair climbing, awareness of roadway structure source of annoyance as in subways, walkover transfers and waiting time for second vehicle at feeder junctures, service confined to channels of highest passenger traffic density.	GOOD: Centralized traffic control. Automatic train control poses problems as swaying motion of vehicle requires stations to be approached with caution and at very low speeds. This makes skip-stop service difficult.	Control of sway. Higher speeds.
(2) Modern Concepts:					
(a) Split-rail Suspension (Gibbs & Hill)	COMPLETE	LIMITED: High roadway structure (30'-35') with required supporting members gives appearance of bulk. However, roadway design represents vast improvement over classical form.	GOOD. Positive: high speed, frequent service, extremely quiet, good ventilation, good visibility, normally an all-seated load; Negative: swaying motion of vehicle, awareness of roadway structure source of annoyance as in subways walkover transfers and waiting time for second vehicle.	GOOD. Centralized traffic control. Automatic train control poses problems as swaying motion of vehicle requires stations to be approached with caution and at very low speeds.	Control of sway. Switching is a major problem as it can impose heavy restrictions on the transport capacity of the roadway.
(b) Stabilized Monorail (Houston System, Hastings)	COMPLETE	LIMITED: High roadway structure (30'-35') with required supporting members and additional stabilizing rails gives appearance of bulk.	GOOD. Positive, high speed, frequent service, extremely quiet, good ventilation, good visibility, normally an all-seated load, no sway; Negative, awareness of roadway structure source of annoyance as in subways, walkover transfers with waiting time for second vehicle at feeder junctures.	EXCELLENT: Centralized traffic control and automatic operation are possible.	Switching is a major problem as it can impose heavy restrictions on transport capacity of roadway.
(c) Saddle Monorail (Alweg)	COMPLETE	LIMITED. As with all "over-riding" elevated systems, a roadway structure having a street clearance of 16½ feet and an overall height of 20 to 21 feet requires much smaller supporting members than is required for "suspended" systems and hence the appearance of bulk is minimized.	GOOD. Positive: high speed, frequent service, extremely quiet, good ventilation, excellent visibility, no awareness of roadway structure, no sway: Negative annoying vehicle motion produced as result of strong and jerky thrusts of side-running wheels in combination with normal motion of top-running weight-bearing wheels, walkover transfers and waiting time for second vehicle at feeder junctures.	EXCELLENT: Centralized traffic control and automatic operation are possible.	In this system the entire beam section is the member for forced guidance. In curved sections, the beam has to be warped as well as curved. A major problem is the reduction to low-cost serial production, especially curve sections, of large size beam units.
(d) Modernized El (Norton)	COMPLETE	LIMITED. Bulky, wide beam at low altitude, beam width covers approximately two and a half times as much street space as those called for in other modern concepts.	GOOD. Positive: high speed, frequent service, extremely quiet, excellent visibility, no awareness of roadway structure, smooth ride: Negative: walkover transfers and waiting for second vehicle at feeder junctures	EXCELLENT: Centralized traffic control and automatic operation are possible.	Reduction of resistance. Switching is a major problem as it can impose heavy restrictions on transport capacity of roadway.
(e) Unibus System (Stephenson)	COMPLETE	LIMITED. As with all "over-riding" elevated systems, a roadway structure having a street clearance of 16½ feet and an overall height of 20 to 21 feet requires much smaller supporting members than is required for "suspended" systems and hence the appearance of bulk is minimized	EXCELLENT: Positive, a completely integrated system requiring no walkover transfers or change of vehicle at feeder junctures, high trunk line speed, high surface speed in dormitory areas, highest possible "origin-to-destination" speed, normally an all-seated load no sway, extremely quiet, excellent visibility no awareness of roadway structure; Negative: Factor of boarding proper vehicle on outbound trips.	EXCELLENT Centralized traffic control and automatic operation. (These devices, of course, restricted to trunk line portion of service)	NEGLIGIBLE. Engineering problems are minimized inasmuch as this system relies more heavily on the "track" factor in engineering than any other elevated system.
(f) Belt Conveyor (Goodyear-Stephens-Adamson, Otis, Hewitt-Robbins)	COMPLETE	NONE	FAIR for city-wide service Positive: moderately high speed, frequent service, extremely quiet, smooth ride: Negative: speed limitations, walkover transfers and waiting time for second vehicle at feeder junctures. SUPERIOR for downtown service	EXCELLENT. Completely automatic.	NEGLIGIBLE

As will be noted, each type of proposed system has its advantages and disadvantages, which would vary somewhat according to its application. However, each type has its champion.

Classical Monorail

Again we draw on Mass Transportation for some discussion of the Monorail.

Eugene R. Boswell, President of Ogden Bus Lines, Ogden, Utah, wrote an interesting article titled, "Rapid Transit in Europe," which appeared in the September, 1955, issue of Mass Transportation. Excerpts from his comments on Germany's famous 50 year old successful monorail in the Wuppertal Valley are as follow:

> "* * * The monorail serves the most thickly settled and industrialized part of the valley. It is about eight miles long, and has eighteen elevated stations averaging a little less than a half mile apart.
>
> "* * * service is very frequent, every five minutes or better.
>
> "* * * From a distance the monorail structure appears light and unobtrusive, but close up the complicated and rather ugly steel structure is more apparent. This unfortunate feature is one that proposed systems using modern designs must correct if such lines are to be accepted as part of today's urban scene.
>
> "* * * In motion the train has a very slight sway at times, and naturally banks for curves. The lack of anything underneath is something you get used to very quickly.
>
> "* * * At the shops I was impressed with the large movable switches necessary to lead trains off the regular overhead rail. Switching isn't necessary for regular operation since the line has loops at each end and there are no branches.
>
> "In recent months modern monorail has made its bow in Houston, Texas, using the 'suspended' feature of the Wuppertal line, but different in other respects as to structure, cars and motive power, as well as potential speed. There is also an actively promoted scheme for a modern line to operate between central London and the great London International Airport, a 13 mile distance. And, of course, Europe has two experimental lines also - the 'saddle type' Wanner-Gren near Cologne, Germany, and the Kearney propeller line near Glasgow, Scotland, this one built twenty-five years ago.

"Other lines have been tried in the past, mostly of the ' saddle type', and including one in Wales and another near New York City. I feel that success for the monorail is a matter of simple, inexpensive and unobtrusive structure, operated with light-weight efficient cars capable of train type operation. If the 50 years' successful operation of the Wuppertal Monorail means anything, a modern version of it should be practical."

The first modern application of monorail construction in the United States was unveiled at Houston, Texas, in mid-February, 1956, when a modernistic car was demonstrated over a 970-foot-long experimental installation by Monorail, Inc.

In operation, the coach is suspended from an overhead rail, which is in the form of a 30-inch steel pipe. The rail is fastened to towers 55 feet apart and up to 30 feet high. At stations, the rail inclines to a height of ten feet.

Powered by two 305-horse power gasoline engines, the coach is 55 feet long, seven feet wide and eight feet high, has seats for 60 passengers and can accommodate 50 standees. Two or more coaches can be coupled together for operation as a train.

Above the coach, and riding atop the rail, are the engines, control equipment and the driver's dome-shaped cabin. The unit rides on eight wheels with pneumatic tires, while 16 rubber guide wheels hold it in place on the rail. In case of blow-out, auxiliary steel wheels are brought into use. The developers believe the monorail can easily attain a speed of 60 miles per hour.

Monorail, as well as split rail suspended railways, appear to share common disadvantages which might well rule them out of consideration in planning transit of the future because: (1) a suspended vehicle would require structures 30 to 35 feet in height in order to realize a safe street clearance o 15 to 17 feet, whereas most over-riding systems (conventional elevated and unibus) require a structure only 20 to 21 feet in height to realize the same clearance. Obviously, the lower structure would be less expensive to construct and would present fewer engineering problems; (2) switching is a major problem. In the suspended type of monorail, apart from the mass involved, switching members have to be moved over a total distance of 48 to 60 inches in each opening and closing cycle. In the Alweg system, the total distance is 100 to 120 inches. These distances compare with a total distance of about 4 inches for the Unibus system, or, in other words, only the distance required to clear the wheel flanges and; (3) in some situations, particularly in Chicago or New York, it may be desirable or even necessary to route the rapid transit system underground through existing subways which do not provide sufficient height to accommodate a suspended railway.

Other and perhaps greater objections to the monorail are these:

While it is said that a system could be constructed for a half a million dollars per mile, this does not take into consideration the cost of obtaining right-of-way on which to place the pillars which will hold the girders or beam from which the vehicle is suspended. It is to be doubted whether such girders could be placed upon public highways, as particularly in the earlier stages of construction and operation the public resistance might prove to be very great. Even if so placed, there would be certain parts of the right-of-way which would need to run over private property.

If all structures were placed on privately owned property, it would be necessary, by purchase or condemnation, to obtain a right-of-way. To establish such a strip of land in built up areas of a metropolitan city would involve costs almost too enormous to contemplate. Such acquisition would entail the expenses not only of obtaining the land on which the structures would stand and over which the cars would be pulled, but would also make necessary compensating the owner (part of whose property is taken) for the damage accruing to the part not taken. If in the process buildings are destroyed or torn down, the cost and damage would be added to the price of the land acquisition.

If the cost of acquiring property averaged $1,000. a foot (and in many parts of a large city such an estimate is not excessive), the right-of-way cost would run something like 5-1/4 million dollars per mile.

Of course, this cost element of obtaining right-of-way is present in all other future dream plans. Perhaps such expenditures will eventually prove to be inevitable. But no one can evaluate the practicability of such plans without considering this very great element of cost.

Another feature to be considered in a monorail system in which the cars are suspended like decorations on a Christmas tree is the matter of public acceptance. In the initial stage undoubtedly there would be public apprehensions and doubts which would take time and expense to eliminate. It may well be doubted whether the majority of prospective riders would relish the idea of riding in a vehicle suspended from overhead girders.

Next is to be considered whether the experiments that have been made on a small scale have adequately contemplated the great stresses placed on the overhead girder in practical usage involving weights that would vary over a rather wide area. Until these questions of stress and resistance are conclusively answered, no organization, whether municipally or privately owned, could risk the vast capital expenditure involved in this great departure.

Another difficulty which would be particularly present in a city like Chicago would be the manner in which different lines of monorail structure would cross each other. Would it be necessary to establish a different plane

at the cross-over for each line so that one would pass over the other? Or would it be possible to have the different lines cross each other in the same plane? If the latter, in what manner would places of cross-over be safely constructed?

The monorail idea with its variations seems not yet to have been proved for extensive use in a metropolitan area. Probably it should not be discarded as an impossibility. But undoubtedly there are many areas of construction and operation that need fully to be tested before the expenditures of the vast sums required could rationally be justified.

Over-Riding Systems

In the class of over-riding systems, that is systems which are carried by some structure, there have been three proposals, Norton, Alweg and Unibus.

Norton Plan

Henry K. Norton, president of the New York, Susquehanna & Western Railroad and a former member of the New York City Transit Authority Board, proposes a plan for operating high speed, noiseless, self-regulating electric buses on one-way concrete structures above sidewalks.

Using the "loop" principle of running cars in only one direction, and radiating from a central station to all sections of a city and its suburbs, the system calls for mounting the concrete trainways on pylons along the edge of sidewalks.

Cars, running on dual puncture-proof tires, either singly or in trains, would travel at maximum speeds of 60 to 70 miles an hour with a running time of 90 seconds between stations one mile apart.

Controlled by dispatchers at each station, thus eliminating motormen and conductors, the 100-passenger cars would draw power from a steel guide rail in the center of the roadway. Rubber tipped steel idler wheels double-tie both ends of each car to this rail for safety. An automatic block signal system would eliminate rear-end collisions. Rubber tires would eliminate noise and reduce vibration, thus furnishing a very comfortable ride. Its silent operation would also minimize any detrimental effect such a structure could have upon its surroundings.

Mr. Norton estimates the cost of overhead structures would be $600,000 a mile, signal and control appurtenances at $200,000 a mile, and passenger stations from $100,000, in outlying areas, to $350,000 in central business districts. On that basis, it appears that the cost of the complete elevated rapid transit facility, exclusive of rolling stock, would cost in the

neighborhood of $1.8 million per double mile of roadway. This is considerably less costly than conventional rapid transit facilities, which experts say cost $12 million per mile for a two track subway and $5 million per mile for a two-track elevated railway.

This idea is not entirely new and untried. Test operation of a rubber tired train on a shuttle line convinced the Paris Metro Authorities of the advantage of the new trains, and plans call for the construction of 70 cars of this type.

The Norton Plan could be adapted to New York subways and Chicago subway and elevated lines by removing present tracks, paving the roadways, and installing the necessary rolling stock and equipment. This system could also easily make use of railroad rights-of-way wherever they would fit into the radial pattern of an area-wide transit system. A roadway could be constructed and still retain the existing rails for joint operation with conventional rail equipment. The Paris Metro has been operating a rubber tired rapid transit car over a section of track where timber sleepers were laid outside of the running rails to serve as a roadway for rubber tired wheels, and auxiliary wheels on the car truck bear horizontally against guide rails at each side of the track.

Here again we have the capital cost of structures contemplated by this plan and particularly the problem of condemning or otherwise acquiring the necessary rights-of-way. These have been discussed in prior paragraphs. That they are considerable obstacles would appear to be obvious.

Alweg System

The Alweg concept called for the development of a universal type vehicle which could operate on street surfaces, over standard rail lines or over a monorail structure. The development of such a vehicle proved to be very difficult and although a 1:2.5 working model was built which gave promise of successful development, it was discarded after there was a change in technical direction. Although the idea has elements of soundness, it has so many disadvantages there is little likelihood that it will ever be successfully developed as originally conceived.

In the Alweg system, weight bearing wheels move over a strip rail mounted on top of the elevated beam sections. Vehicle stabilization is effected by side-running wheels moving over two strip rails mounted on each side of the beam sections. Thus, it is actually a five-track monobeam system, known as a "saddle-type" monorail.

A major disadvantage of the saddle-type monorail is its intricate and costly construction in curves. Here, beam sections must be warped as well as curved in order to obtain the proper banking for the degree of curvature

involved. This requirement imposes severe limitations on serial production and the use of standarized sections. With the almost infinite variety of curves to be found in actual installation, the beam sections therein involved would have to be practically hand-made at high cost. Even with precision fabrication, because of the mass involved (approximately 2' x 4' x 50') beam sections would tend to conform more nearly to a series of chord formations rather than true curvature. Thus the vehicle must fight its way through curves. The strong impact at chord intersections and at section joints under high speed not only produces a pronounced jarring motion in the vehicle, but tends to pound the beamway out of alignment. This results in high maintenance costs.

As pointed out in a previous paragraph, in most monorail systems switching presents a major problem because of the distance the switching members have to be moved and the mass involved. In the Alweg system, the total distance is 100 to 120 inches or, in other words, a half cycle distance somewhat greater than one-half the width of the vehicle.

The importance of switching time cannot be over-emphasized because it has a direct bearing on transport capacity. One of the basic requirements of a modern rapid transit system is the ability to move a greater number of services per hour than is possible on conventional systems. The long switching times required in the suspended and Alweg systems place heavy restrictions on their transport capacity. Actually, switching times on these systems, respectively, are at least 12 to 25 times greater than those required for a conventional rail system.

The technical difficulties of this system are obviously so great that a successful operation does not seem at this time to be within the area of probability.

Unibus System

The Unibus system appears more nearly to provide all of the desirable features envisioned for transit of the future, as will be noted by a study of the chart appearing on page 348. However, it must still be classified as distinctly within the "green" stage.

Basically, the Unibus System suggests that standard city-type buses operate on local surface routes in residential areas and at a number of centralized points these routes would converge and the buses would board self-propelled platform cars to continue their journey "piggy-back" to the central area by rail, either non-stop or with a limited number of express stops. The platform trains would shuttle between the downtown terminal and the junction points where they would turn back after out-bound buses unload and inbound buses have loaded, thus keeping unproductive mileage to a minimum.

The Unibus trains could operate over conventional track by electric power or by self-contained diesel or propane units. This feature would make Unibus readily adaptable to CTA operation because the existing rapid transit facilities could be converted to platform car operation at relatively little cost. Trunk line extensions could be laid out with due consideration for the use of ready-made rights-of-way which may be shared, such as center strips or shoulders of highways or expressways, the air space over railroad lines, or the actual railroad trackage if joint scheduling would permit.

Modern type elevated structures would be supported by "T" shaped pylons installed in the center of roadways or at the edges of sidewalks or roadways, or inverted "L" shaped supports attached to buildings, across which longitudinal beams would be laid to support the tracks. This type of construction would eliminate all obstacles to surface traffic, and the beams would be spaced far enough apart to provide minimum interference to light and air, thereby overcoming the principal objections to conventional type elevated railway structures. The details of this type of beamway construction, whether in steel or concrete or a combination of the two, is well established in the art of bridge construction and is relatively inexpensive.

Control of the trains could be completely automatic. A combination of centralized train control and electronic guidance systems could eliminate much costly manpower. Automatic dispatching systems similar to those in use in a number of large elevator installations could space trains and send them to the junction points where they are needed. Of course, all the modern safety devices such as block signalling and automatic train stop would be an integral part of the system. An alternate to this control system would be a combination of centralized train control and operators on each train or at control stations at various points along the line. Under this system, the trains would be controlled in much the same fashion as they are on some of the more elaborate model railroads.

Electronic route selectors have been installed on a number of rapid transit cars by CTA. These devices are "tuned" to pass on certain commands to receivers that can actuate switches at important junctions or announce the train and its destination to an interlocking tower operator. It would be possible for a supervisor at a downtown terminal to press a particular button on the automatic control of the lead car of a Unibus train that would select the destination of the train. The train control, in coordination with trackside devices, could then take the train onto the trunk line, observing speed limitations and maintaining proper distances from the preceding train and bring it to a stop at its terminus.

At the central area the tracks could terminate or pass through one or more transfer stations where Speedwalk or Carveyor would carry the passenger to his destination.

The basic Unibus plan suggests that, (1) standard city-type buses be loaded onto self-propelled platform cars and shunted "piggy-back" to their destination, or (2) dual service vehicles which could run on the streets as well as on the beamway. The latter suggestion appears to be a modified version of the Alweg system or an elaborated version of the Norton plan, each of which has disadvantages not found in the "piggy-back" feature of the Unibus plan.

However, the "piggy-back" plan could be improved upon considerably and a substantial saving made in the initial and subsequent investment in rolling stock by going one step further. Why should a standard city-type bus, complete with its heavy chassis and propulsion and related units, be loaded onto a self-propelled platform car and transported for miles, when only the body need be moved?

From experience gained by freight lines and railroads there have evolved special freight container bodies which are carried either by specially designed flat cars or flat bed trailer trucks. The Clark "Mobilvan" system which eliminates the expensive movement of the truck trailer underframe and wheels in piggy-back service is now being placed in operation over the Pennsylvania Railroad. It should not be difficult to design a low slung flat bed highway chassis to carry a removable bus body for use in a Unibus system, and mechanical devices on the order of industrial conveyor systems could quickly and automatically effect the transfer of the bus body from the flat bed highway chassis to the self-propelled platform car, and vice versa.

A vehicle of this description would effect savings in operating expenses by reducing operators' wage costs to as much as 67% per passenger carried. For example, on CTA's longer rapid transit lines the average car makes only one round trip in each of the two daily rush hours. If, during the one-hour peak of each rush-hour period, the surface shuttle buses were scheduled to make one round trip in a given dormitory area each 20 minutes, one self-propelled flat bed highway chassis would deliver three fully loaded bus bodies to a junction point where each would be transferred to a Unibus platform car for automatic dispatch to the Loop terminal. Thus, one chassis and one operator would move three times as many people, and the patrons would enjoy an uninterrupted ride without a walking transfer at the junction. Of course, this labor saving feature would apply only to that portion of rapid transit passengers who must utilize both surface and rapid transit facilities to reach their destination. At the present time, this class of passenger constitutes approximately 35% of all rapid transit passengers carried by CTA.

Auxiliary Speedwalks

Near saturation distribution within the periphery of the downtown area by facilities such as the Stephens-Adamson Speedwalk and Goodyear Carver no longer appears to be an impractical solution to the problem of removing

all public surface transit from this congested area.

In Jersey City, for example, running up a 10% grade for the first 137 feet of a 227 foot run, a " Speedwalk" for the Hudson & Manhattan Railroad has handled well over a million passengers without accident. The moving sidewalk has been instrumental in regaining passenger traffic which had sought other means of conveyance to avoid the long uphill climb, labelled "Cardiac Ramp".

Eight "Speedwalk" passenger conveyor units have been purchased by the management of Chicago's Wrigley Field. They will operate in two sections of four units each to carry Cub fans from ground level to the grandstand and from the grandstand to the upper deck. Total length of the "Speedwalk" units will be 400 feet on the eight slope runs which will move passengers uphill a vertical distance of 60 feet. The lower four belt system utilizes 5-1/2 foot wide belts for a rated capacity of 10,800 passengers per hour. The upper level system, handling fewer fans, will be equipped with 3-1/2 foot wide belts for a rated capacity of 7,200 passengers per hour.

The Chicago Transit Authority has contracted for installation of an inclined speedwalk at its 63rd and Loomis Terminal. This project is now well under way and completion is anticipated before the end of the year 1956.

The Speedwalk will be 87' 7" long by 36" wide, run up at a 15 degree angle for a vertical lift of 22' 4", and have a rated capacity of 7,200 passengers per hour.

This Speedwalk will be supplemental to the regular stairways and will relieve rush hour congestion at this heavily used terminal. The direction of travel of the Speedwalk can be reversed to fit the required pattern of usage in the A.M. or P.M. rush hours.

Dreams of conveyor belts for mass transportation have been spinning for years, and "Mass Transportation" and other trade magazines have printed theorists' conceptions of conveyor belt subways, conveyor belt sidewalks, conveyor belt loading ramps and second story moving sidewalks through downtown buildings.

Each new installation brings dreams of widespread use of conveyor belts for mass transportation nearer fulfillment, for each installation has proven highly successful.

Freight As An Auxiliary Income Source

As pointed out in Chapter IX, urban mass transportation facilities are used to full capacity for less than four hours per day and stand comparatively idle during the remaining hours.

A glance at diversification in American industry indicates that no privately owned enterprise could survive without using its productive capacity to the fullest extent. It is, therefore, asked by some operators whether the owners of urban transit facilities could not make better use of their plant by expanding their service to carrying goods as well as people.

If specialized freight handling were undertaken, these idle hours could conceivably become the principal and most profitable part of the operation.

Many large store chains maintain their own fleets of trucks to transport merchandise from railheads to warehouses to retail outlets, and many manufacturers do likewise to bring raw materials to their factories and to deliver finished goods to wholesale outlets or to railheads. Each has a sizeable investment in trucks and must contend with the related problems of personnel, maintenance, and the ever-present annoyances of traffic delays which add extensive non-productive handling costs.

Any transit planning for the future should consider local freight movement on a par, in importance, with that of moving people. Cooperation between industrialists, retailers, transit planners, and a single area-wide zoning commission would make it possible to locate enterprises adaptable to rapid transit freight service in the most advantageous spots along the present and proposed lines.

Freight container bodies could be designed to fit the transit company's low slung flat bed highway chassis and customers could build conveyor systems into their loading docks to effect the transfer of the freight container body to the highway chassis. Many customers, such as factories and large stores, could have direct conveyor access to the rapid transit lines at the elevated structure level.

Because of the efficient and speedy transfer facilities that would have to be developed to handle masses of people during the rush hours on a competitive basis with automobiles, the same practices would move freight at unheard of speed and at much lower rates than at present.

At the same time, the transit company would realize a substantial and profitable income during what would otherwise be non-productive periods of the day and night.

CONCLUSION

As indicated earlier in this Chapter, these thoughts for future changes and improvement fall into two general classifications - - the first including things that appear feasible within the reasonable future; the others being largely in the dream stage.

It would appear clear that the practical developments and the ones which are economically attainable would be through the median or side strip in the vast highway improvements that are taking place. If such strips to be used exclusively for mass transit were provided, a great service to the public could be attained without too large additional capital investment. Because of the probable concentration of industrial and residential buildings in the area close to such superhighways, the chances of transit operation in those strips being profitable would appear reasonably good. Undoubtedly, the emphasis in the next few years should be upon that type of development, as well as on the terminal carrier systems, such as speedwalks, escalators and comparable installations.

Use of transit facilities for freight movement in off-peak hours would also appear to be in the realm of the attainable.

The other changes that have been discussed in this Chapter must be classified as in the dream stage; first, because of the enormous cost of installation, which is due in large part to the necessity of acquiring rights-of-way, and second, because the technical and engineering problems in these other installations have not been completely solved.

There is no one answer to transit difficulties of large cities, but the experiments with median strips, which will soon begin in the case of the Congress Street Superhighway and later in the Northwest Highway should at least provide a partial answer to the pressing problems that confront all municipalities in the next ten years.

CHAPTER XII

RESUME AND LATER DEVELOPMENTS

Great capital improvements, both for highways and mass transportation, are necessary for efficient living in the Chicago Metropolitan Area, Werner W. Schroeder, Vice-Chairman of Chicago Transit Board, declared today in the twelfth chapter of his transit research study.

Mr. Schroeder announced that the chapter released today concludes the basic researches of the study that he is conducting as a personal project, but he added that he will conduct and publish special research studies dealing with mass transit problems of major urgency.

"The transportation problem is not limited to the City of Chicago," Mr. Schroeder said, "but includes an area extending for some miles around it.

"In the 1950 census, the population of the City was approximately 3,600,000 while the population of the so-called country towns was approximately 900,000," Mr. Schroeder continued. "The population of both the city and country towns has increased substantially since 1950. At the present rate of increase, the total population will exceed 5,000,000 people by 1960. The growth of the great suburban area has been more rapid than the growth of the city itself."

Because mass transportation is subjected to tremendous competitive forces generated by the private automobile, Mr. Schroeder said, greater speed must be attained in public transit, and off-street, grade-separated routes must be extended and expanded.

"Particular emphasis must be given to the use of parts of superhighways for median or other exclusive strips to carry the mass of people," Mr. Schroeder said. "Another partial solution to the problem of movement is use of railroad rights-of-way where this can reasonably and safely be done."

In Chapter 8 of this research study, Mr. Schroeder advocated consideration of a comprehensive plan of extensions of off-street rapid transit routes. He listed rapid transit facilities in the median strips of the Northwest, South, Southeast and Southwest Expressways, elevation of the street level section of the Lake Street route, extension of the Englewood route, an off-the-street cross-town rapid transit route, new subways in the central business district, and extension westward of the new West Side subway, part of which is to be in operation in 1957.

Reiterating previous assertions that it would be utterly impossible to finance such a large scale capital improvements program out of fares, Mr. Schroeder again urged consideration being given to making public funds available for these large capital expenditures, perhaps by means of tax-supported bond issues.

He pointed again to the large subsidies given mass transit in New York and in Boston.

"It appears that New York has spent over 2-1/3 billion dollars in subsidizing public transit, and Boston has spent in excess of 69 million dollars," Mr. Schroeder said. "The programs for the future in both cities contemplate very large expenditures."

With the large-scale public improvements program, Mr. Schroeder said, there should be drastic improvement in the use of street space for moving people and goods, which he advocated in Chapter 7 of his study.

Mr. Schroeder pointed to the successful operation of the exclusive transit lane in Washington Street, between Wacker Drive and State Street, as a specific example of the benefits that can be obtained by more efficient use of street space.

"Studies indicate that during the morning rush period there has been a 14. 5 per cent saving of time by CTA buses using this lane," Mr. Schroeder said. "During the evening rush period there has been a saving of 15. 4 per cent. During the mid-day period, there has been a saving of 25.8 per cent."

In bringing up-to-date his chapter on Wages, Fares and Inflation, Mr. Schroeder said that CTA's wage cost per "platform hour" to provide service is now 8-1/2 times what it was when Chicago last had a five cent fare.

"If the local transit fare in Chicago had increased in the same proportion as wages and benefits," Mr. Schroeder said, "the rate would now be at a 43¢ level."

Chicago now has a universal fare of 20 cents with free transfer privileges.

Reviewing the results of CTA operations since October 1, 1947, its starting date, Mr. Schroeder said:

"At the conclusion of its outstanding modernization program (by Spring of 1958), CTA will have acquired 4,256 new, modern buses and cars, constructed three new motor bus garages, and modernized its shops, garages, shop tools and machinery and other facilities at a total cost of approximately $137,500,000 or a net out-of-pocket cost of $130,000,000, after giving consideration to the $14,000 salvage value for each of the 540 "Green Hornet" streetcars which have been or will be converted to rapid transit cars."

"Since 1947, the time of the issuance of its first bonds, " Mr. Schroeder said in conclusion, "CTA has steadily and promptly paid all interest as well as all principal on bonds that have come due; has earned and deposited with the Revenue Bond Trustee all revenue bond reserves required under the trust indenture ($7,793,074 at 10/1/56); has purchased and retired $3,136,000 par value of its long-term revenue bonds in advance of maturity dates.

"Much equipment has been purchased by equipment trust certificates that are payable out of the depreciation fund. Here again both principal and interest have been promptly paid."

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CHAPTER XII

RESUME AND LATER DEVELOPMENTS

This Chapter, the last in the present series of our transit research study, will summarize prior chapters and refer to some developments that have taken place since the original release of the chapters dating from November 15, 1954.

I.

City transit operation under private enterprise, mainly through causes beyond its control, did not achieve financial success in Chicago any more than it has in many other communities of the country. The study has shown that when the day of reckoning approached for the privately owned companies taken over by Chicago Transit Authority in the autumn of 1947, the following financial results were clearly evident:

The five Surface Lines companies had suffered a known loss of 110 million dollars, plus an additional probable loss of 11 million dollars on certain stocks and participating shares. The gross loss on the Surface Lines operations during the 40-year history from 1907 to 1947 (and to some extent their operations prior to 1907) had resulted in a loss to private investors of not less than 120 million dollars.

In the elevated operation which began with five companies and ended with one, the loss during the same period of time totaled not less than 149-1/2 million dollars.

In the case of both the Surface and Elevated Lines there were common stock losses of undeterminable amounts which have not been included in the totals given.

In addition to those losses, the Federal Government had contributed a few dollars less than 26 million dollars toward subway construction. This was an outright contribution which will never be repaid.

It may therefore be said that the known losses were approximately 297 million dollars for the Surface and Elevated operations in addition to indefinite stock ownership losses which are impossible to estimate accurately. It may safely be asserted that Chicago transit was subsidized to the extent of more than 300 million dollars, of which 26 million came from the Federal Government and the balance out of the pockets of private investors.

The possible reasons for the disastrous financial results of 40 years of transit operation are suggested as: Inadequate rates fixed by regulatory commissions; the lack of an adequate depreciation reserve fund which in turn is based upon inadequacy of rates; the supplying of off-hour service, particularly night time service, at a great loss; the rendering of service in areas which did

not pay the cost of operation; duplication of services and expenses by the Surface Lines and Elevated System; lack of good public relations; the failure of the companies to protect themselves against new bus lines, with the result that some of the choicest potential routes were taken by the companies that developed this new field; the spread of population and industrial plants into outlying areas and the suburbs; and above all, the competition of privately owned automobiles and the constant increases in the rates of salaries and wages.

This dismal picture has not been peculiar to Chicago. The United States Supreme Court in Market Street Railway Co. v. Railway Commission of California, 324 U.S. 548, 89 L. ed. 1171, summarized the entire transit situation by referring to it as a "generally sick industry."

II.

In the second chapter, a somewhat detailed study of the decline in riding on mass transportation was presented.

Since the publication of that chapter on December 20, 1954, additional statistics further demonstrating the decline in such riding have become available. Whereas, by 1953, in Chicago there had occurred a 40% fall off in total riding since 1946, by the end of 1955 the total decline was approximately 46%.

The disproportionate fall-off in week-end riding continued its downward trend and has contributed considerably to the total decline in revenue passengers. The following statistical data for the Surface System, which produces approximately 81% of total C. T. A. passenger revenues, shows the extent of this progressive fall-off:

AVERAGE DAILY ORIGINATING REVENUE
PASSENGERS CARRIED (SURFACE SYSTEM ONLY)

	Daily Average Passengers			Ratio to Weekday Traffic	
Year	Weekdays	Saturdays	Sundays	Saturdays	Sundays
1946	2,725,000	2,497,300	1,670,000	91.6%	61.3%
1950	1,978,600	1,528,700	981,700	77.3	49.6
1953	1,804,800	1,290,000	806,900	71.5	44.7
1954	1,753,800	1,168,000	709,100	66.6	40.4
1955	1,625,200	1,096,600	678,400	67.5	41.7
% Decrease 1955 Under 1946	40.4%	56.1%	59.4%		

Automobile registration in the two years from 1953 to 1955 rose from 66% to 80% (over 1946), and the per capita rides per year on C. T. A. had dropped from 187 to 164.

Whereas, in 1953, there was one automobile registered in Chicago for each 4. 8 persons, the 1955 registration had increased to a total of 831,418 automobiles in Chicago, which means 4. 6 persons for each automobile in the city. As might be expected, the total mass transportation riding continued to fall off.

In that chapter the period between 1906 to 1953, inclusive, was divided into five phases. The fifth began in 1948. It was pointed out that in this phase the total passenger traffic dropped from 1.05 billion in 1948 to 686 plus million in 1953. Here again the decline continued. In 1955 the total riding was only 623 plus million, or 164 rides per capita. This was the least usage since 1909. The continued loss of passenger patronage is illustrated by taking the 1953 line in the table that appears on page 38 in that chapter, repeating it, and then adding the 1954 and 1955 figures:

REVENUE (ORIGINATING) PASSENGERS CARRIED BY LOCAL TRANSPORTATION COMPANIES OF CHICAGO DURING YEARS 1953 THROUGH 1955

	Chgo. Surf. Lines	Chgo. Rapid Transit Co.	Chgo. Mot. Coach Co.	Combined	Population of Chicago	Rides per Capita	Percentage of Total: Chicago Surface Lines	Percentage of Total: Chicago Rapid Transit Co.	Percentage of Total: Chicago Motor Coach Co.	Passen-ger Auto-mobile Registra.	Pop. Per Pass. Auto
1953	501,072,848	111,738,513	73,748,715	686,560,076	3,665,792	187	72.98%	16.28%	10.74%	764,942	4.8
1954	459,345,725	111,232,302	70,588,474	641,166,501	3,705,000	173	71.64%	17.35%	11.01%	792,940	4.7
1955	438,440,658	112,889,976	72,163,014	623,493,648	3,789,000	164	70.32%	18.11%	11.57%	831,418	4.6

The fall-off in total passenger traffic in U. S. cities of over 1,000,000 population came to 34. 37% in 1953 (as compared to 1947). In 1955 the decline went to 42. 48%. This compares with a decline in Chicago for the same period of from 38. 70% to 44. 34%.

The national and Chicago rides per capita of population have continued the downward trend. Comparing all cities in the United States, the per capita patronage had declined from 153 in 1953 to 124 in 1955, whereas in Chicago it had declined from 187 in 1953 to 164 in 1955. The rate of decline for all cities between 1953 and 1955 was 19% and the Chicago decline was only 12%. The lesser per cent decline for Chicago is influenced considerably by the fact that the adverse effect of fare increases and competition from private automobiles has been more severe in smaller cities than in large ones.

A comparison should also be made of a typical day in May 1956 with the typical day in May 1953 discussed in the chapter previously published. This data is taken from Cordon Count summaries covering the years from 1926 to 1956, as shown in tables 1 and 2 on Pages 371 and 372 .

The statistical matter for May 1956 is as follows:

Test counts indicate that on a typical day in May 1956, in the central business district of Chicago, 667 streetcars brought in 30,584 people; 5,905 CTA buses transported into the area 129,324 people; and 5,675 subway and elevated cars brought in 236,838 people. Thus, 6,572 CTA street vehicles and 5,675 vehicles on the elevated or subway account for a total of 396,746 people as against an overall total of 860,264 entering the area on that day. The railroads and out-of-town buses brought in 146,761. This makes a total for publicly owned and privately owned mass transportation media of 543,507 or approximately 63% of the total.

On the same typical day, 171,404 privately owned automobiles carried 257,106 passengers into the area or approximately 30% of the total. The remaining 7% was brought in by service vehicles and taxicabs.

The Cordon Count data for 1956 brings down to date the Cordon Count figures of 1953 shown in the original chapter. These figures are shown in Table 3 on Page 373.

DAILY NUMBER OF VEHICLES
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO

7: 00 A. M. to 7: 00 P. M.
Comparison by Years – 1926 to Date
(Surveys generally made during the month of May)

Year	Streetcars		C.T.A. Buses (1)		Private Autos		Service Vehicles		Taxicabs (2)		Out of Town Buses (3)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	8432	8469			92425	88421	30224	20750					132913	129441
1928	8380	8312			109374	104752	29948	31784					150189	147289
1929	8660	8607			113331	102269	28959	27556					153629	141002
1931	7963	7954			119951	111247	23124	22975					153278	144341
1935	7705	7720			120452	112266	22931	20764					153325	142864
1936	7436	7419			126970	121038	25339	25633					162023	156285
1937	7547	7536			133352	124500	24843	25516					168251	159970
1938	6615	6685			140832	137598	24596	24665			267	186	174636	172226
1939	6761	6769			144106	137259	25485	25910			262	206	178712	172226
1940	6193	6192			150676	140889	24826	25015			316	262	184062	174434
1941	6171	6163			148213	142540	25591	24892			453	353	182674	176171
1942	6673	6663			126537	116674	21426	21421			442	377	157547	147513
1943	6672	6677			97110	86549	19540	19274			430	386	125946	115027
1944	6209	6216			96574	90166	19079	19445			458	448	124485	118416
1945	5639	5642			100248	94126	11035	11576			481	348	119614	113864
1946	5845	5861			136001	126392	22525	22434			715	560	167396	157469
1947	6324	6315			140096	129432	21303	20403			1150	1080	171335	159681
1948	6147	6106			153775	144399	23155	23354			939	762	186698	177309
1949	6061	6053			161232	148632	22228	22423			925	825	193139	180626
1950	4363	4361	1220	1194	166272	155188	20790	20982			919	852	196030	185047
1951	3401	3426	1716	1670	171772	160531	22145	21949			931	810	202273	190706
1952	2190	2209	4850	4825	143577	134808	20204	21925	23321	23288	854	796	194996	187851
1953	1952	1960	4945	4778	147777	134219	21505	21399	25939	25220	1018	1074	203136	188650
1954	1343	1436	5284	5282	156682	140889	22091	20887	28985	27098	730	697	215115	196289
1955	1134	1129	5392	5432	163609	149192	20823	22220	26973	27757	782	835	218713	206565
1956	667	666	5905	5929	171404	149926	19752	20993	26599	26297	852	797	225179	204608

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined totals C.T.A. and C.M.C. buses.
(2) Taxicabs included with private autos prior to 1952.
(3) Includes all buses except Chicago Transit Authority.

DAILY NUMBER OF PASSENGERS
ENTERING AND LEAVING THE CENTRAL BUSINESS DISTRICT OF CHICAGO

7:00 A.M. to 7:00 P.M.
Comparison By Years – 1926 to Date
(Surveys generally made during the month of May)

Year	Streetcars		C.T.A. Buses (1)		Subway and Elevated (2)		Railroad		Out of Town Buses (3)		Private Autos (4)		Service Vehicles		Taxicabs (5)		TOTAL	
	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
1926	294958	283967			256286	231320	118857	103225	44391	44878	166367	159157					880859	822547
1928	282013	261041			243594	216241	124107	109310	47472	50234	196873	188554					894059	825380
1929	296690	290592			236575	196988	132723	115996	55161	62264	203996	189084					925145	849924
1931	281312	271007			191540	159469	119742	108290	46500	44187	203916	189120					843010	772073
1935	254528	246048			169690	137223	84251	72595	42465	36449	204760	190852					775694	683167
1936	246781	235391			200212	164845	92144	75367	46812	41171	215849	205765					801798	722539
1937	248946	239388			209590	169111	103505	86885	57106	47996	226868	211651					846015	755031
1938	228236	222754			193005	166855	94208	81311	57270	52235	239414	233917					812133	757031
1939	235182	228172			205142	174840	99970	87291	54100	48711	244980	233340					839374	757072
1940	213043	201377			191875	169995	100246	87230	63052	53710	256150	239512					824366	772354
1941	208927	201156			191851	158972	103405	90394	67728	57639	251962	242318					823873	750479
1942	200168	186860			192623	179208	116946	102340	78671	67581	215113	198346					803521	734335
1943	219418	209492			212825	187666	139966	119182	77529	64434	165087	147133					814825	727907
1944	201786	193626			206613	189912	146334	122278	77107	64422	164175	153282					796015	723520
1945	209079	199942			212215	193245	148964	127973	77112	68747	170422	160014					817792	749921
1946	238865	231500			229430	199782	158001	139580	92512	83879	231201	214866					950009	869607
1947	231893	223899			229164	204085	152082	135465	88679	77333	238163	220034					939981	860816
1948	219936	214657			238830	216706	156205	136798	94583	87947	261418	245478					970972	901586
1949	202240	193830			224932	197757	142521	126876	84361	75644	274094	252674					928148	846781
1950	147949	141330	29420	28617	199351	189499	138741	122781	82113	76125	282659	263819					880233	822171
1951	119364	119554	36657	34334	216288	204877	139188	127240	75131	67216	292014	272902	22145	21949			900787	848072
1952	86538	81628	121771	107382	222753	205532	137191	125683	13372	12073	244081	229174	20204	21925	39649	39590	885559	822987
1953	76141	75264	112225	103550	228853	219080	132678	119303	18871	17472	221665	201329	21505	21399	38909	37830	850847	795227
1954	56294	53776	119961	115087	235877	211413	133022	119849	9802	11132	235023	211333	22091	20887	43477	40647	855547	784124
1955	48886	45498	118753	114002	236544	215939	130600	119837	10390	10694	245414	223788	20823	22220	40459	41635	851879	793613
1956	30584	26699	129324	128667	236838	225442	136268	129632	10493	11546	257106	224889	19752	20993	39899	39445	860264	807043

(1) Chicago Transit Authority buses included with streetcars prior to 1950; 1952 shows combined total C.T.A. and C.M.C. buses.
(2) Includes Chicago Aurora & Elgin Railroad and the Chicago, North Shore & Milwaukee Railroad.
(3) Includes all buses except Chicago Transit Authority.
(4) Passengers per auto and per taxicab considered as 1.8 from 1926 to 1929, 1.7 from 1929 to 1952, and 1.5 from 1953.
(5) Taxicabs included with private autos prior to 1952

CORDON COUNT DATA FOR 1956

Amplified to Include Elevated Cars and an Estimated Number of Railroad Cars

	Vehicles In		% of Surface Veh.	% of All Veh.	Pass. In	% of Surface Pass.	% of all Pass.	Pass. per Vehicle
Street Cars	667		0.30%	0.28%	30,584	6.28%	3.56%	45.85
C. T. A. Buses	5,905		2.62	2.53	129,324	26.55	15.03	21.90
Total Surface Systems	6,572		2.92	2.81	159,908	32.83	18.59	24.33
Out of Town Buses	852		0.38	0.36	10,493	2.15	1.22	12.32
Private Autos	171,404		76.12	73.38	257,106	52.78	29.89	1.50
Service Vehicles	19,752		8.77	8.46	19,752	4.05	2.29	1.00
Taxicabs	26,599		11.81	11.39	39,899	8.19	4.64	1.50
Total All Surface	225,179		100.00%	96.40	487,158	100.00%	56.63	
Elevated & Subway Cars	5,675			2.43	236,838		27.53	41.74
Railroad Cars	2,725	(A)		1.17	136,268		15.84	50.00
Grand Totals	233,579			100.00%	860,264		100. 00%	

(A) Estimated at an average of 50 passengers per car.

NOTE: Railroad cars are considered to be non-surface operation because they enter the central business district on their own right-of-way by either elevated or under-cut roadbeds and do not contribute to the surface traffic congestion.

The conclusion stated for 1953 can now be amended to apply to 1956 as follows:

It is interesting to note that in 1956, transit surface vehicles, being 2.92% of the total entering the area, carried in 159,908 people; whereas, private automobiles, numbering 76.12% of all surface vehicles entering the area, carried 257,106 people. On the same day the subway and elevated, with 5,675 vehicles, which were not on the street, brought into the area 236,838 passengers.

The CTA vehicles alone - - streetcars, buses and elevated cars - - only 5. 24% of total surface and elevated vehicles entering the area - - brought in 46% of the total people who entered the area on this typical day. It is significant to note that private automobiles entering the central business district of Chicago on this typical day in May increased 16% from 147,777 in 1953 to 171,404 in 1956.

At this point it may be noted that the continuing decline in traffic on CTA vehicles may possibly have come to an end in 1956. The comparative figures of traffic are kept day by day on the basis of the comparison with the preceding year. The figures have varied from day to day, but as of the end of October 1956, the total patronage (there being one more day in 1956 an account of being Leap Year) had an increase of .07% for the ten-month period as compared with the same ten months of 1955. This is no great gain, but indicates that the rapid decline noted in the prior ten years may have come to an end.

It may be that riding has stabilized itself at the 1955 level, but only the future will answer whether that is true.

III.

There have also been changes since the writing of the original Chapter III which had to do with wages, fares and inflation. There have been no fare increases, but the extent of the further wage increases is shown by rewriting a few of the paragraphs of that Chapter so as to bring them down to date. They are as follows:

Up to November 20, 1918, there was a 5¢ adult fare on both the Surface Lines and the Elevated. During part of that period, namely from February 1, 1914, to August 1, 1918, the scale of trainmen's wages on two-man cars on the Surface Lines ranged from 23¢ to 39¢ per hour, the average wage during the last year of that period being 35¢ per hour, and on the Elevated the average trainmen's wage ranged from 26¢ to 34¢ per hours, the latter figure being the average during the last year of that period. At the present time, as of November 1, 1956, the trainmen's basic wage on two-man cars is $2.025 per hour and on one-man cars and buses, $2.125 per hour, plus in each case 6¢ per hour cost of living allowance.

But in the years intervening since the 5¢ fare, other benefits have been won by or granted to those employes amounting to approximately $1. 00 (est.) per hour of platform time, as defined on Page 103 of the original Chapter. Such additional benefits were, with one or two insignificant exceptions, entirely unknown during the 5¢ fare period.

The wage cost per platform hour now is 8-1/2 times what it was when Chicago last had a 5¢ fare.

It is pointed out that if fares had increased in the same proportion as wages and benefits, they would now be at a 43¢ level. The table showing wage increases from 1914 to January 1, 1955, contained in the original chapter is brought down to date with the following figures:

2-Man Cars

From	First Year 1st 3 Mos.	Next 9 Mos.	2nd Year & Thereafter	Night Cars
	($1.90	$1.93	$1.95	Day Runs
6-1-55	(1.93	1.96	1.98	P.M. "
	(1.95	1.98	2.00	Night
	(1.955	1.985	2.005	Day Runs $1.975 plus 3¢ c/1
12-1-55	(1.985	2.015	2.035	P.M. "
	(2.005	2.035	2.055	Night Runs
	(1.94	1.97	1.99	Day Runs $1.975 plus 1. 5¢ c/1
3-1-56	(1.97	2.00	2.02	P.M. "
	(1.99	2.02	2.04	Night Runs
	(1.99	2.02	2.04	Day Runs $2.025 plus 1. 5¢ c/1
6-1-56	(2.02	2.05	2.07	P.M. "
	(2.04	2.07	2.09	Night Runs
	(2.035	2.065	2.085	Day Runs $2.025 plus 6¢ c/1*
9-1-56	(2.065	2.095	2.115	P.M. "
	(2.085	2.115	2.135	Night Runs

* Effective December 1, 1956 the cost of living allowance increased from 6¢ to 7¢ above the basic wage rate.

As to one-man operations, the figures bringing down the table from January 1, 1955, to the present are as follows:

1-Man Operators

From	First Year 1st 3 Mos.	Next 9 Mos.	2nd Year & Thereafter	Night Cars
	($2.00	$2.03	$2.05	Day Runs
6-1-55	(2.03	2.06	2.08	P.M. "
	(2.05	2.08	2.10	Night
	(2.055	2.085	2.105	Day Runs $2.075 plus 3¢ c/1
12-1-55	(2.085	2.115	2.135	P.M. "
	(2.105	2.135	2.155	Night Runs
	(2.04	2.07	2.09	Day Runs $2.075 plus 1. 5¢ c/1
3-1-56	(2.07	2.10	2.12	P.M. "
	(2.09	2.12	2.14	Night Runs

1-Man Operators

From	1st 3 Mos.	Next 9 Mos.	2nd Year & Thereafter	Night Cars
	($2. 09	$2. 12	$2. 14	Day Runs $2. 125 Plus 1. 5¢ c/1
6- 1-56	(2. 12	2. 15	2. 17	P. M. "
	(2. 14	2. 17	2. 19	Night Runs
	(2. 135	2. 165	2. 185	Day Runs $2. 125 plus 6¢ c/1*
9- 1-56	(2. 165	2. 195	2. 215	P. M. "
	(2. 185	2. 215	2. 235	Night Runs

* Effective December 1, 1956 the cost of living allowance increased from 6¢ to 7¢ above the basic wage rate.

The allowances and other benefits were estimated at 94-3/4¢ in the original chapter. Because of certain increased allowances, including one additional holiday, the estimate for the so-called fringe benefits has now risen to $1.00 per platform hour. This makes an estimated average cost per platform hour for Surface System trainmen of $3.07 as of June 1, 1956, as compared to $2.88 during the first nine months of 1954.

The figures shown in this part of the chapter may be applied to the various conclusions stated in Chapter III.

The Consumer Price Index which was given in that chapter as 117. 1 for the end of October 1954, had, by October 1956, risen to 121.1. This is the index for Chicago.

The conclusions stated with reference to the number of hours of factory labor required to buy transportation are also subject to some change. It was there stated that if the rider paid the same number of hours of labor per year for transportation as he did in 1914, the fare would be 40¢. This figure must now be revised to 43¢ in view of these changes which have occurred.

The number of employes of the Authority, the decrease of which was shown in the previous chapter to have been approximately 30%, has now gone to a decrease of 39%. Thus, at the respective dates of acquisition, the number of employes was 23,368. By October 1954, this number had declined to 16,180. As of October 1956, it had further declined to 14,346, an over-all decrease of 39% as noted.

IV

Chapter IV addressed itself to two questions:

(a) What were the legal, economic and political forces that made the creation

of a publicly owned local transit system for Chicago inevitable?

(b) Was the purchase price paid for the Chicago Surface Lines and the Chicago Rapid Transit Company fair to the transit riders and to the investors?

These were and are historical matters. No new developments have taken place which would cause a change in the conclusions stated in that chapter.

V

The modernization program described in considerable detail in Chapter V has been continued with vigorous advances. That Chapter brought the total expenditures to and including December 31, 1954, to $98,502,401. At that time the expenditures included the construction of two new motor bus garages and the start of a third, as well as the modernization of shops, machinery and other facilities. Included also was the purchase of 3,586 modern buses and cars.

By October 31, 1956, the third new motor bus garage had been completed and 450 additional modern buses and cars had been ordered. The final order in the rapid transit phase of the equipment modernization program, covering another 70 rapid transit cars, is scheduled for bidding in mid-year 1957.

At the conclusion of this outstanding modernization program CTA will have acquired 4,256 new, modern buses and cars, constructed three new motor bus garages, and modernized its shops, garages, shop tools and machinery and other facilities at a total cost of approximately $137,500,000 and a net out-of-pocket cost of approximately $130,000,000, after giving consideration to the $14,000 salvage value for each of the 540 P. C. C. street cars which were or will be converted to rapid transit cars.

The net expenditures for revenue vehicles under the program will amount to approximately $97,000,000 - - $65,500,000 for 3,512 Surface System cars and buses and $31,500,000 for 744 E1-Subway cars. This will represent 75% of net modernization expenditures.

The balance of $33,000,000 paid or payable under this modernization program includes $2,424,584 for paving of abandoned streetcar rights-of-way and $716,000 on account of purchase of fixed transportation facilities from the Chicago, Aurora and Elgin Railway.

Exhibit I shows revenue vehicles purchased and delivered by years through December 31, 1955, and those on order and planned for year 1957.

This Exhibit is as follows:

Exhibit I

Summary of Revenue Vehicles Purchased Under
The Modernization Program
January 1, 1945 to December 31, 1955, Plus Firm Orders and
Contemplated Commitments to Complete the Modernization Program

Year Received	Street Cars	Trolley Coaches	Motor Buses	Total Surface	L-Subway Cars	Grand Total
1945	–	–	55	55	–	55
1946	103	–	192	295	–	295
1947	199	–	281	480	2	482
1948	298	210	372	880	2	882
1949	–	–	–	–	–	–
1950	–	–	31	31	100	131
1951	–	190	520	710	100	810
1952	–	159	–	159	–	159
1953	–	–	105	105	–	105
1954	–	2	317	319	176 **	495
1955	–	–	78	78	94 **	172
Sub-Total	600	561	1,951*	3,112	474	3,586
Delivered or on Order in 1956	–	–	250#	250	200 **	450
Planned for 1957	–	–	150	150	70 **	220
	600	561	2,351	3,512	744	4,526

** Converted P. C. C. cars for "L-Subway" operation.
# Includes 100 Mack propane motor buses to be operated under a lease agreement.
* Does not include 595 motor buses acquired from Chicago Motor Coach Company.

The total results on the age of equipment are summarized in another exhibit. This demonstrates that in 1945 the average age of the Surface System vehicle fleet was 28. 88 years. Actually the fleet was not taken over by the CTA until October 1, 1947. The result was that at that time the average age exceeded 31 years. The modernization program has now brought down this average age to 7. 19 years, as shown by Exhibit II.

Great progress has also been made in modernization of the Rapid Transit System rolling stock. At the date of take-over (October 1, 1947), the average age of the rapid transit cars was approximately 42 years. The modernization program has now brought down this average age to 27. 53 years, as shown by

Exhibit II, which immediately follows.

At October 31, 1956, 478 new all-metal El-Subway cars had been delivered and 196 more were ordered, under construction and in the process of delivery. When all cars now on order have been delivered, CTA will be able to retire about 200 of the wood-steel units, practically eliminating them from the Chicago transit scene, except for a few which may have to be used in emergencies. A total of 879 old rapid transit cars have already been retired.

Upon delivery of the final order for 70 El-Subway cars scheduled for bidding in mid-year of 1957, the rapid transit fleet will be 100% modernized.

Revenue Equipment Owned by Chicago Surface Lines and Chicago Rapid Transit Company at January 1, 1945, and by Chicago Transit Authority at October 31, 1956, Showing Results of the Equipment Modernization Program

	On Hand Jan. 1, 1945	Average Age (1) (In Yrs.) at 1-1-45	Jan. 1, 1945 to Oct. 31, 1956 Acquired	Retired		On Hand Oct. 31, 1956 Owned	Active	Ave. Age (1) (In Yrs.) of Active Equip. 10-31-56
Surface System:								
P. C. C. Cars	83	8.50	600	486	(2)	197	152	8.33
Other Street Cars	833,388	32.00	–	3,388		–	–	–
Motorless Trail Cars	89	23.11	–	89		–	–	–
Total Street Cars	3,560	31.23	600	3,963		197	152	8.33
Trolley Coaches	152	12.66	561	120		593	578	6.62
Motor Buses								
Gas, Mechanical	243	6.35	258	235		266	256	10.40
Gas, Hydraulic	10	0.50	522	5		527	526	8.98
Diesel, Hydraulic	6	2.50	715	18		703	699	9.72
Propane, Hydraulic	–	–	1,051	1		1,505	1,050	3.98
Total Motor Buses	259	6.03	2,546	259		2,546	2,531	7.25
Total Surface Equipment	3,971	28.88	3,707	4,342		3,336	3,261	7.19
Rapid Transit System:								
Elevated Cars-Wood & Steel	1,167	44. 13	–	875		292	292	50.62
Elevated-Subway Cars -								
Steel-Conventional Type	456	26. 15	–	4		452	452	37.87
Metal-Articulated	–	–	4	–		4	4	8.83
Metal-P. C. C.	–	–	474	–		474	474	3.59
Total Rapid Transit Cars	1,623	39. 08	478	879		1,222	1,222	27.53
Total Revenue Equipment	5,594		4,185	5,221		4,558 (3)	4,483 (3)	

NOTES: (1) Average age in years calculated on the basis that a vehicle is 6 month old at close of year of acquisition regardless of month of purchase.

(2) 400 to be converted to E1-Subway cars (247 completed to October 31, 1956), 85 retired, and 1 held for exhibition.

(3) Difference of 75 is made up of 45 P. C. C. street cars to be converted to E1-Subway cars, 15 trolley bused held for standby equipment and 15 motor bused held in dead storage pending approval for retirement.

In the Chapter was included a discussion of the fall-off in Revenue passengers. The figures there given extended through 1954. There are now added the statistics for 1955 and for the first ten months of 1956. They are as follows:

Up to Date Passenger Data to be Added to
Statement Appearing on Page 184 of Chapter V

Originating Revenue Passengers (In Thousands)

Year	Surface System	E1-Sub. System	Total Chicago	Under Prior Year			Under Year 1956		
				Surface	E1-Subway	System	Surface	E1-Subway	System
1954	5.29,934	111,232	641,166	7. 81	0. 45	6. 46	46. 46	29. 54	44. 13
1955	510,604	112,890	623,494	3. 65	(1. 49)	2. 76	48. 41	28. 49	45. 67
10Mo. of 1956	422,088	95,865	517,953	0.66	(3. 42)	(0. 07)	48.80	27. 23	45. 83

( ) Denotes Increase

VI

Chapter VI dealt with the question of public subsidy of transit in view of the urgent need for continuing mass transportation carriers, particularly in the larger cities, such as Chicago, and in view of the succession of almost insuperable problems that have confronted the industry for many years.

The experience and cost in two large cities--New York and Boston - - was reviewed in the chapter. It appears that New York has spent over 2-1/3 billion dollars in subsidizing public transit, and Boston has spent in excess of 69 million dollars. The programs for the future in both cities contemplate very large expenditures.

The reaction of this writer has been against a general subsidy, but it may become inevitable that capital costs should be borne by the public. Up to this time the Chicago Transit Authority has spent well over 100 million dollars in modernization of vehicles and facilities, all of which has been done without resort to a general tax levy. However, some of the more elaborate plans that have been suggested would be impossible to finance out of the operating income presently received by the Chicago Transit Authority. Certainly increased fares to finance such very expensive plans would not seem to be feasible.

Incidentally, it was pointed out in the chapter that the biggest competitor of public transit, namely, the private automobile, has apparently been subsidized to the extent of $90.00 per year per automobile in Milwaukee and approximately $84.00 per vehicle per year in Chicago.

In the seventh chapter some specific suggestions were made to bring about a more economical use of the street facilities which are in existence. Some of these suggestions contemplated a rather drastic departure from present usage of the streets.

Since the publication of the chapter, one suggestion contained therein- -which had been discussed by CTA and City officials for some time previously- -has been put into test operation. This is the exclusive traffic lane on Washington Street. This was put into effect on approximately June 27, 1956, from the east curb line of Wacker Drive to the west curb line of State Street. The studies indicate the time consumed before the exclusive transit lane operation, then on one day immediately following the use of the transit lane and then an additional study two weeks later, after the public had become accustomed to this new method of operation. The studies indicate that during the morning rush period there has been a saving of time of 14. 5% and during the evening rush period a saving of 15. 4%. This is the average elapsed time that has been saved in this area. During the mid-day period the saving of time has been 25. 8%. The table showing the results of this study of the average bus elapsed running time is as follows:

Average Bus Elapsed Running Time on Washington Street
From East Curb Line, Wacker Drive to West Curb Line,
State Street

		AM Rush Perd.		Mid-Day Perd.		PM Rush Perd.	
		No. of Buses Obsv.	Aver. Elpsd. Time (Min.)	No. of Buses Obsv.	Aver. Elpsd. Time (Min.)	No. of Buses Obsv.	Aver. Elpsd. Time (Min.)
	"Before" Transit Lane Oper. (Wed., 4-20-55)	–	5. 4	–	6. 6	–	8. 3
(a)	"Before" Transit Lane Oper. (Wed., 6-20-56)	147	5. 5	108	6. 6	158	6. 5
	"After Transit Lane Oper. (Wed., 6-27-56)	73	5. 3	53	5. 8	75	6. 2
(b)	"After Transit Lane Oper. (Wed., 7-11-56)	149	4. 7	104	4. 9	152	5. 5
	% Decr. in Avg. Elap. Time (b) under (a)		14. 5%		25. 8%		15. 4%

The savings in minutes show that were such plans applied more generally, the saving in time to those who use mass transportation vehicles would be considerable.

At the same time, studies were made to see whether the use of the traffic lane had an adverse effect upon the movement of privately owned motor vehicles

in the area. The result of this study has been to demonstrate that the movement of that traffic has not been adversely affected. The following is a summary of data bearing on this question:

Vehicle Traffic Volume on Washington Street

	6-20-56 "Before"	Wednesday 7-11-56 "After"	8-8-56 "After"
Washington St. between Wacker Drive and Franklin St. -			
7:30 A.M. to 10:00 A.M.	2,762	2,647	2,648 –
11:00 A.M. to 1:00 P.M.	2,160	2,030	2,014 –
3:30 P.M. to 6:00 P.M.	2,595	2,610	2,777 +
7:00 A.M. to 7:00 P.M.	12,327	11,605	11,783 –
Washington St. between State St. and Dearborn St. -			
7:30 A.M. to 10:00 A.M.	2,133	1,873	1,871 –
11:00 A.M. to 1:00 P.M.	1,845	1,820	1,757 –
3:30 P.M. to 6:00 P.M.	2,435	*	2,525 +
7:00 A.M. to 7:00 P.M.	8,321	*	*

* No report, register failure.

Total vehicle traffic volume during the l2-hour period shows a fall-off on each of the two test days following establishment of the exclusive transit lane. However, this appears to be a reasonable fall-off in traffic between a normal business and full employment test day in June compared with a corresponding vacation period day in July or August.

This trial indicates that there are some undoubted benefits that come from the exclusive traffic lane when applied to one of the busiest streets in downtown Chicago.

The success of the experiment has led the engineering departments of the Authority to recommend the establishment on a more permanent basis of this plan of more efficient use of the public highways involved.

VIII

The Eighth Chapter was in a sense a continuation of the suggestions made in the Seventh Chapter. They have to do first with the more efficient use of the street space that is in existence or will come into existence in the foreseeable future. The suggestions in that respect included transit lanes, which were discussed in the Seventh Chapter, parking controls to prevent the use of public high-

ways as garages by privately owned automobiles, curb cut-backs and throat widening of streets, by-pass routings around busy intersections, a spread-out of the rush hours, the placing of stops and the moving of bus terminals and cab stands to points away from busy intersections. The other part of the Eighth Chapter dealt with the creation of more off-street facilities. Particular emphasis was placed upon the use of median or side strips in the superhighways in and near the city. The time is not far distant when a real test of the efficacy of this suggestion will be made. Those who have studied the matter have high hopes that the efficiency of the median strip will greatly enhance service and effectiveness of public transportation, thus eventually cutting down the need for greater public expenditures to create additional highway space.

The detailed suggestions made in the Eighth Chapter look somewhat into the future, covering developments that will probably take place in the next ten years.

It is hoped that public officials will realize the importance of providing for the thousands who ride on mass transportation facilities by giving mass transportation vehicles a place of exclusive operation in the vast new highway system that is now being planned. Many officials are already fully aware of the importance of making such provisions.

IX

The transportation problem is not limited to the City of Chicago, but includes an area extending for some miles around it. In the 1950 Census, the population of the City was approximately 3 million 600 thousand, while the population of the so-called country towns- -being the area in the County but outside of the City- -was approximately 900,000. The population of both the City and the country towns has increased substantially since 1950. At the present rate of increase, the total population would exceed 5 million people by 1960. The growth of the suburban area has been more rapid than the growth in the City itself.

Prior chapters have established that great capital improvements, both for highways and for mass transportation, will be necessary to efficient living in the entire area, particularly as respects the movement of people and merchandise.

The financing of these extensions will require considerable bonding power. To supply this, it is suggested that one or more municipal corporations be established or authorized with power of issuing bonds and levying general taxes to carry on highway and mass transportation route improvements.

This suggestion is somewhat drastic, but it is believed that time and events will force a partial solution of the problem in substantially the manner suggested in Chapter IX.

The constitutional questions involved are discussed in some detail in that chapter. The plan is workable and can be attained within the limits of the present constitutional framework.

X

One of the great and increasing costs of public transportation is that of compensating for personal injuries and death and for property damage. At the present time over 1. 3¢ out of every 20¢ collected by the CTA is required to pay for such damages (including Workmen's Compensation awards). This burden has constantly increased. It has been a growing load not only on carriers but also on all operators of private vehicles, if they are solvent.

The court calendars have become congested with cases, the trials of which will extend, if they are not disposed of amicably, for some years into the future. The cost to the public of this increased litigation is enormous. The expense to members of the public is very great, because every jury trial under our common law system, which still prevails in Cook County, Illinois and many other jurisdictions, requires at least 20 persons to adjudicate a controversy between two litigants. The fees that can be paid the people who are necessary to the trial are hopelessly inadequate compared to the incomes in private employment.

Moreover, the jury trials are far from infallible. There is lack of uniformity in the results because of the varying judgment of jurors on the question of negligence. The greatest non-uniformity is in the amount of the damage awards made by the juries. People with similar injuries receive verdicts which vary over a wide range, sometimes in a ratio of 25 to 1.

In addition to all of those difficulties is the fact that many automobile operators are financially unable to respond in any substantial amount of damages. It is estimated that 35% of all automobile accidents are caused by motorists who are uninsured and unable to pay any substantial verdict.

The common law system of damages is therefore highly inefficient, very cumbersome and completely lacking in even-handed justice.

The Tenth Chapter, therefore, discusses whether a compensation system, applicable either to all transportation vehicles or applicable only to municipal corporations, is a feasible and just solution of this vexatious problem.

It cannot be predicted with scientific certainty whether an organization such as the CTA would save money by a compensation system similar to the Workmen's Compensation Acts. But this much would be certain - the courts would be relieved of the greatest single cause of the congestion of court calendars; the payment of compensation would be more expeditious; and the amounts of compensation would be far more uniform and just.

Without doubt, the very force inherent in this situation will someday cause a drastic change in the present outmoded method of ascertaining the awards for damages and the time of this change may not be too far in the future.

XI

Because of the tremendous competitive forces to which mass transportation is subject, it appears to be necessary that greater speed be attained in public transportation. Some classes of solutions are in the reasonably attainable future. Particular emphasis must be given to the use of parts of the superhighways for median or other exclusive strips to carry the mass of the people. Another partial solution to the problem of movement is to use railroad rights-of-way where it can reasonably and safely be done to augment and speed up the mass transportation service.

There is another large area which lies much farther in the future and may be described as a dream area. These are systems of transportation which are radical departures from those that have been in use in the world up to the present time. They will develop and some day their use may be indicated in a system as large as the one in Chicago. Another possibility which has been suggested is the use of public transportation systems for local freight transportation. This will take considerable planning. If it ever could be developed successfully, it would fill the great gap which now exists in the finances of mass transportation systems. That is the use of the facilities during the off-peak hours.

For many years, perhaps at all times, there has been a problem of the rush period in the morning and in the evening. This period, which is roughly two hours at each end of the day, puts an unbelievably heavy load on transportation facilities. During the other 20 hours, there is very little usage.

Undoubtedly no industrial plant can succeed on four hours of production and 20 hours of operation at a loss. If these slack periods could be used for freight carriage locally, one of the financial weaknesses of public transportation might in part be solved.

CONCLUSION

The writer hopes it will not be considered immodest for him to quote a few paragraphs from an article prepared by him for the Daily Bond Buyer, which appeared in the November 28, 1955, issue:

> "The Chicago operation, while it has had to overcome unprecedented obstacles, has shown, in the facts that have been briefly reviewed, that it has been financially sound. Since 1947, the time of the issuance of its first bonds, CTA has steadily and promptly paid all interest as well as all principal on bonds that have come due; has earned and deposited with the Revenue Bond Trustee all revenue bond reserves required under the trust indentures ($7,344,587 at 8/31/55) *; and has purchased

* $7,793,074 at October 31, 1956.

and retired $2,229,000 par value of its long term revenue bonds in advance of maturity dates. **

"Much equipment has been purchased by equipment trust certificates that are payable out of the depreciation fund. Here again both principal and interest have been promptly paid, and the prospects for continuance of that record appear to be very good.

"Fares have been increased, it is true, but in proportion to increases in wages and other costs, the increases have been moderate. Public mass transportation is a problem not easy of solution. Chicago has had many difficulties. It has been confronted with an inflationary spiral, but it has taken all of its difficulties in stride, and up to date, the financial results to investors have been better than were the results under private ownership."

** As of October 31, 1956, C. T. A. had purchased and retired $3,136,000 par value of its long term revenue bonds in advance of maturity dates.

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