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At Mid-1959

"TRANSIT FACES THE FUTURE"

A Manual of transit "improvement" and "self-help," consisting of a summary and analysis, supplemented by actual case histories, of operating company answers to questions concerning:

1. Trends in transit improvement programs (4/6/59)
2. What transit companies are doing to help themselves (5/20/59)

Edited by

W.S. Rainville, Jr.  
Director of Research

August 31, 1959

American Transit Association  
355 Lexington Avenue  
New York 17, N.Y.

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## FOREWORD

AND

## EXPLANATORY NOTE

In the spring of 1959 the Association's director of research was given two speaking assignments by association officials or committees.

The first of these, an appearance before the annual convention of the American Society of Civil Engineers, to discuss "Trends in Transit Improvement Programs," has already been successfully discharged.

The second, a report to the first general session of the 1959 annual convention of the American Transit Association on September 21, has yet to be delivered. The assigned subject is "What Transit Companies Are Doing to Help Themselves."

In gathering material for both of these assigned tasks, recourse was had directly to the transit operating companies who are actually making the improvements and doing the job of "self-help." A total of 48 transit operators in the nation's 50 largest urbanized areas were invited to participate, along with 13 companies carefully selected from the next 50 urbanized areas on the basis of their previously demonstrated interest in Association "street and highway" questionnaires. In all, 61 companies were canvassed with appeals for assistance on April 6, 1959 (transit improvements) and May 20, 1959 (transit "self-help"). Copies of these requests may be found in Appendices "A" and "B".

The response to these requests has been overwhelming - in quantity and quality. Of the 61 companies asked to participate, 53 have responded fully and helpfully - a return of almost 90 per cent. Of greater significance is the warmth and enthusiasm of the responses, indicating an obvious desire of these company managements to share with others just what they did and how they did it in respect to their programs for improving services for the traveling public, and "staying in business." At this session when the long-term downward trend in transit riding appears to be levelling off it is doubly heartening to learn in managements' own words that transit is "here to stay" - and that it is preparing to play its important future role as one of the vital services in the growing urban community.

As a consequence of this study during the early summer of 1959, the writer reached two decisions in connection with his assigned task:

1. To call the convention report, at least in its first draft form - "Transit Faces the Future."
2. To prepare five copies of a "mid-1959" transit manual on "improvements" and "self-help" by editing the material submitted by the operating companies into a series of summaries and case histories, which will be found herein. These manuals are to be placed in the Association's library for use by member operating companies on a loan basis.

This manual, therefore, consists of the following items:

## II

A copy of the convention report on transit "self-help" entitled "Transit Faces the Future";

A copy of the paper on "Trends in Transit Improvement Programs";

A series of 29 Summaries derived from the case histories of individual companies;

A series of 53 Case Histories derived from the reports of the individual companies as submitted in response to the request; and

Copies of the requests for assistance.

The individual company members who so graciously responded have already been thanked, each within twenty-four hours of receipt of his contribution. It is a privilege to thank them collectively for the helpful effort they have put forth in making this compendium possible.

W. S. Rainville, Jr.  
August 31, 1959

"TRANSIT FACES THE FUTURE"

Paper prepared for presentation at the  
First General Session  
1959 Annual Convention  
American Transit Association  
Minneapolis, Minn.  
September 21, 1959

W. S. Rainville, Jr.  
Director of Research  
American Transit Association

Transit is "here to stay" - fully prepared to play its future role as one of the vital public services in the growing urban community.

This is the only conclusion that can be drawn from the material upon which this report is based.

This industry has grasped the significance of the need for a greater social acceptance of transit in the public consciousness; it has sensed the need for improved speed and convenience of its services. In seeking to heed the heavenly admonition to "help themselves" in times of trouble, managements have placed first the needs of their passengers and the communities which they serve - and have helped themselves in the process.

In preparing this report, recourse was had directly to the transit operating companies. Forty-eight companies in the nation's 50 largest urbanized areas were invited to participate, along with thirteen companies carefully selected from the next 50 urbanized areas on the basis of their previously demonstrated interest in ATA "street and highway" questionnaires. The response to this invitation was overwhelming - in quantity and quality. Of the 61 companies asked to help, 53 have responded fully and helpfully - a return of almost 90 per cent. Of greater significance is the warmth and enthusiasm of the responses, indicating an obvious desire on the part of these company managements to share with others their individual programs for improving services for the traveling public, and for "staying in business."

At this happy season when the downward trend in transit riding appears at long last to be levelling off, it is doubly heartening to learn in management's own words that transit is "here to stay" - and that it is braced for its future role in community progress.

It will be impossible in the time allotted me to report in detail just what these companies did, and how they did it. I can hope, at best, to sketchily touch upon a few of the highlights.

For the benefit of those who care to go into the subject in more detail, copies of the material on which this paper is based will be made available to the operating member companies of the Association. In preparing these copies, the individual responses received from the companies were edited into a series

of "case histories" of consistent format. From these, summaries were prepared covering each field of transit improvement, and each area of transit "self-help."

#### IMPROVED SPEED AND CONVENIENCE

Transit companies have improved the speed and convenience of their services to the public through, consolidation of operations, improved routings, improved headways, improved travel time, improved traffic conditions, rapid transit improvements, the use of transit on expressways, and the operation of express and limited services on major arterial streets.

##### Consolidation of Operations

In the past several years there have been consolidations of properties or routes, the taking over of former private operations by municipalities and public authorities, or changes in ownership and management. Each such instance has afforded the "new broom" an opportunity to "sweep clean," or at least to focus a little light into the "dark corners." Improvements in service to the public and economies in operation have resulted. Average system speeds have been increased; duplications in service have been eliminated; operator hiring procedures have been overhauled to obtain a better caliber of transit representative on the vehicle with less labor turnover.

##### Improved Routings

An imposing number of companies have reported improvements in route patterns, extensions into growing residential areas, extensions to housing developments and outlying shopping centers. New routes have been established experimentally, with later removal of those which do not work out and intensification of services on those which do.

Noteworthy is the trend, reversing the practice of the past several decades, towards "through-routing" in the interests of greater public convenience, speed and rider appeal, as well as materially reducing the number of right- and left-hand vehicle turns in crowded downtown streets. Circuitous routings have been superseded by more direct ones. Customers have reacted appreciatively to these improvements.

Where routes use a common "trunk" in the downtown area, buses have been "spaced" to eliminate long gaps at some times and the "bunching" of service at others.

Most of the reporting companies have indicated a steady program in recent years towards the elimination of "feeder" and "shuttle" services, and the substitution of direct services from residential areas to downtown, so that the transit patrons may have a direct transfer-free ride.

As the result of improved routings, companies claim increased speeds up to 25 per cent, eliminating as many as 25 per cent of the vehicles in the business district without any decrease in service, savings in vehicle miles, hours and operating costs, and the relief of traffic congestion.

In those cases where some slight added costs have resulted from improved routings, companies have not found them burdensome, and they have been more than offset by the improvement in service and good will.

#### Improved Headways

Most companies make passenger checks on a regular, progressive and systematic basis, changing headways frequently to meet requirements of passenger travel.

Some companies have not reduced service in proportion to the decrease in riding in recent years. Service has been curtailed at nights and on weekends, but maintained throughout the daytime period. While this has cost some money, at least one company believes that it has maintained a high volume of riding, which in turn has kept many automobiles out of the downtown area.

Two publicly-owned transit systems have deliberately maintained high standards of service and compared their riding with that of other companies which have reduced services more nearly in proportion to the decrease in riding.

One of these cities reduced revenue miles 5.4 per cent in the last five-year period. Nine other large cities reduced revenue miles by 23.0 per cent. Eight of the other nine cities showed a reduction in maximum scheduled vehicles of 22.6 per cent as compared with 10.4 per cent for the test city. The average passenger loss in the nine cities over this period was 30 per cent, as compared with 22 per cent for the test city.

In the other of these cities, 18 per cent more vehicle miles were operated in 1955 than in 1941. Comparisons were made with four other cities similar in the number of vehicles operated, mileage, employees, and population served. For every 100 vehicles operated in 1941, this system is operating 113 vehicles today. The four comparable cities operate 81 vehicles, and the transit industry generally operates 92 vehicles, for every 100 in 1941. Figures of the U.S. Department of Commerce indicate that business district total retail sales for this city have increased 5-1/2 per cent between 1948 and 1954, while the four comparable cities decreased nearly 8 per cent. Department stores alone show an increase of 4 per cent, while the four comparable cities show a decrease of 15 per cent. Management is confident that the city's transit operation and its high service standards have contributed substantially to this trend.

#### Improved Travel Time

Companies are alert to the economies inherent in increased speeds of operation, as well as to the improvement in passenger convenience which they bring. Thus, in their purchases of vehicles of all types they seek improved accelerating and braking characteristics, free running speeds, ratio of horsepower to weight, etc. Operational changes conducive of improved speed and convenience are introduced, and companies cooperate fully with city and traffic officials to obtain faster movement of ALL traffic through the streets.

Reductions of up to 30 per cent in travel time through operational changes and express operations have been reported. One large company states

that such an improvement in speed on its lines has produced an over-all improvement in service of 13 per cent with reduced equipment and increased riding volume by 6-3/4 per cent - all of which meant an increase of \$100,000 in annual revenue and a simultaneous reduction of \$200,000 in operating expenses.

A smaller company in a highly industrial area reports "line-ups" of vehicles at stated intervals in the downtown area for the convenience of transferring passengers - at morning and night shift-change hours, and all day Sundays. Considerable economy in operating cost was achieved by reducing service on several lines to conform to the "line-up" times and, although the interval between buses was actually lengthened, passengers were assured of direct connections without delay in travel time. Company surveys and public reaction indicate that there has actually been an over-all improvement from the riders' point of view.

#### Improved Traffic Conditions

Transit companies have been working for many years with the proper public officials to free congestion in city streets, improve the flow of all vehicular traffic, and step up the speed and convenience of transit service in the more heavily-traveled urban areas.

The methods used and the results attained are recorded in the case histories and summaries on file at Association headquarters. A few will be mentioned here.

At least eighteen reporting companies make mention of reserved transit lanes in congested downtown streets, either in present operation or early prospect. Savings in travel time of up to 30 per cent at certain times of day have been reported. On one route of a company which has had such lanes in effect since 1956, 17 buses now maintain the necessary six-minute schedule during rush periods that formerly required 19 vehicles.

One company which has not yet "sold" the reserved lane idea to its city has strong press support for a plan which calls for setting aside the curb lane in the prevailing direction for rush hours only for the exclusive use of buses, together with a reversible center lane - so that motorists would not be deprived of a lane. This principle should widen the scope of application for the reserved lane idea by making it practical on two-way streets which otherwise would be just "one lane short" of making it work.

Companies have remained active in their programs for getting parking prohibited during rush hours in prevailing directions. This increases schedule speed; consequently, company performs rush-hour services with a saving in buses and operators, while giving the customer a faster ride.

Improvements have been made in signal systems and other features of the traffic control program.

One transit company installed, several years ago, a "neutral zone" in the downtown section. No fares are collected in a 24-block area. Loading time

was immediately reduced 50 per cent. All this saving could not be translated into improved travel time because of difficulty in pulling away from the curb. Passengers are enthusiastic about this plan, which attracted world-wide attention. Cooperation by the city in establishing restricted parking regulations assisted materially. Pressures by some merchants on the City Council, however, has resulted in resumption of on-street parking "here and there." Company has learned that constant vigilance is needed to prevent individual merchants and special groups from "nibbling away" at restricted parking zones. Today this company has joined the city in an experimental "try" at downtown shopping malls for pedestrians.

#### Rapid Transit Improvements

Specific improvement projects on rapid transit systems have resulted in the elimination of bottlenecks and in increased capacity of the systems for rush-hour movements. Former railroad commuter lines have been integrated with rapid transit systems to maintain essential services. Travel times have been improved; connecting motorbus, services have been instituted. Improvements have been made in stations for customer convenience - escalators, longer platforms, improved lighting.

A most significant development has been the increase in the number of parking spaces provided adjacent to rapid transit stops, so that the passenger automobile may effectively be coordinated with transit for a more convenient journey to town. Such spaces become filled almost before they are ready for use - and many of the users were former "exclusive motorists."

Future developments in rapid transit on the West Coast are anticipated, for not all cities in that area are enamoured of the automobile freeway as an ultimate solution to the problems of movement in large metropolitan areas.

#### Transit on Expressways

Twelve of the responding companies reported the present or anticipated use of transit on expressways.

A new era in local transit history began in June 1958, when the first rail rapid transit line started operation in the median strip of a multi-lane expressway, a joint financial undertaking of the Federal, state, county and city governments, and a transit operating authority. Running time between terminals has been reduced about 30 per cent. Public acceptance has been spontaneous and gratifying.

The operation of express motor bus service on expressways has reached significant proportions. More than thirty express routes are in such operation in ten cities, and more are in prospect. Buses can operate at the same speeds as automobiles; "park-ride" stations located at shopping centers along the way keep many automobiles away, and aid in supporting the express service. Traffic congestion downtown is avoided for these motorists.

In some instances a premium fare is charged for these faster expressway services; in other cases, no extra charge is involved.

Savings of up to 30 per cent in travel time have been achieved by the operation of buses on expressways.

#### Express and Limited Services on Arterial Streets

In all, eleven transit operators have reported operation of express and limited bus services on arterial streets. Passengers are pleased because a fast ride is given to and from outlying areas. In one case, express service patronage has shown an increase of five per cent as compared with an over-all decline in system patronage.

Travel time on such lines has been improved 20 to 30 per cent over corresponding local services. City and traffic officials have cooperated in many cases to restrict parking in the curb lane to permit rapid movement of buses.

#### GREATER SOCIAL ACCEPTANCE

Transit managements are all too well aware of the great change which has come about on this continent as the result of increasing numbers and greater utilization of the private passenger automobile. They realize that this vehicle has become the "standard of performance" for the average American family in appraising local transportation services. To this end, therefore, transit has concentrated upon measures to obtain greater social acceptance of transit - not only by community officials because of its importance as an efficient mover of persons through the city streets, but also by individuals, families and common-interest groups as regular patrons thereof. ....It is not enough to improve speed and convenience of services, and to acquaint the public with these improvements through advertising and publicity. Imagination and ingenuity must be employed to devise and successfully operate services tailored to the needs of the individual in a motor-conscious civilization, and to get him to use them because they are the "thing to do" - or a thing which he CAN do without dimming his prestige.

Some of these services will be briefly touched upon.

#### Special Express Services

One of the pioneers in the rush-hour express service field has based his "pitch" upon two factors - (1) speed, and (2) social acceptance to the downtown worker. Express bus services, in the opinion of this operator, combine both factors. This service now comprises 18 rush-hour express lines using 240 vehicles. Time savings of as much as 30 minutes per round trip have been effected between residential areas and downtown. While the element of "social acceptance" is difficult to measure, company knows that many of its patrons consider it "smart" to say that they are "express riders" - and to pay a premium fare, while they would hesitate to say that they were "bus riders." Even before air conditioned vehicles were used on these runs, there was an increase in express service patronage of five per cent as compared with an over-all decline in system patronage.

At another point on the "social" scale, one operator has started several "servant limited" lines, designed especially for domestic help. These lines operate on an expressway to suburban parts of town where regular bus routes cannot be justified, using buses which would otherwise pull into the garage after morning peak hours.

#### Club Bus Services

While few "club bus" routes are in operation, they are mentioned as one interesting means of obtaining social acceptance for transit riding by those who prefer a high-grade prestige "reserved seat" service between residential areas and business centers where all-day service is not warranted.

This type of operation is also of interest because it embodies the principle of a fixed service or stand-by charge coupled with a "use" charge each time the patron occupies his seat.

#### Charter Services

Transit customers are getting the idea that it is "smart" to go in a group and to enjoy each other's company while en route to points of common interest, picnics, special events, and so on. The advantages of group over individual travel have been stressed through many media, and with the assistance of company employees. Managements have backed up their promotional efforts by providing the right equipment for special purposes, adequate public address systems, trained guides, as well as by arranging for meals and so on. The summary on this subject makes interesting reading. I will not labor it at this time because the ATA Board of Directors has called for a special study in this field, a report of which by the Association staff will be forthcoming shortly.

Companies have increased charter revenues fantastically through promotional efforts, as the following examples will indicate:

- revenue increased from \$55,000 to \$200,000 annually in three years;
- revenue increase 50 per cent over the preceding twelve months;
- an increase from \$6,000 to \$32,000 annually;
- a charter revenue of \$300,000 per year, plus considerable "good will";
- an increase from \$144,000 to \$296,000 in ten years;
- an increase of 127 per cent in charter business in five years;
- charter revenues up from \$26,000 in 1954 to \$188,000 in 1958.

Managements have successfully negotiated contracts with school authorities for school bus services. School officials are apparently becoming convinced that the company can furnish these services more cheaply than they can. Some companies are currently purchasing "body-on-chassis" school buses for such services at one-third the cost of their regular buses. In one instance charter promotion and school contract services have raised an operator's income from these sources from \$6,000 to \$124,000 per year over a three-year period.

### Services for Shoppers

In no field has the transit operator been more active than in increasing the social acceptance of his services to the lady shopper. Shoppers' special services of many kinds have been instituted. In one form, a shoppers' special loop bus provides a fast, direct, low-cost connection between arterial lines and the shopping district, the medical center and, where possible, local and other governmental centers. This is designed to encourage the short rider. In other forms the company operates deluxe-type off-peak express services for shoppers between residential areas and downtown at a premium fare - using expressways where available. These have proven very popular. Where air-conditioned buses are available, they have been used to advantage in operations of this type.

Another effort to further the public acceptance of transit by the shopping public has been through cooperation with merchants on various forms of "ride and shop" promotion. These efforts are based on the fact that transit customers are entitled to the same "prestige" treatment as automobile customers. Merchants have been encouraged to survey their customers to satisfy themselves as to the dollar value of the transit shopper to the store. If the merchant provides free parking space for the shopping motorist, he should also consider a corresponding courtesy to the transit shopper.

Activities vary from special "sale days" or "fare refund days" held once or twice a season to formal validation arrangements in which the customer is refunded one or more transit fares after having made a minimum purchase. The forms of some of these plans have changed for the better as the result of experience. The variations in approach make interesting reading, and may be found in the bound manual referred to, along with some statements as to results obtained.

A few companies have inaugurated "stop and shop" transfer privileges - both in the downtown area and in the neighborhood shopping centers on various lines.

### Other Special Services

Transit operators have been meeting the needs of thousands of persons in the field of recreational transportation, and have gained greater acceptance of the collective approach to amusement and play. Sunday excursions to points of interest have required as many as 50 buses to serve 1,300 persons on a single outing. Multiple-day, all-expense tours have proven popular, and produced greater financial return than one-day tours. Direct services to baseball and football games, special Sunday services for churchgoers, direct services to convention events, expositions, etc., are all available for those who tire of driving and bucking traffic.

### Improved Vehicles and Greater Public Acceptance

Not the least of the factors contributing to a greater public acceptance of transit has been the improvement of transit vehicles used in the regular services of transit companies. Just as the successful charter operators have introduced

appropriate vehicles into their fleets for special purposes and school service contractors have introduced the more economical school-type bus, so operators generally have spent more money on their vehicles to give them a dressed-up appearance. Interior colors and paneling, seats, windows, lighting - all these have received expert attention to create a vehicle with greater rider appeal.

The experience of the company which claims responsibility for the initial "push" in the search for a new bus design is of interest. This company has purchased buses while awaiting the manufacturer's "new look" buses, and given them special treatment based on the recommendations of an interior airplane designer. It has gone quite far on a reconditioning program for older buses, with attention to interior design and seats, floors and painting. It has several of the "new look" buses on order. Since women riders represent two-thirds of this company's daily patronage and 85 per cent of the base patronage, the entire "new look" program has been directed at them.

In the opinion of this management, the most significant thing revenue-wise was the method of assigning this "aircraft interior" equipment. Each department had a different idea -- the traffic department wanted to saturate one or two routes with these buses in the P.M. peak to save one or two scheduled vehicles; the safety department wanted the buses kept off certain routes because of difficult turns; the mechanical department wanted them run on high mileage routes to get maximum maintenance savings; the transportation division wanted them spread between divisions to keep the drivers happy; public relations wanted to put a bus on each route to keep everybody happy.

Management decided to stick with its original conception and "aim at the women." Their percentage is highest in the base, when a comfortable seat means most and color can be enjoyed. So, company saturated base schedules of heavily traveled routes with these vehicles. Any woman using the service during the base period boards a new coach.

A study of the last two routes so equipped shows that company's riding increased by 3.6 per cent as compared with all other routes, notwithstanding a mileage reduction on them of twice the reduction on other routes. This is a significant increase in revenue - and company believes the coaches have added this 3.6 per cent increase as "net," since savings in maintenance equal the annual added depreciation costs. Company is pleased at this increase, as it is associated with its basic service to the public, which brings in 95 per cent of gross revenue.

#### Air-Conditioned Vehicles

Air conditioning is being tested experimentally in rapid transit cars. At least three companies are experimenting with air-conditioned buses. Two other companies have gone well beyond the experimental stage, one having enough units so equipped to handle practically all base service and about 40 per cent of the rush-hour service.

The largest air-conditioned bus fleet is employed by a company which features special service at premium fares. 245 buses have been air conditioned for express and shopper services. During the summer of 1958, records show that air conditioning was responsible for an average of 12 per cent in new transit customers on these special lines, in addition to local service passengers who switched to air-conditioned buses at a higher fare. The average daily increase in revenue on these lines during the summer was 16.4 per cent; two-thirds of this increase was retained during the winter months.

#### Transit-and-the-Automobile

Great interest continues in "wedding" the advantages of the private automobile and public transit through park-ride and courtesy-parking arrangements. Several successful ventures of this type were reported, along with one unsuccessful undertaking. In the latter case the company has not given up on the idea.

Park-ride, especially where combined with rapid transit or express bus services, has the virtues of speed and social acceptance, and combines the best features of each vehicle type. The country's newest rapid transit operator is an ardent advocate of this arrangement. The use of more than 2,000 parking spaces in lots adjacent to rapid transit stations has encouraged a number of people to ride who otherwise would have driven downtown or not gone there at all. Of the persons using the lots, 71 per cent have been found to be new riders.

THAT HEAVENLY VIRTUE - HELPING ONE'S SELF:

I pause now to pose a question.

How important is it to the general public that transit properties be well and efficiently managed, and that they do everything in their power "to help themselves"?

A successful transit executive on a large midwestern property puts his answer this way:

"Transit's call for help from American communities today is a real one. It is no "wolf call." There are major problems facing transit in every community - born of automobile competition and the explosive growth of the central city and residential suburbs.

"The result has been a changed pattern of travel for the community at large -- one difficult to meet and still maintain an attractive service. So, transit ends up with a bigger territory to serve, and fewer customers. Yet -- urban planners and engineers maintain that transit must be sustained and encouraged for the good of the community. Its efficiency in the movement of people in urban areas is essential to the economic and social welfare of these communities. Transit is, therefore, deserving of help along with other essential community services.

"In some cases recognition of this fact has taken the form of public ownership in order to expedite and simplify the means of community aid. This is, of course, a matter for the individual community to decide. The fact remains that there are many ways in which help can and should be provided, regardless of transit's ownership status. However, before such aid can be justified there must be some evidence that the proposed recipient has done everything reasonably within his power to help itself."

Another prominent transit executive puts it this way:

"Company has made progress in reducing expenses in all categories. ....Management feels that in this penny-pinching business we are in, about half the battle is a continual pecking away at small details."

Another says:

"Company does not think there is any 'magic' to be used in the bus business any more than there is in any other business. In fact, there is no short cut to business acumen. The success of any business enterprise is in direct proportion to its management ability."

The final quote on this subject says:

"Company knows that every change resulting in cost reduction in operating expenses, taxes and depreciation assists it in providing service to its patrons, and maintains net revenue. ....One real method of helping to do better has been achieved through regular staff meetings. Company's collective brain power is better than that of the 'top brass' alone."

In short, companies believe that they are able to stay in business to serve the public in their respective communities by effecting cumulative economies in scheduling; in operation and supervision; in maintenance, servicing, and cleaning; through reorganization, reassignment of duties, and mechanization; through improved safety and claims experience; through improved public relations; as well as through tax relief and savings in fixed charges. These measures may be less "glamorous" than those taken to insure improved speed and greater public acceptance, but they are nonetheless effective and in the public interest. Along with improved passenger revenues, increased charter business, other income, and revenue from diversification of activities, these economies help keep the ship afloat.

#### Economies in Scheduling

Transit companies remain alert to opportunities for improved schedule efficiency and savings in driver costs. Vehicle performance, improvement of traffic flow through the streets, and systematic study of passenger traffic

volumes, running times and delays are all elements of the process. Reduction of "dead" mileage, "off-route" operations, and "cross-routing" have helped to maximize the use of equipment in rush hours. Closer attention has been paid to closing times of stores and shops, with favorable passenger reaction.

At least two companies have tried reduced schedules scientifically adjusted to provide definite "meets" and "overlapping layovers" of vehicles in the downtown area in the late evening hours - with ample time for patrons to walk to any transfer line and find a bus waiting; or special routes to pick up regular patrons in their neighborhoods to take them to their work. These methods resulted in sizeable savings - eleven scheduled buses in one case, \$200,000 per year in another - yet no one was inconvenienced, and public approval was voiced.

Two companies are experimenting with "automation" in the schedule-making field, and report faster schedule adjustments to meet passenger needs with substantial reductions in clerical costs.

#### Economies in Operation and Supervision

Transit companies continue to seek means of improving the dependability and convenience of their services on the public streets, and to effect economies in the supervision of these services. In recent years mobile supervision and the use of two-way radio have permitted notable gains in this field. Methods of fare collection have been re-vamped to speed loading operations. Operating divisions have been combined under one group of supervisory and clerical employees. Changes in operating procedures have resulted in reductions of train personnel. Dispatching setups have been modified for increased efficiency and greater economy. Two-way radio communication between dispatchers and individual drivers has improved schedule adherence and heightened passenger convenience while saving on manpower and operational costs.

#### Economies in Maintenance, Servicing, Cleaning

Companies report a continuing search for greater efficiency, better facilities, and more effective procedures for handling the maintenance, repair, servicing and cleaning of transit vehicles. This results in improved dependability and greater attractiveness of vehicles in service, as well as lowered equipment costs.

Inspection and repair facilities have been combined and modernized; new tools, equipment and facilities for servicing and cleaning have been installed. Inspection intervals have been "stretched out" without harm to equipment or its performance on the streets. General office facilities have been brought to plant locations for closer communication between management and supervisory forces.

One large company reports a reduction of 46 per cent in maintenance personnel over a period of years in which the number of vehicles decreased but 10 per cent. Computed at 1958 wage rates and related benefits, this amounts to an annual saving of \$48,100,000 for the 8,000 employees eliminated. A smaller company reports a \$2,300,000 saving annually due to improved shop

equipment and techniques and reduced shop forces. A third company reports a 50 per cent reduction in maintenance costs through fleet standardization. A classic example of economy in this area furnishes the following results:

- inspection intervals widened
  - backlog of "bad order" buses cleared up
    - improved condition of equipment
    - fewer complaints
- freer flow of equipment in maintenance areas
  - better oil consumption
    - increased miles per mechanical failure
    - reduced cost per mile in spite of higher wage rates
- cut in maintenance man-hours as follows:
  - February 1952      58 man-hours/1,000 miles
  - early 1958        25 man-hours/1,000 miles

#### Economies Effected Through Reorganization, Reassignment of Duties, Mechanization

It is always "tough" to pare the overhead down to meet a reduced volume of business. Many reasons, sentimental and otherwise, may be found for not making such adjustments. Notwithstanding the distasteful nature of this task, much progress has been made in this direction.

At least twelve companies have reported economies in costs for office, supervisory and clerical personnel, much of it accomplished by the introduction of machine accounting procedures. Centralized offices and shops have permitted personnel reductions. Employees who retire are not replaced. Duties are scrutinized carefully, and functions are combined. One large accounting department reports a 43 per cent reduction in staff. Other reductions ranging from 12 to 60 per cent have been reported.

Storerooms have been reduced in number, and their inventories curtailed, along with savings in personnel.

Better performance has been attained through continuing study followed by realignment of organization and reassignment of duties, utilizing the talents of the individual members of staff in their optimum combination and eliminating "deadwood."

#### Improved Safety and Claims Experience

Nineteen companies report intensified efforts over the past several years to improve standards of safety and to reduce claims costs. Programs vary from the simple to the elaborate, and are described and summarized in the Manual. Some twenty-five "steps" to better performance, used in varying combinations by the several properties, have been reported.

Sixteen companies have indicated the extent of the improvement which their activities in the safety and claims fields have produced. Reductions in number of accidents of up to 57 per cent, amounting to several million dollars per year, have been reported in the face of increases in general city traffic

accidents of up to 135 per cent in the same period. One company reports a reduction in claims costs from 10-1/2 per cent of gross revenue in 1947 to 6 per cent today. Another proudly boasts that it has paid out in claims over the past twelve years just 4/10 of 1 per cent of its gross revenue - about one-tenth the average outlay over the country. Employee lost-time accidents have, in several cases, been practically eliminated.

#### Improved Public Relations

Transit companies continue to maintain and expand the excellent public relations measures which they have been exploring and using for many years. These include institutional activities designed to bring the importance of transit to city officials, business leaders and the general public; informational activities designed to advise the public as to routes, schedules, special services, etc.; and employee participation programs.

Most reporting companies are conscious of the vast "public relations potential" represented by the twice-daily contacts between their vehicle operators and their patrons, and several have moved to capitalize on this valuable asset. The approaches used are outlined fully in the "self-help" manual. One company reports a 560 per cent increase in employee commendations, a 50 per cent decrease in operator complaints, and a 70 per cent decrease in service complaints over an 8-year period.

There are general reports of a betterment in labor relations, more cooperation from the daily press, and better understanding on the part of governmental bodies and the riding public.

#### Tax Exemption and Tax Relief

There is little need to discuss here the efforts of transit companies, singly and in concert, to obtain relief from burdensome taxes and imposts. These have been set forth in a special report of the ATA Law Committee and are related weekly in PASSENGER TRANSPORT. Since the beginning of this activity several years ago, nearly 300 cases of tax relief granted by states, counties and municipalities have been reported.

#### Savings in Fixed Charges

Companies report savings in depreciation costs through the nature and timing of their equipment replacement programs, through an extension of estimates of useful life based on demonstrated experience, or through a change in methods of figuring depreciation schedules.

Favorable interest rates have been negotiated for equipment trust certificates by giving their debt service requirements a prior lien on depreciation reserve funds. Retirement of revenue bonds in advance of maturity through sinking fund and bond amortization fund monies has reduced interest costs substantially for one large property. Proceeds from sale of unused overhead equipment in another instance were used to buy in bonds to the extent of nearly \$1 million worth, with consequent interest savings.

The Revenue Outlook

Some companies have claimed specific revenue increases from the steps in improvement which they have taken. These include improved headways, the use of "new look" buses for the ladies off-peak, and air conditioning. Other companies report a stabilization or "leveling off" of riding, stemming the long-term decline of the past fourteen years. Industry figures reflect this latter tendency.

The vast potential in charter, contract, and special service revenues has previously been touched upon.

Still other sources of reserve are being found by companies in a diversification of their activities in the fields of truck rental and leasing, and in the performance of maintenance work on the vehicles of other operators, in the intercity bus, school bus and trucking fields. As one company says: "It seems quite possible that company might, in the long run, make more money on this than on operating the transit system. The net result could be to better insure continuance of transit service in the community."

IN CONCLUSION

In conclusion, I would like to express my appreciation for this assignment -- for the privilege of receiving the reports of these companies and the opportunity to analyze and summarize them.

I hope that many of you will borrow the bound manuals from our ATA library and review the summaries and the individual case histories to be found therein. If you do, I am sure you will be inspired and encouraged, as I was. I am sure you will gain the definite impression, as I did, that transit is facing the future in trim and streamlined readiness -

- alert to the needs of its patrons,
  - alert to the needs of the community,
- better public understanding, and
  - recognized as a vital element in the practical solution of present and future transportation problems in our growing urban areas.

W. S. Rainville, Jr.  
August 5, 1959

"TRENDS IN PUBLIC TRANSIT IMPROVEMENT PROGRAMS"

Opening Paper prepared for Panel Discussion on  
"Public Transit Improvement Programs"

Annual Meeting - A.S.C.E. - Cleveland, May 7th

W. S. Rainville, Jr.  
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Mr. Chairman and Gentlemen:

In the absence of precise instructions from your convention programming officials as to the nature of my paper, I have approached this task with some trepidation.

Knowing that all practicing civil engineers are fortified by a knowledge of "graphic statics" and "strength of materials" or their modern equivalents in their college preparation to do "big things," and that many civil engineers are associated with projects financed with public moneys extracted in large quantities from the taxpayer, my fear is that you will expect the improvement programs of the transit industry to be generally characterized by physical and financial magnitude, accompanied by much civic glamour. The presence of representatives from the cities of Chicago, Cleveland and Toronto on this panel, where big things in transit have been - and will be - done, heightens my misgivings.

Let me hasten to assure you, therefore, that transit improvement programs cover a wide range and variety of projects from the spectacular to the obscure, from the structural to the operational and from the physical to the psychological. The eight billion revenue passengers carried by 1,300 transit "entities" annually in some 70,000 vehicles are being handled in urbanized areas varying widely in size, population, automobile ownership and other characteristics. They are served by a variety of transit vehicles chosen in each instance with a view to their proper application to the volume of traffic to be moved, as viewed from both physical and economic standpoints.

We should keep in mind that more than 1,000 of these transit operations, perform their services in communities of less than 50,000 population or in suburban areas; roughly 100 of them in areas housing from 50,000 to 100,000 persons; 80 serving the 100-250,000 population group; 40 the 250-500,000 group; and only 30 operations serving cities of a half-million population or larger. Since my fellow-panelists are from but three cities of the latter group, I shall try to indicate what transit improvement programs may be like in other large cities, and to the smaller fellows, with perhaps an example or two here and there.

For purposes of this necessarily brief treatment of the subject, I have chosen to classify public transit improvements as follows:

1. Rapid transit improvements
2. Transit on expressways
3. Improved transit on surface streets
4. Improved traffic conditions

5. Improved vehicles and facilities
6. Improved financial stability
7. Improved public relations
8. Other improvements

Rapid Transit Improvements

Rapid transit improvements embrace new subway, elevated and surface rapid transit lines and extensions thereof, modernization of existing facilities of these types, provision of more convenient access by pedestrians and motorists, provision of complementing local and feeder services, and other items.

In addition to the major projects you will hear about in Chicago, Cleveland and Toronto, the following may be of interest:

In New York: The \$58,000,000 Chrystie Street project to link the BMT with IND on the lower East side, which will add 2-1/2 miles to Manhattan's subway system when completed in 1962, and which will eliminate a major bottleneck and increase capacity of the system for rush-hour movements to and from downtown Manhattan.

The integration of the former Rockaway Division of the Long Island Railroad with the New York City rapid transit system at a cost of \$54,000,000, to serve 72,000 year-round residents and a summer population of 170,000. 3,500,000 passengers were carried in 1958.

The introduction of "cycled maintenance" of tracks and signal equipment, to be extended to cover elevators, escalators and turnstiles. This system has increased passenger comfort, reduced delays, and will effect economies in manpower and materials.

The revamping of maintenance organization and facilities to attain more efficient repair schedules, increase production, and reduce costs. This includes consolidation of two major shops; improved car cleaning-methods, machines and materials.

The purchase of new rapid transit cars and retirement of older cars to the extent of 1,410 units at a cost of \$145,000,000. The new cars have dynamic braking, improved motors and controls, improved draft gear, public address systems, etc.

The substitution of diesel buses for remaining street cars and trolley coaches to gain flexibility in operating, more fluid traffic flow, and economies in maintenance costs.

In Boston: The planned \$21,000,000 subway link, nearly a mile in length, paralleling the Boylston Street tube, and necessitated by the travel requirements of the projected \$100,000,000 Prudential Center development.

Possible future improvements to be necessitated by the proposed Scollay Square Federal-State-City Center, which will overload existing facilities.

A future plan to replace railroad commuter service to the South Shore with rapid transit, by rail or bus, at an estimated cost of \$21,000,000.

In Philadelphia: The \$5,000,000 project involving three miles of track construction in the North Broad Street subway, designed to give a faster express service between North Philadelphia and downtown.

The planned future extension of the Broad Street subway and rehabilitation of passenger stations at a cost of \$22,000,000, including park-ride facilities.

In Los Angeles: The San Francisco Bay Area, South Jersey, Washington, D.C., and Baltimore - the possibilities of future rapid transit programs not yet definitely planned or approved.

#### Transit on Expressways

In this category are the existing and prospective railway transit operations in expressway malls, express buses in exclusive transit lanes, express buses in regular expressway lanes with provisions for passenger interchange off the expressway proper, non-stop express bus services on expressways, provision of convenient access by pedestrians and motorists, provision of complementing local and feeder services, and so on. These projects are of considerable interest to the civil engineer, and of primary importance to the taxpayer, at this time because of the Federal highway improvement program for the National System of Interstate and Defense Highways and other segments of the nation's street and highway plant. For optimum balance and best results in obtaining the most transportation per dollar invested in urban metropolitan areas, the planning approach should be comprehensive in nature - embracing all forms of transportation and the need for parking facilities, and adequate provision should be made for transit on expressways where its presence would insure that balance.

You will hear of today's prime example of rail rapid transit on expressways - the center mall operation on the Congress Street expressway in Chicago.

You may read about current examples of express motor bus service on expressways in Research Report No. 28 recently issued by the Institute of Traffic and Transportation Engineering, University of California, covering operations in Atlanta, Chicago, Cleveland, Dallas, Detroit, Los Angeles, Pittsburgh, St. Louis, San Francisco and other areas.

Additional express bus operations on expressways are in effect or contemplated in Sacramento; Portland, Ore.; San Antonio; Columbus, Ohio; Richmond, Va.; San Diego and Cincinnati.

#### Improved Transit on Surface Streets

The improvement of transit operations on surface streets has been an almost continuous program everywhere for the last three decades. These programs were generally called "modernization" programs, and consisted largely of the substitution of modern P.C.C. street cars for the earlier models where rail operations seemed economically feasible for the life of a fleet of new cars, or the substitution of trolley coaches and/or motor buses for surface rail operations where physical and economic flexibility were required. This process of modernization was interrupted by World War II due to the shortage of equipment, tires and motor fuel, but resumed as soon thereafter as possible. Witness these comparative figures:

	<u>1935</u>		<u>1957</u>	
	<u>Number</u>	<u>Per Cent</u>	<u>Number</u>	<u>Per Cent</u>
Street Cars	40,050	62	3,601	6
Trolley Coaches	578	1	5,412	9
Motor Buses	23,800	37	50,800	85
	<u>64,428</u>	<u>100</u>	<u>59,813</u>	<u>100</u>

Modernization through vehicle substitution was accompanied by collateral advantages and improvements. The "sciences" of route cost analysis and transit vehicle selection were developed during this period. The smaller, faster vehicles gave opportunity for improved headways and faster travel time (where not offset by mounting traffic congestion). The flexibility of the automotive vehicle made possible new routes and route extensions into growing areas, with improved coverage of those areas of sufficient density to support transit services.

A recent example of such modernization was the conversion to all bus operation in the Twin Cities completed in mid-1954 at a cost of \$11,000,000 for 525 new diesel buses. Economy in operations and flexibility in fitting in with governmental plans for the area resulted. In Birmingham a \$2,400,000 project involving the purchase of 100 new buses has permitted a program of improvements in routing, speed and service extensions with direct downtown access. In Buffalo, downtown routings have been improved, and services have been extended to new housing areas and shopping centers. Sacramento has purchased new buses, increased route coverage of services by 15 per cent, and added new routes. Portland, Ore. has established through routes, eliminated many transfers, and reduced the number of vehicles on downtown streets without reducing the level of service. San Francisco has introduced 380 new buses. Columbus, Ohio, has re-vamped routings and extended a number of lines, along with its program of new equipment purchases. Richmond, Va. has improved headways and established new routes and extensions to shopping centers and housing developments. Dayton has raised system speeds substantially.

Within the past decade, and particularly the last half thereof, transit operators have brought forth many innovations and improvements in surface operations. Some of these are: express/limited/local services on arterial streets in various combinations; park-ride services; courtesy parking services; stop and shop plan; ride and shop services (including transit validation plans similar to "park and shop"); club bus services; babystroller service; special shoppers services (including expresses); services to special events; direct routes to industrial, commercial or shopping centers, and so on.

Examples of these surface transit improvements may be found in many cities. Cincinnati, Los Angeles and Nashville use the "club buses." St. Louis and Baltimore provide examples of comprehensive innovations in surface bus operation designed to enhance the speed and convenience of service to the transit rider. Birmingham, Baltimore and Cincinnati have been eliminating feeder services in favor of direct services from residential areas to the central business district. Dallas in its changeover to buses, has done a major rerouting job to conform to the pattern of street improvements, including extensions. Nashville has provided bus shelters in the central transfer area. Toledo has simplified downtown operations with a unique "neutral fare zone." San Diego, Toledo, Richmond and Sacramento have increased their charter and special bus services substantially.

Improved Traffic Conditions

Many of transit's efforts to improve the speed and convenience of its surface operations have been nullified in part through the congestion arising from increased ownership and utilization of the private passenger automobile.

In many cases, necessity has brought about the cooperation of police, traffic and transit officials in attacking the problems of traffic congestion, and in some notable instances improvement has resulted. Operators have simplified their downtown routings, and sought to reduce the number of transit stops. Traffic officials have prohibited parking, standing or stopping on transit thoroughfares during peak hours in prevailing directions and provided stricter regulation of commercial vehicle loading. Police have enforced traffic and parking regulations more rigidly. Bus stops have been lengthened and better marked. Traffic signal timing has been improved on transit streets. Lanes have been reserved exclusively for the use of transit vehicles at certain times of day on important arteries with interesting results of benefit to the transit rider and the motoring public.

In several places where, emulating the pioneer example of Nashville, the exclusive transit lane has been tested, there has followed an extension of the program, either as a greater length of the initial street as in Rochester, or on additional traffic arteries as in Baltimore. Some of the cities experimenting with this have carefully measured the speeds of movement of transit vehicles and general traffic BEFORE the change, and then repeated these test procedures AFTER the change to ascertain the improvement.

In Baltimore, for instance, buses were speeded up on the average about 20 per cent; other traffic was speeded up by as much as 30 per cent. In Atlanta, reported results were much more startling at certain times of day. In Birmingham, an improvement of 20 per cent in vehicle speed has been obtained in the afternoon rush hour. In Dallas, bus speeds have increased up to 26 per cent, with corresponding improvement in the speed of general traffic.

Improved Vehicles and Facilities

Improvements to rapid transit cars and their equipment are constantly being made as the result of both the individual and the combined efforts of the operators, in cooperation with manufacturers and suppliers.

The medium for the exchange of ideas and experiences in this field among the companies is the Advisory Committee on Rail Cars of the American Transit Association, which works cooperatively with Transit Research Corporation. The latter organization is currently engaged in the research, design and development of trucks for high-speed rapid transit cars of various types. Several manufacturers of trucks, motors, controls, brakes and other components are participating with the operators in these efforts.

In the motor bus field research and development have been continuing programs with the manufacturers of vehicles and their components. Their efforts have been spurred by two committees of the American Transit Association - a top-management Committee on Bus Design, which has been seeking a vehicle with greater rider appeal through improved seating, flooring, lighting, color, front-end visibility, picture windows, wider aisles, extra leg room, lower steps, etc., and the Advisory Committee on Motor Buses, which maintains a set of periodically-revised "Urban Motor Bus Design Objectives" for the guidance of the manufacturers. These objectives cover every aspect of the vehicle from roof to tire tread.

Companies have generally kept abreast of the times, unless financially handicapped, in improving their fleets through periodic purchases of these newer vehicles and components.

In the rapid transit field, in addition to the cities represented on this panel, New York, Boston and, shortly, Philadelphia, have been or will be in the market for new rail cars. The numbers of operators purchasing modern motor buses are too great to mention.

Air conditioning has been installed on buses in several cities, including San Antonio, Dallas, Washington, Annapolis and St. Louis. Units have been developed by vehicle manufacturers for installation on new buses, and by other manufacturers for installation in transit shops on vehicles already in service. Experimentation with this form of improvement in passenger comfort continues, including preliminary tests of its possible application in subway cars.

Many companies have installed short-wave radio communication systems giving two-way flow between the central dispatcher and mobile supervisory units, trouble trucks, and company official cars. Some companies have installed two-way radios in their individual buses, providing for constant communication between transit dispatchers and bus drivers. Problems can be handled immediately; service interruptions are minimized and more promptly corrected; schedule adherence becomes easier; information may be quickly obtained for passengers. Lost articles and lost children may be readily accounted for. Late night connections at transfer points can be assured. Supervisory and other costs have been reduced, and public convenience has been enhanced.

Behind the scenes, and quite apart from public observation or consciousness, are the facilities for maintaining the vehicular fleet and other property. Companies large and small are engaged in continuing programs of improvement to maintenance plant and equipment, and in increasing the effectiveness of their maintenance programs. Recent expenditures of some magnitude have been made in Buffalo, the Twin Cities, Birmingham, Baltimore, Sacramento, Toledo and Springfield, Mass.

#### Improved Financial Stability

The transit industry has waged a continuous and rather successful battle against the adversities which have beset it in recent years. Caught in a spiral of high capital and material costs and increasing labor charges, the companies have been forced to raise fares not once but several times since V-J day. This has discouraged riders - but not at rates of passenger loss which have been characteristic of fare increases in less prosperous times. The price of the transit ride has been rising along with rises in the prices of bread, milk and other household and family necessities. So have the salaries and wages of transit riders.

Every effort has been made to improve operating efficiency and to render as much service as possible per dollar of operating revenue. Despite these measures, the ratio of operating income to operating revenue for the industry as a whole has dropped to less than 3 per cent as contrasted with nearly 15 per cent 30 years ago. Between 1940 and 1957 operating revenues rose 88 per cent, while operating expenses, including depreciation, increased 111 per cent. .... 1957's industry earnings amounted to roughly but 1 per cent on its investment - a showing hardly conducive of attracting new capital for improvements.

The transit industry has been active in seeking relief from burdensome taxes and special imposts, some of which are relics of the day when it was a monopolistic and lucrative business. This program began in earnest some years ago when, in the first year, relief was granted in three instances. In the 12-1/2 years to mid-1959, nearly 250 cases of tax relief have been reported, covering franchise and gross receipts taxes, license and registration fees, motor fuel taxes, occupational and real estate taxes, etc. Bills have recently been introduced in several state legislatures aimed at sustaining present, or granting additional, relief.

There are many publicly-owned transit operations in the United States, including those serving New York, Chicago, Los Angeles, Detroit, Boston, Cleveland, San Francisco and Seattle. The trend towards outright public ownership has been steady, but not accelerating. Many such proposals are made, but relatively few are put into effect in any calendar year. ....It has been discovered, I think, that public ownership per se possesses no special magic, and is not necessarily the ultimate solution to the financial and operating headaches which plague the industry. I recently had an opportunity to observe this in an intensive comparative study of the legislation creating the four so-called transit "authorities" at New York, Chicago, Los Angeles and Boston. The legislative experts, in making provisions to guide the authority board members, showed that they expected them still to be confronted with such problems as declining riding, payment of certain taxes, the requirement of operating on a self-sustaining basis, necessity for further fare increases, and labor relations, including negotiation and arbitration of differences and disputes.

In at least six recent instances the city "take-over" of transit facilities has been under a leasing arrangement, in which the former "private" management continues to operate the system for a fee. Such arrangements are intended to result in savings in Federal excise taxes and, possibly, some state, county and municipal taxes. A recent court decision in Michigan upholds the legality of this expectation as it applies to state motor fuel levies and weight taxes. Two of these lease-and-rental agreements in the far West have not worked out satisfactorily from a financial point of view, and recent attempts to secure voter approval of a subsidy arrangement to assure continuation of these systems was defeated.

The use of a public subsidy for private transit operations appears to be more prevalent in Canada than in the United States at the present time. Of the two or three cases in this country of which we are aware, one is functioning quietly and smoothly, and apparently to the satisfaction of the city and the transit operator. In another case, perhaps the subsidy came too late. In fact, consideration for the transit system came too late - after the city had engaged in an extensive program of public off-street parking in the downtown area which sapped the transit system of its financial vitality. The attitude of some private transit operators towards the acceptance of public subsidies has changed to this extent - they are now more willing to consider subsidization of those non-compensatory services which are insisted upon by the regulatory authority or the riding public.

The economic and financial health of transit operations - public or private - is a matter of grave concern to the urban community, and should be looked into early and often. Constructive steps should be taken to insure the continuing solvency of the enterprise. Otherwise, by the time the master plan has been devised embracing the "optimum balance" of improved streets and highways, improved parking facilities and improved transit, the transit operation may have "disappeared from the scene."

### Improved Public Relations

The transit industry and its components have engaged for years in efforts to improve its relations with the general, the riding, and the motoring public. Such activities cover a wide range. Some are devoted to making it easier for the public to use transit - information as to routing, schedules, travel times, locations of stops, etc. Others are devoted to educating the public transit-wise, including efforts to emphasize to transit personnel their personal interest in better relations with the public. Finally, there has been great stress in recent years on awakening the consciousness and the interest of other groups in the urban metropolitan area as to their "stake" in the total transportation problem and transit's place therein. Interestingly enough, earlier efforts in this direction were promoted by transit. Today, transit has difficulty keeping up with the requests it receives to bring the story to retail merchant groups, planning groups, advanced traffic engineering students and others who are trying to determine, from the standpoints of their special interests, where transit services fit into the total picture of urban transportation improvements.

In its public relations work, transit uses every modern medium - radio, television, newspaper space, direct mail material, interior and exterior car cards, system maps, individual route maps and schedules, timetables posted at bus stops, the Welcome Wagon service, etc. In San Diego, customer relations round-table discussions for drivers are held regularly. One operator says "the best approach is through better service, improved employee relations, and a 'fair' local press."

### Other Improvements

Many companies feel that the improved records in safety and accident prevention which they have achieved are worthy of inclusion in this discussion. Most transit companies take great interest in, and participate in, the safety programs of the American Transit Association, and the National Safety Council. Great strides have been made in an industry already distinguished for its safe operations.

### Conclusion

In concluding my remarks, I would like to submit that transit improvement programs having broad community impact cannot be satisfactorily developed in a vacuum, or out of context with programs for improvement of urban transportation generally. In any urban area policies, plans and programs for such improvements should be considered "in the large" - embracing streets and highways and off-street parking as well as transit.

Transit is an efficient means of moving persons in urban areas - the most efficient in terms of use of street space per person moved. It requires no parking space, which is a boon in congested areas. Thus, it merits consideration and a place in future city and urban transportation planning. The need for its inclusion should be thoroughly explained to the public by public officials. Transit improvement plans need to be clearly and publicly developed in studies of alternative solutions of the community's problem, so that an informed public may make its decisions wisely, leading to achieving the "optimum balance" in the total improvement program and giving the taxpayer the most transportation for his money.

One medium for accomplishing such comprehensive advance planning is the program of the National Committee on Urban Transportation, which has produced the guide manual - "Better Transportation for Your City" and a series of procedural

manuals. These latter documents include one on "Standards, Warrants and Objectives for Transit Services and Facilities," one on "Measurement of Transit Services," and one covering "Standards for Street Facilities and Services." These aids may be obtained from Public Administration Service, Chicago, Ill., for a nominal cost. Those cities and transit companies which have participated in advance planning "pilot" projects under the NCUT program are convinced that there will be greater reliance on public transit in the future in many urban areas.

W. S. Rainville, Jr.  
Director of Research  
American Transit Association  
April 25, 1959

## Summary

### GENERAL COMMENTS

Respondents to the questionnaires on "transit improvements" and "self-help" in some instances gave voluntary general comments which help, in a sense, to define their philosophy of approach to both these phases of activity. At mid-1959 these are of interest as "guideposts" as transit faces the future; thus, they have been included for the benefit of the reader:

- A large midwestern property believes that the transit companies' call for help from American communities today is a very real one. To them, it is no "wolf call." There are major problems facing transit in this community and in every other community in the United States. The primary problem is, of course, automobile competition, and whether this is good or bad for the future of the country, the automobile industry IS a principal "prop" of the American economy. Another problem faced by transit is the explosive growth of the central city. The trend has been toward a growth of suburban residential development as well as a decentralization of industry.

The result has been a changed pattern of travel for the community at large. This trend has lessened the demand for truck line service to downtown. At the same time, it has increased the need for diverse travel movements - in ALL directions. This is difficult for transit to handle because it is bound to mean more transferring from one line to another and, therefore, less attractive service.

The result of this transformation is that transit ends up with a bigger territory to serve, but with fewer customers. At the same time, it is generally conceded by urban planners and engineers that transit must be sustained and encouraged. Its efficiency in the movement of masses of people in urban areas is essential to the economic and social welfare of these communities. Transit is, therefore, deserving of community help along with other essential community services.

In some cases recognition of this fact has taken the form of public acquisition of transit properties in order to expedite and simplify the means of community aid. Whether this step is necessary is a matter for the individual community to decide. The fact remains that there are ways in which help can and should be provided regardless of transit's ownership status. However, before such aid can be justified there must be some evidence that the proposed recipient has done everything reasonably within his power to help himself. In this city the company believes strongly in the philosophy that "the Lord helps those who help themselves."

In its "case history" (included elsewhere) and in the several summaries developed therefrom there are accounts of some of the things done by this company to promote the use of its service and to continually improve its attractiveness. Through the years this company has pioneered many new services and other promotional devices in the transit industry. In fact, the Wall Street Journal recently referred to its operation as "a showpiece of good maintenance and profitable innovations." The company knows it can't expect recognition and high priority in future planning if it simply offers a philosophy of futility - if all it does is cry for help.

So the company has been hard at work doing everything it can to help itself.

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- Company has made progress in reducing expenses of all categories, although there is no one instance which is startling in itself. Management feels that "in this penny-pinching business we are in" about half the battle is just a continual pecking away at small details.

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- Transit system is not happy with its progress, but feels it is at least moving at a snail's pace towards some desirable settlements of the problem of establishing in the public's mind the essentiality of its services.

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- As was pointed out in a previous letter on transit improvements, riding had stabilized in April 1959 and, as of this later date, company is still experiencing practically no decline in business, under the previous year. This has resulted from its programs for making its services more convenient and attractive, and for heightening the public's appreciation of its contribution to community life.

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- Company management does not think there is any magic to be used in the bus business anymore than there is in any other business. In fact, there is no short cut in business acumen. The management ability of any business is in direct proportion to the success of any business enterprise.

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- Company's continually looking to the future. In the center of the downtown area are two plazas, or "public squares," 100 ft. wide curb to curb. As part of its off-street parking program, the city administration is considering an underground garage under these squares to accommodate from 1200 to 1500 automobiles. All design plans recommended by the City Manager include an underground bus terminal loop connected at entrance and exit by tunnels one and one-half blocks long which will lead to the distributor and expressway system now under construction.

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- Company is enjoying excellent cooperation from the city government in the handling of day to day operating matters, as well as in the larger area of permits and franchises upon which its very existence is based. All these things contribute to company's feeling that public relations have improved. It hopes that these same steps might also have improved the revenue over what it otherwise might have been.

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- In its nearly twelve years of operation the authority has emphasized strongly the objective of providing modern, convenient transit service for the people of this city and adjacent suburban areas. To the extent possible under the present basis of financing, the authority has accomplished these things. However, the great transit needs of this area and of many other large urban areas is increased traffic - free rapid transit service; and this authority's experience has demonstrated emphatically that financing such construction and improvements is entirely impossible from fares collected from patrons. There is a growing awareness among public officials and civic leaders as well as transit managements, that financing of these vital necessities should and will be from public funds.

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- In 1956 the company was granted a 10-year transit franchise to construct, maintain and operate a mass transportation system in this city. Under the transit franchise, the company is entitled to earn an adequate return upon its rate base.

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- Company finds it most difficult to place a dollar value on various methods of self-help used. It does feel, however, that valuable benefits have accrued by using such methods, and that other operators might also profit thereby.

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- Transit ills stem mainly from the loss of customers to the private automobile. Other influences too, have been at work - the five-day week, the rise of suburban shopping centers, and TV-inspired stay-at-home recreational patterns. Revenue passengers on the nation's local bus, trolley and subway systems as a result dwindled from 13.8 billion passengers in 1950 to 8.3 billion last year. This city, of medium size including suburbs, was no exception. In three of the five years from 1948 to 1952 it operated in the red.

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- On a property where riding and revenues have not yet reached the bottom of a long decline, it is a little difficult to evaluate specific methods and results thereof in attempting to make enough to stay in business, and to furnish an adequate transportation system in the community. Company knows it is not as bad off as it would have been had it not put into effect many of the changes reported. Management is still convinced that transit in a community of 150,000 people can be made to pay. Company has made some money - never enough - but paid regular dividends to its share-holders over its eleven years of existence as a separate company. It plans to find ways and means of continuing to do this.

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- Company does not see where the measures it has put in effect are causing it to gain much, if anything, over its transit neighbors in the area. With the general improvement in business, the monthly percentages have all improved about equally throughout the area.

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- Abandonment of trolley coach operation, consolidation of all operations in one location, complete rerouting of lines, revamped schedules, reduction in administrative and working forces, have reduced operating expense \$2,298,428 in a five-year period. While operating revenues during the same period were reduced \$1,511,907, no increased fares were effective during the five-year period. Company knows no better way to explain or prove the benefits of its "self-help" program.

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- It is difficult to assess the exact results as far as net income, as company faces a continuous decline in riding coupled with ever-increasing costs. Company knows that every change that results in cost reduction in operating expenses, taxes and depreciation assists it in providing service to its patrons, and maintains net revenue. In short, company has to "run very hard" to "hold its own." ....One real method of helping to do better has been achieved through regular staff meetings. This is based on the premise that company's collective brain power is better than that of the "top brass" alone. Recent accomplishments in "keeping the ship afloat" are due to the combined planning and efforts of the staffs of both cities, in which this group operates.

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- During the past few years company has been trying to improve its financial position through reductions in unprofitable service, by increasing fares, and by seeking relief from traffic congestion through elimination of parking on busy thoroughfares in the direction of heavy flow of traffic. These, of course, are among the usual devices employed by transit companies in the constant struggle to stay "in the black." ....In order to furnish material that might be useful in this project, a careful review of operations was made. The items that bear mentioning have proven their worth in dollars and cents. Others have been successful, although it is not yet possible to place a dollar value on them. Still others have not yet reached their full potential.

Summary written  
July 25, 1959 - WSR

Summary

CONSOLIDATION OF OPERATIONS

In the course of the past several years there have been consolidations of properties or routes, the taking over of former private operations by public authorities of one type or another, or changes of ownership and management. Each such instance has afforded the "new broom" an opportunity to "sweep clean," or at least to focus a little light into the "dark corners." In almost every such case reported, improvements in service to the public and economies in operating costs have followed. Many of these are referred to in their proper places among the summaries and case histories presented herein.

One midwestern transit authority became an operating entity in 1947, taking over the actual operations of a large city surface system and a large rapid transit facility at that time. In 1952, a separate motor coach operation was acquired and integrated in the city system. A major problem was the consolidation of these formerly separate company managements. All these groups were welded into a single efficient operating organization without laying off a single person. Subsequent reductions occurred as a result of normal labor turnover, retirements and deaths.

In a large eastern city one large motor bus operator took over another large bus system in its general operating area, as the result of a bankruptcy and reorganization proceeding. Company has been actively engaged in rehabilitation of the acquired property, and in improving its services. It has "caught up" deferred maintenance on the vehicles, and rehabilitated repair and garage facilities, as well as buying 75 new vehicles for the revenue fleet.

One company with a wholly-owned subsidiary recently purchased another line, which permitted a consolidation of services in the area. Buses on the recently acquired line, as well as those of the former subsidiary, are all operated from the main company garage in the central city. All bus services south and west of the city can be operated as one system, eliminating any local competition; this will also help solve transit problems arising from annexations to the city. Transfer privileges to the parent company's buses are granted passengers of the two subsidiaries.

In another city one of the most effective transit improvements was the consolidation of three separate transit companies into one. This made possible a rerouting plan with more direct routes to the center of the city. Average system speed was increased from 10.57 M.P.H. in 1953 to 11.00 in 1958. With one company in the area it has been possible to institute stop-and-shop transfers, suburban bus shelters, benches, timetables. Company has thoroughly overhauled its operator hiring procedure and believes it is obtaining a better caliber of man with less turnover of employment.

In one company's area duplication of services in one of the counties served by a total of four companies was materially reduced through an exchange of operating authority among the companies. This resulted in a substantial saving in operating expenses.

Summary written  
July 15, 1959 - WSR

Summary

IMPROVED PASSENGER REVENUES

The following comments of interest in connection with the improvement of regular passenger revenues has been received.

A small company observes: Obviously there are only a limited number of ways in which net income can be increased. Most of the industry, in the opinion of this company, seems to have gotten into a rut and followed the lines of least resistance by going after an increase in fare which (in company's opinion) increased the gross revenues only temporarily. Immediately this is done, another round of wage increases ensues. ....Company has received a recent fare increase. Starting just before this increase company took its men, three or four at a time, sat down with them and discussed company operations generally, stressing the extreme importance of helpfulness and courtesy on the part of each individual. This procedure was not a "flash in the pan," but was followed up by getting the opinion of operators as to public reactions to the extra interest and courtesy being shown by company personnel. Coincidental with this last fare increase came a slight increase in passengers. This increase has continued to the present time.

Another company "hopes that it has increased its revenues through advertising, although it is difficult to say that a specific dollar of revenue came from specific dollars spent on some certain advertising."

A large operator will increase its gross revenues beginning this month by beginning operations over a newly constructed rapid transit extension over the abandoned right-of-way of a railroad branch line. This constitutes a 9.4-mile addition to an existing subway system, with a new terminal 11.6 miles out. Modern light-weight rapid transit cars will provide speedy, low-cost rapid transit service to a large residential area.

One company says all the steps it has taken "plus an increase in fares together with a 5¢ transfer charge all added materially in making company's lines profitable."

A company with two operating locations says, in effect: Business today is competing for the consumer dollar and much advertising is directed towards the prospective purchaser to "buy now and pay later." In an attempt to develop the sale of rides on credit, several years ago company made arrangements with the larger downtown stores for them to sell books of tickets - 45 rides per book for \$6.30. This represents a rate of 14¢ per ticket and a reduction of 1¢ for adult fare. These participating merchants will charge the cost of a book of tickets to their customers' accounts. For this service company pays the merchants a 2¢ commission on sales, and they are responsible for any loss sustained through noncollection of an account. Such books are advertised as "super 45's," and company carries outside and inside cards on its equipment advertising the stores where they may be purchased.

Operational charges reported by another operator in rapid transit services reduced trip time from 20 to 30 per cent, produced a 13 per cent over-all improvement in service with reduced equipment, increased riding volume by 6-3/4 per cent - all of which amounts to an increase of \$100,000 in annual revenues and at the same time reduced annual expenses by \$200,000.

One company reports increased revenues through inauguration of two express lines and a cross-river line operating at a premium over the regular fare.

Another company has concentrated heavily on the use of "new look" bus interiors in off-peak shopper service. A study of two such routes shows riding increased by 3.62 per cent as compared to all other routes, even though there was a mileage reduction on these routes of 2.63 per cent compared with 1.33 per cent on all other lines, or twice the percentage service reduction. This indicates a significant increase in revenue. Prior studies indicated that the added revenue per coach alone equals the annual depreciation. In addition, savings in maintenance again equals the annual depreciation cost. Company believes, in other words, that these new coaches have added 3.6 per cent net revenue.

A company which has used air-conditioned buses extensively in special service on its rush-hour express rides reports that during the summer of 1958 air conditioning was responsible for an average increase of 12 per cent in new transit customers on 8 lines. This was in addition to the increase realized from local service passengers who switched to air-conditioned buses at a higher fare. The average daily increase in revenue on these lines was 16.4 per cent during the summer. Two-thirds of this increase in passengers and revenue was retained during the winter months.

One operator reports net income slightly increased as a result of its efforts, but "far from adequate."

A southern property reports: "All of the steps enumerated have improved company's public relations remarkably in the last six months. Company seems to have gained the confidence of governmental bodies, the riding public, and its own employees. Most important, the riding has, as of April 15, 1959, been stabilized to a point where company is experiencing no decline under the previous years." ....Within 2-1/2 months of this report, company wrote: "Company riding had stabilized in April, and (as of the later date) is still experiencing no decline in business under the previous year."

A final reporter states: Passenger revenue is still on the decline although, as experienced by the industry generally, the attrition has not been as great as it has been in the last few years.

Summary written  
July 20, 1959 - WSR

Summary

PROMOTION OF CHARTER SERVICE 1/

Several reporting companies have stressed the importance of building up their charter business and revenues, and many of these have indicated success in their efforts.

Here are some of the promotional methods and sales procedures used:

- Make practically every member of its organization sales conscious. Employees sell their personal groups in clubs, etc., the idea that it is better and more fun to use charter transportation for ball games, outings, etc.
- Set up a sales department to go after charter business.
- Purchase sufficient equipment of appropriate types to meet the needs of the area.
- Acquire rights (I.C.C. and other) so that charter service may be operated in many states, and even in Canada, etc.
- Feature tours to historical points of interest in and around the city with the aid of local or county historical society. Make these tours available to grade school pupils with the approval of school boards. Stimulate interest in similar adult tours.
- Use major league baseball games and other events in nearby - or distant - cities as a means of selling charter trips.
- Use folders, sporting events schedules, "take-one distribution," and direct mail. Write letters to potential customers for service. Advertise on sports pages of daily newspapers. Develop special mailing lists.
- Use charter service to increase productivity of revenue vehicles during off-peak hours.
- Sign contracts, where possible, for services with school boards, churches, clubs, civic and fraternal organizations, nearby military installations, etc.
- Develop special charter equipment, and sightseeing equipment with public address systems.
- Use car cards, newspaper ads, television and personal calls to promote this high-earnings-per-mile bus service.
- Tie promotions to football, baseball, horse racing and tournaments, and theatrical events.
- Consider a commission plan for employees to stimulate charter business should this appear desirable or necessary - and if the practice can be successfully "managed."

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1/Including school charter arrangements.

- Work out mutually agreeable and compensatory charter wage rates and working conditions with operators so that company may quote more competitive prices in the highly competitive (in some areas) charter field to get the business for the company and the work for its employees.
- Suggest places and events for outings. Push these through the sales department by personal contact.
- Sell charter to industrial and mercantile firms, and for convention and meeting usage - intrastate and interstate.
- Use ads in school papers, city and telephone directories, and program advertising.
- Company carries 21 x 44 inch and 30 x 144 inch displays on its buses which carry charter sales messages.
- Do not overlook direct routes to industry, commercial and shopping centers.
- Where stiff competition exists, have the best equipment in the area - radio, public address system, portable "mike" for outside use, bar (optional), card tables, lavatories in coaches. Excellent long-haul equipment can attract a great deal of short-haul business for which company can use transit-type coaches and make considerable net.
- Rates must be competitive with other carriers in the vicinity. Company has the advantage of vehicle and operator availability.
- A reputation for safety in operations must be maintained.
- Send Christmas cards and thank-you letters to charter "clients."
- Work closely with Convention Bureau and its out-of-town correspondents.
- If desirable, arrange dinners for clubs and arrange to obtain their tickets to shows and events.
- Use inexpensive "give-aways" to "plug" charter service - coin purses, token holders, wallet card holders, pocket memo pads, pencil, comb, nail file, etc.
- Watch newspapers for news and events which might lead to business.
- Do not overlook courts and juries - such as transporting jurors to the scenes of crimes and accidents.

Here are some of the results of intensified promotional activity in the field of charter bus service:

- Company has been able to increase net charter coach revenue by approximately 15 per cent through aggressive selling.

- Revenue from this source has been increased in the past three years from \$55,000 to \$200,000 annually. Present rate of charter revenue increase is about 50 per cent over the preceding twelve months.
- Revenue from chartered vehicle services was increased from \$106,000 in 1954 to \$154,000 in 1958.
- School district has recognized the fact that the transit operator can handle the school load cheaper than they; consequently, it disposed of its school buses and made a contract with the transit carrier. In the past three years special bus revenue - charter and school contract service - has increased from \$6,000 to \$124,000 a year. This has offset a loss in revenue from decline in adult riding, and enabled operator to continue his present 15¢ adult cash fare, etc.
- In the past few years charter revenue has increased from \$6,000 to \$32,000 annually.
- Result: Increased charter revenue.
- Revenue from charters increased 27 per cent during the past five years, in the face of declining revenue from regular service.
- Company has increased its chartered, sightseeing and contract revenues. It has recently signed a fiscal year's contract for charter and sightseeing service with a nearby military installation for \$125,000.
- Charter service, although limited by personnel and available equipment, yields about \$300,000 per year of revenue - plus considerable good will.
- The total charter service revenues were \$144,000 in 1948. In 1957 this source of revenue had been increased to \$247,000. In 1958 it was \$295,600. In 1959 charter service revenues to date are running well ahead of the comparable 1958 period.
- Beginning just this spring, before the end of the school year there were 45 historical field trips of pupils at \$30 per trip. Some 2,500 school children enjoyed these trips. During the month of June, 1959, company's charter revenue was 33 per cent over the same month last year.
- The result is an increase of 127 per cent in regular charter business from January 1953 through December 1958; and company is ahead of last year's figures for the first six months of 1959.
- Company's gross for chartered service in 1958 was \$75,000. For 1957 it was \$94,000. In 1958 it was affected by severe snow storms and the removal of a government office (which used a contract shuttle service) from the city. For the first four months of 1959, the gross was \$10,561 compared with \$12,150 for the corresponding period of 1958. Part of this is due to the company's high wage rate for operators, which makes competition with nonunion charter bus companies for business difficult.
- Charter business represents only 3-1/2 per cent of company's revenues; but charter business has been increased 1,000 per cent in the past five years. Revenues in 1954 were \$26,000; in 1958, \$188,000.

School Charter Arrangements:

Some companies are currently purchasing "body-on-chassis" type "school buses" with which to serve their school contracts because such buses can be purchased at about one-third the cost of integral-type transit buses.

In a New England area, company receives a subsidy of \$55,000 to \$60,000 per year from the city. This is in payment for tickets - at full fare - which the city purchases and distributes to children whose transportation they must provide.

A midwestern company has worked out with school authorities a basis of guaranteed revenue service to a certain group of schools. Tried experimentally for two years, it will be extended in future. Schools guarantee company \$7.00 an hour for all bus hours on certain off-line routes. Schools print and sell special weekly tickets good only on these buses and sold at a cost of \$1.00 per child and not more than \$2.00 per family. Thus, approximately 9 per cent of the passes are given to the third (or more) members of the same family. Cash fares collected on these specials are credited against the guarantee, and schools make up the difference on monthly billing. The direct payment by schools amounts to 25 per cent of the total payments to company for service. This type of service is also being given to kindergarten pupils of adjacent townships where various organizations, including Lions Club and P.T.A., collect from the parents and remit to company weekly on the \$7.00/hour basis.

In this latter community, schools have changed hours in certain areas so as to enable company to get more than one productive trip with a single bus. Increased school business will make it necessary for company to add to its fleet this fall - perhaps with low-priced vehicles.

Schools in this area have apparently become convinced that transit company can furnish these services more cheaply with buses regularly engaged in transit work than school district can do with buses of its own used only a few hours a day.

Summary written  
July 19, 1959 - WSR

Summary

REVENUE FROM DIVERSIFICATION OF ACTIVITIES

About June 1, 1959 one transit system started doing outside maintenance for the city and originally took on the job of handling and maintaining 30 trucks, establishing a preventive maintenance program. Sixty additional units were taken over for part of the maintenance, and in June the company overhauled a large caterpillar tractor for the city. Starting August 1, system expects to take over part of the maintenance of the city police cars. It is estimated that during the first year it will gross approximately \$175,000 from this outside maintenance, and that it will increase after that. Present rates for this work are \$4.40 per hour for labor, and parts are charged at system's cost, plus 10 per cent. This arrangement makes it possible for the city to get improved maintenance for their vehicles, and produces needed revenue for the transit system as well as making for fuller use of transit shop facilities.

Truck maintenance and repair work has been actively solicited in another city through the distribution of advertising leaflets, advertising in the telephone directory and on exterior car cards, bulletins and lectures to employees urging them to solicit such work; and through direct solicitation by the superintendent of equipment. Revenue obtained from outside maintenance has not been substantial; however, it does relieve cost on bus maintenance accounts and reflects on company's net revenue. In time company hopes, with continued promotion, to increase the volume of business.

Another company is presently preparing to enter outside maintenance work and truck rental. Experience is not sufficient for comment at this time, although company anticipates good results from this new venture.

Two of the cities in another group of companies are doing outside maintenance work, but in these cases the work is done by a separate company not related to the transit company, so that any net revenue does not accrue to the transit companies. Volume of this work has not built up enough to have any great effect even if the revenue itself did go to transit; but, company has hopes that volume of work will gradually increase. A third affiliated company is not engaged in this activity, primarily because its new shops are so tailored to transit use that there is not space available to take on outside work.

Maintenance work for others on a commercial garage basis by another company was first undertaken early in 1957. This has been building up steadily, and furnished an appreciable proportion of net revenue last year. It seems quite possible that company might, in the long run, make more money on this than on operating the transit system. The net results could be to better insure continuance of transit service in the community.

One company also operates and maintains under contract 17 buses of a River Tunnel Commission, a political subdivision of the state. These buses operate on a bridge and through a tunnel connection in two of the cities served by the company. The buses are owned by the Commission and are operated, maintained and serviced by the company's division. The only function of the Commission is to remove the cash vaults from the buses each evening on their last trips through the toll gate.

A municipal transit operation does repair work on service automobiles belonging to other public utilities. While this work is performed at cost, a judicious scheduling of the work at slack times enables the company to receive pay for services which in some cases might be lost time.

In another case, a subsidiary is engaged in truck and auto leasing to the general public.

By performing maintenance work in company garages for others, one company has increased revenues and at the same time created greater efficiency through fuller work-force utilization and absorption of some overhead charges.

In November 1958 another company began the operation of three truck maintenance companies, one in each of the cities served. For the twelve months' period ending March 31, 1960, company estimates that its annual gross business will approximate \$250,000. It is meeting this budget on a monthly basis, and believes that this work, which utilizes its existing facilities and the abilities of its shop employees, will ultimately grow into a very profitable operation.

Vehicle maintenance work for other transit operators in this area is performed in a company's central bus maintenance shops. Also, to a limited extent, maintenance work is done on heavy duty diesel trucks for fleet operators; but company does not maintain a general truck repair shop.

In 1957 another company started with five trucks available for daily rental. At the present time it has 121 truck units on long term lease, and 34 trucks available for daily rentals.

A final company has a truck rental subsidiary which operates a fleet of 140 trucks. Sixty of these trucks are on a day-to-day, or short term, rental basis and the remaining are on long term leases.

Summary written  
July 20, 1959 - WSR

Summary

COMMENTS ON "OTHER" INCOME

A large transit "authority" reports: Another adjunct of public relations activities in concessions consisting of advertising display, station news stands and vending of confections, soft drinks, etc. The Authority realizes approximately \$600,000 a year of net income from these sources.

A small company reports: Company could not advocate generally that every property handle its own transit advertising sales. This company can do this because of its local setup. As a result, it generally nets 70 to 75 per cent of revenue instead of the 50 to 55 per cent that accrues where an outside advertising company sells the service. A couple of years ago a mid-western transit operator made a survey of a dozen properties in this area and furnished the results to the companies involved. The reporting company had a greater advertising revenue per bus than any other city, although it is the smallest company of the group.

Summary written  
July 20, 1959 - WSR

Summary

IMPROVED ROUTINGS

An imposing number of companies have reported improvements in route patterns, extensions into growing residential areas, extensions to housing developments and shopping centers, elimination of sources of delay to general traffic, and so on. Noteworthy is the trend, in opposition to the practice of past decades, towards "through routing" in the interests of public convenience. Several reporting companies have made a point of this, as well as the elimination of feeder lines and establishment of direct services.

In order to take a businesslike approach to the problem of bus extensions into new areas, one transit system has developed a set of minimum standards for use in determining whether or not bus service is justified. It has also completed a survey of home counts of the unserved areas of the city. So far, a number of requests have been turned down because they did not meet the minimum standards. Other requests, where justified, have been granted. A new line has been established between downtown and an important Air Force Base, superseding a former feeder line and giving direct service. Line extensions have been made to housing projects, suburban shopping centers, and an important university area. City cooperation in paving a street made one of these extensions possible. The "shoppers special" line was extended to include a new commercial bank building on its route.

Another company's policy over the past five years has been directed towards the elimination of feeder lines and the establishment of direct services to downtown. With the exception of one line, to be converted as soon as suitable grades can be prepared on new streets, company has made this program coincidental with its conversion of trolley coaches to motor buses.

In addition to the consolidation of routes and the extensions effected in the past ten years, one company has established eight entirely new bus lines. Not all of these lines have paid their way, and some were necessarily discontinued. Others were consolidated with major lines. The remainder are not only still operating, but have been extended to several additional areas. Another company reports a similar experience with experimental reroutings and extensions.

A midwestern company has reported the conversion of some trolley coach lines to motor bus service, with routing changes to improve the movement of vehicles and some extensions.

A company reports continuing study of population shifts throughout the city, with extension of routes and adjustment of services whenever these appeared to be economically feasible. Between 1947 and 1958, 39 such extensions were effected. Another company, in the period 1947-1957, consolidated seventeen lines to provide through service for their users, thus furnishing a more direct ride, without the necessity of transferring -- and attracting new riders. This latter company submitted a new, additional rerouting plan in 1957 in the interest of even more efficient operation. Some of the new route revisions are already underway with regulatory approval, and additional consolidations should be achieved by the fall of 1959. In

its entire approach to modernization of its properties, this company has freed 50 miles of streets from streetcar operation, materially reduced both left-hand and right-hand turns by transit vehicles downtown, eliminated circuitous routings, and established through bus service to town from residential areas instead of shuttle lines.

One company reports a system increase in route coverage of 45 per cent, from 452 to 654 route miles, between 1943 and 1955. Another reports the inauguration of six new lines in recent years, four major line extensions, and reroutings to provide more direct service into the downtown area for passengers. Still another reports the rerouting of a majority of its bus lines in late 1958 to eliminate duplications, overlapping services, and to gain a mileage reduction. This latter company claims that a change to motor coaches gave increased maneuverability eliminated thousands of turning movements in the central business district daily, permitted through routing for passengers and seven profitable extensions into new territory, while increasing system's schedule speed from 11.48 to 11.80 mph.

Two additional companies report elimination of transit turns downtown - in one case to the extent of 3,500 turns in a normal weekday. One of them has combined a number of former "loop" routes into through routes, eliminating 25 per cent of the vehicles in the downtown streets without any decrease in service to the public. This has decreased vehicle miles and vehicle hours, relieved traffic congestion, and reduced operating expenses. A by-product of this change which surprised the company was a slight improvement in fuel consumption due to the elimination of slow, less efficient mileage in the downtown area.

A fairly large southern property made the following interesting report: As buses came into use 25 or 30 years ago, a number of shuttle bus routes were started as feeders to rail lines. With conversion of rail lines to trolley bus or motor coach, progressive steps have been taken to eliminate these shuttles and to provide through service into the downtown district. Four such shuttle routes have been merged into downtown routes, generally with a saving in hours operated, and always with outer passengers receiving a better, no-transfer ride. At the threshold of the automobile era, about 1917-18, all routing of trolley cars across the business district was eliminated in this city. All rail routes were placed on five nonoverlapping loops, apparently to reduce mileage, minimize delays and to isolate tie-ups should any electric feeder circuit fail. Over the succeeding forty years one-way streets have been introduced, and there has been some shifting of the downtown business area. Now company has returned to a small amount of "through routing." These routes are highly successful and passengers are pleased in riding them - they quickly learn to use them to get across the downtown section. The through routes give better access to several large downtown stores. Although some slight added cost may accompany "through routing," these costs have not been unusually large and have been overshadowed by the improvement in service and good will. Company feels that through routing, along with its other improvements in convenience to the riding public, has contributed to the stabilization of riding which has shown up over the past few months in this city.

One company's bus routes use one street passing through the center of the city. Formerly each route operated on its own headway, and passengers found vehicles "running together" or with considerable "gaps" between them. "Spacing" of buses within this area has practically eliminated these annoyances.

One company reports revision of route structure and schedules to effect an actual saving of a million vehicle miles per year. Another says that a simplified downtown routing, with cooperation of the police in rigid enforcement of parking and traffic regulations, resulted from a report on traffic conditions in the city by a leading traffic engineer. A third simply reports "lines extended; new routes established."

A company's equipment conversion program permitted it to do a thorough rerouting job throughout the city. Routes were better spaced, less circuitous - the opening of new streets in some areas and the widening and resurfacing of others making this possible. Company's judgment has been confirmed by the fact that very few changes have been necessary since that time except, of course, for some extensions into newly developed areas.

In 1954 another company improved the downtown portions of four routes, and two suburban routes were extended into developing areas. Four relatively short extensions to city routes were made in 1955, and downtown bus routings in a neighboring city served by this company were revised to provide off-street turning facilities. Two further extensions were made on suburban routes. In 1956 the downtown delivery of five city routes was improved and other routes were extended to provide service to a housing project. A suburban route was rerouted to provide service through a shopping plaza, and three suburban routes were extended to serve newly developed territory. The company follows consistently the policy of extending service to meet the needs of the community.

A final company extended one line beyond the city limits into a large shopping center where a transit waiting shed is located. Connections are made at this point for buses of another company which operates out into the county. Separate fares are charged on these lines. Another line was extended beyond city limits into a second shopping center. An extra 5¢ zone fare is collected on this extension. A third line was divided into two legs to serve two new housing developments of approximately 500 units each.

Summary written  
July 17, 1959 - WSR

Summary

IMPROVED HIGHWAYS

Most companies make passenger traffic checks on a regular, progressive and systematic basis, changing headways frequently to meet requirements both as to passenger loads and "revenue per mile."

One medium-sized company has not curtailed service in proportion to the decrease in riding in recent years. Service has been reduced at night and on week ends, but a high volume of service has been maintained throughout the daytime period. This has cost some money. Company believes it has been helpful, however, in maintaining a high volume of riding, which, of course, has kept many automobiles out of the downtown area.

Between the years 1948 and 1958, surface system single-way miles were increased from 1,404 to 1,878. Over 99 per cent of the population is within 3/8 mile of transit service, which also passes through 29 incorporated suburban communities. Total pay hours decreased 48.2 per cent between these years. Revenue vehicle miles declined 13.4 per cent; originating revenue passengers declined 48.4 per cent; maximum scheduled vehicles declined only 6.3 per cent. This indicates that a high standard of service has been maintained despite the disproportionate fall-off in riding. During the past five years many transit systems have been compelled to resort to drastic service reductions to balance income with outgo. Comparison with nine other large cities shows that average passenger loss in them was 30.3 per cent, as compared with 22.3 per cent in this city. Average reduction in revenue miles in the nine cities was 23.0 per cent as compared with 5.4 per cent in this city. Eight of the other nine showed a reduction of 22.6 per cent in maximum vehicles scheduled in rush hours, as compared with 10.4 per cent in this city. This all serves to indicate that modernization of rolling stock, expansion of coverage and improvements in services have enabled this operator to retain a greater percentage of its patronage than has been experienced in almost every large city in the country.

In the nation's newest rapid transit city the decline in vehicle miles has been remarkably small as compared with other cities of comparable size and with the industry as a whole. In 1941, 35,600,000 vehicle miles were operated. In 1955 the system operated 42,000,000 vehicle miles, or 18 per cent more than in 1941. Comparisons were made with four comparable transit systems which are recognized throughout the industry as outstanding and well-managed properties. They are similar to the city under discussion in number of vehicles operated, mileage, employees and population served.

The subject system of the above paragraph showed a 40 per cent better trend in "vehicles in operation" than the trend for the four comparable cities, and 23 per cent better than the transit industry trend. For every 100 vehicles operated in 1941, this system is operating 113 vehicles today. The present figure for the four comparable cities is 81 vehicles; for the industry - 92.

Data recently released by the U. S. Department of Commerce shows that this city's central business district total retail sales have increased \$20,000,000 or 5-1/2 per cent between 1948 and 1954, while similar sales in the four comparable cities decreased \$99,000,000, or nearly 8 per cent. The record for department stores in this city is even better; they show a \$7,000,000 increase, or 4 per cent, while the four comparable cities show a decrease of \$90,000,000, or 15 per cent. Management is confident that this city's transit operation has contributed substantially to this favorable trend.

Summary written  
July 18, 1959 - WSR

Summary

IMPROVED TRAVEL TIME 1/

Companies are alert to the economies of increased speeds of operation, as well as to the improvement in passenger convenience which they bring. Thus, in their purchases of vehicles of all types such items as accelerating and braking rates, free running speeds, ratio of horsepower to weight, etc., are given careful consideration. Operational changes conducive of improved speed and convenience are introduced, and companies cooperate fully with city and traffic officials to obtain faster movement of ALL traffic through the streets.

One large company reports that operational changes have reduced trip time from 20 to 30 per cent on rapid transit lines, produced an over-all improvement in service of 13 per cent with reduced equipment, increased riding volume by 6-3/4 per cent - all of which meant an increase of \$100,000 in annual revenues and a simultaneous reduction of \$200,000 in annual operating expenses. Surface transit operations were also speeded up through the introduction of modern trolley buses and motor buses.

A midwestern trolley coach operator has consolidated three former companies to provide more direct routes, increasing average system miles per hour from 10.57 in 1953 to 11.00 in 1958.

One company is operating five express lines over completed sections of two expressways. Eventually it expects to have up to fourteen routes operating on the inner portions of these expressways - with anticipated cuts in travel time of from 25 to 50 per cent of present schedules. Another company operates fifteen lines on expressways nonstop at the same speeds as automobiles. A third company has cut average travel times of 39 minutes to 28 minutes, or roughly 25 per cent, through expressway operation.

Club coach services afford faster, nonstop rides to the downtown area.

Three large properties have cut travel times up to 30 per cent over local bus service by the operation of express and limited-stop services over major arterial surface streets.

In February 1958, a company inaugurated "line-ups" in the downtown section at hourly intervals beginning at 7:20 P.M. on weekdays and all day Sundays, for the convenience of transfer passengers - particularly employees riding to night shifts at factories. Much favorable comment was received because of the saving in time required for transferring. Company reasoned that if night line-ups made an improvement in service, the same advantage might be gained in the morning when even more persons were traveling. In April 1959, it started line-ups in the downtown section at 5:10 A.M., 5:45 A.M., 6:20 A.M. and 6:50 A.M. Considerable economy in operating cost was achieved by reducing service on several lines to conform with line-up times, and although the interval between buses was lengthened, passengers were assured of direct connections. Company surveys and public reaction indicate that there has been an over-all improvement in service during the early morning period.

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1/ See also Summaries covering: Improved Vehicles and Facilities  
Transit on Expressways  
Express Services  
Traffic Improvements

Summary written  
July 18, 1959 - WSR

Summary

IMPROVED TRAFFIC CONDITIONS 1/

Transit companies have been working for many years with city and traffic officials to free congestion in city streets, improve the flow of all vehicular traffic, and step up the speed and convenience of transit services in the more heavily-traveled urban areas. Some of the methods and results are summarized herein.

Reserved Transit Lanes:

At least eighteen reporting companies made mention of reserved (or "exclusive") transit lanes for his operation in congested downtown streets - either presently in effect or anticipated shortly. Some of the comments follow:

- Company has worked diligently to increase its speed, and its efforts have finally convinced the local Traffic Committee and City Council. They are about to grant the company special bus lanes during rush hours - which will speed up service and possibly increase revenue.
- It took six years for company to get reserved transit lanes established, finally with the aid of the Department of Transit and Traffic of the city. The program has expanded rapidly since its start last year, and is now in effect on several downtown streets. These lanes are very helpful, particularly where they are long enough to permit a substantial saving in running time.
- The Authority has obtained an exclusive lane on one of the principal streets crossing the central business district, which reduced the running time through this congested area approximately 15 per cent in rush hours and 25 per cent mid-day.
- Company does have some transit lanes downtown on which parking is prohibited; however, automobiles are permitted to make right-hand turns at certain intersections, which reduces their effectiveness.
- The system was put in effect here in 1956 with special lanes given over to the buses downtown between 7 and 9 A.M., and 4 and 6 P.M. Faster-moving buses, of course, save money for the company since fewer drivers and vehicles are needed. One route, for example, formerly required 19 buses to operate a six-minute schedule during rush periods. Now 17 buses maintain the same schedule. At the peak of the rush-hour each morning bus after bus loaded with office workers, store clerks and shoppers, barrels into the congested heart of the city, unloads its passengers quickly, and highballs out again. These lanes are barred to other traffic during morning and evening peak hours.
- As a result of studies by a "mayor's committee", of which the transit company president was a member, bus lanes were established on two of the principal streets, and a large number of turns in the downtown area were eliminated. This has been a decided improvement and can become even better with a little enforcement.

1/ See Also IMPROVED TRAVEL TIME.

- Recently much publicity has been given to the establishment of exclusive lanes for transit vehicles in many cities. Actually, in this city there has been for all practical purposes an exclusive lane for buses on the main street for the past thirty years. It was established shortly after buses were substituted for street railway service.....Another "first" for this city was the establishment of exclusive twin loading lanes for buses on one of its main streets beginning December 1956. In the peak hour 226 buses move along the north side of the street loading passengers at all bus stops. The dual lanes and loading, and the assignment of definite lines for each lane, has speeded the movement of buses by as much as 20 per cent.
- New block-long traffic islands have been installed by the city in one direction along the biggest shopping thoroughfare. They have had the effect of providing an exclusive lane for use of buses and have helped company speed up service.
- Reserved exclusive transit lanes have been put into effect on four streets. Both transit and automobile speeds have increased substantially. Transit speeds have been increased up to 30 per cent. These lanes are in effect from 7:00 A.M. to 9:00 A.M., and from 4:00 to 6:00 P.M.
- The first exclusive lane here was adopted in May 1957. City was so impressed with benefit to general traffic that it extended the length of the exclusive lane on its own initiative by more than doubling it. Movement of general traffic has been enhanced, and lanes have enabled company to prevent many costly delays during rush-hours. An actual speeding up of rush-hour service has resulted.
- Company has partial system of exclusive curb lanes, and is working to obtain them throughout two main streets in the downtown area.
- For some years company has had the curb lane in this city on the main street, which has been most helpful.
- For the future this company would like to see two streets set aside for exclusive use of transit - one north-south, one east-west. This would facilitate traversing the downtown loop area, easing congestion and saving time.
- This Authority will eventually seek restricted lanes for buses during certain periods of the day. However, it is felt advisable to first get rid of parking on the right side of one-way streets during the rush-hours, before advancing into the controversial matter of exclusive bus lanes.
- In the past three years, by utilizing exclusive lanes, company has increased schedule speeds. This has allowed it to operate more efficiently. Service has not only been improved through these lanes, but costs of service have been cut by maintaining the same headways with fewer buses.
- Late in 1958 this city established bus lanes on three principal downtown streets. These lanes have been most successful. They are operated 7-9 A.M. and 4-6 P.M. six days per week. A "towing ordinance" has been enforced. Increased speed approximates 20 per cent in the P.M.

rush period, and 15 per cent on an average basis. The bus lanes have been well received by both motorists and transit passengers.

- One constructive step that can be taken while awaiting (transit on) expressways and other future developments is the establishment of exclusive transit lanes on existing arterial thoroughfares.....Company's plan (as yet unaccepted by the city), which had strong press support, calls for setting aside the curb lane in the flow direction during rush hours only for the exclusive use of buses. Reversible center lanes would also be established so that motorists would not be deprived of a lane. In addition, feed-in streets on the flow side - except for signalized intersections - would be closed off during rush hours, thus providing a semi-expressway. Such an arrangement would speed the travel of both transit and autos, but because of the exclusive transit lane many motorists might be "won-over" to transit - thus greatly improving the artery's efficiency in moving people.

#### Curb Parking Restrictions:

- Over the years this Authority has agitated with some success for elimination of parking on transit streets.
- Numerous other relief measures have been developed by working with the traffic bureaus of various cities and towns, such as installation of parking meters (which eliminated double parking), and the establishment of tow-away parking zones, where the motorist either removes his car by a stated time, or it is towed away.
- During the past several years parking has been restricted on most downtown streets during rush hours, and on many major streets leading out from downtown. These measures seem to help company's operations.
- With the aid of the traffic engineer and other city officials, parking is slowly but progressively being eliminated in the downtown area.
- In cooperation with the traffic engineer, company has been able to get "no parking" on congested streets downtown and in suburban areas. This has helped maintain better rush hour schedules.
- City cooperates in prohibition of parking during rush hours.
- Company has a number of transit streets on which parking is prohibited during rush hours in prevailing directions. This prohibition increases schedule speed; consequently company performs rush-hour services with a savings in buses and operators.
- City has eliminated on-street parking during rush hour period on some of the main streets. This has helped increase speed of transit service.

#### Traffic Signal Systems:

- A new traffic system was installed on the main street to (1) provide for controlled pedestrian movements in the area and (2) regulate flow of traffic within 26-block area according to the predominance of movement.

This is accomplished by electronic controls located at three key stations within the area.

- City has installed a radar-controlled traffic light system to increase speed of traffic on the main streets. This is part of the master plan set up for a civil defense program.
- Traffic engineer has installed a flexible signal system on a six-lane two-direction highway, and established the artery as a main traffic channel inbound to the central city in the morning rush, and in the reverse direction in the evening. Movement along the boulevard has been speeded, even though the change attracted traffic from parallel highways. Westward movement of buses along this boulevard has been expedited, and seventeen of company's lines serving the railroad station with 90 trips in the P.M. rush hours have saved as much as 5 minutes in running time. Express service on two lines which run the length of this Boulevard have been speeded up even more, and patronage on all express buses has increased. Similar benefits were realized in the morning rush hours.

#### Other Traffic Improvements:

Other reported traffic improvements include:

- changing of streets from two-way to one-way traffic;
- simplified downtown routings;
- rigid enforcement of traffic and parking regulations by police;
- development of one-way street program to tie in with future expressway plan;
- widening of downtown roadways;
- elimination of automobile turning movements in central area;
- lengthening and improved marking of bus loading zones;
- readjustment of traffic light cycles;
- replacement of curbs;
- paving of loading platforms;
- relocation of bus loading zones;
- restriction of movement and parking of large tractor-trailer truck units in the downtown area;
- remodeling of bridge and former rail transit terminal to accommodate express bus movements and use of terminal without traversing city streets, with increased speed and reduction in operating costs;
- an alternate stop arrangement for bus operation on principal street of central business section to distribute stopped buses and expedite their loading and movement.

#### Downtown "Neutral Zone":

In 1955 one company installed a "neutral zone" in the downtown section. No fares were collected within the 24-block area, which comprises most of the downtown section. Passengers whose entire ride is in that section may ride free, boarding and leaving company's vehicles by either door. About 300,000 folders were distributed on the buses and through the stores explaining this plan.

Loading time was immediately reduced 50 per cent. All this saving could not be translated into schedule speed because of difficulty in pulling away from the curb. Downtown Associates urged City Council to remove some parking in

order to facilitate all vehicle movements.

Passengers were enthusiastic about this plan, which attracted world-wide attention. Aside from a few penny transfers, company does not feel it is losing any fares.

Early cooperation by the city established restricted parking regulations for a 30-day trial period - a total ban in a 16-block "heart of downtown" area during rush hours. Some 350 parking meters were removed. Since that time, because of pressure put on City Council by some merchants, on-street parking has been restored "here and there". Company, however, still benefits from the initial Council action. Some of the former parking restrictions have been restored - during the morning rush on the inbound side of one of the principal streets, and during the evening rush on the outbound side. Four of company's bus lines use this important thoroughfare.

Company has learned that constant vigilance is needed to prevent individual merchants and special groups from "nibbling away" at restricted parking zones.

Summary written  
July 19, 1959 - WSR

Summary

RAPID TRANSIT IMPROVEMENTS

Specific improvement projects completed in recent years, or now under construction, were reported by companies engaged in rapid transit operations. These were designed to eliminate bottlenecks, and to increase capacities of the systems for rush-hour movements.

At least two rapid transit systems have taken over portions of former railroad commuter lines in their service areas and "integrated" them.

Plans for additional rapid transit improvements, necessitated by future civic improvement projects in these several large metropolitan areas, are under consideration.

One operator has improved speed of movement and increased the utility of the system to passengers in the following manner: Wasteful duplicate and competitive services between former separate privately-owned rapid transit and surface systems were eliminated, with the closing of 54 lightly-used stations and the inauguration of skip-stop express services. These operational changes reduced trip time from 20 to 30 per cent, produced a 13 per cent over-all improvement in service with reduced equipment, increased riding volume by 6-3/4 per cent. This meant an increase of \$100,000 in annual revenues and a reduction in operating expenses of \$200,000 annually. Between 1948 and 1958 seven branches of the rapid-transit system serving suburban communities or low traffic areas were discontinued and adequate connecting motor bus services substituted. Considerable ground-level train operation was eliminated thereby, reducing accident hazards at street crossings and reducing the number of crossing flagmen and gate-men. Savings were also made in towermen's wages, switching crews and station and terminal facilities. A new rapid transit loop was constructed to eliminate a cumbersome and costly yard switching operation, and to permit doubling of service frequencies.

One eastern city has installed escalators at five stations along its north-south subway. These, of course, have been popular with passengers. They have created an operating problem, however, since state regulations require a readily-accessible button for stopping them in an emergency, and these are toyed with by children. An employee must be dispatched with a special key to restart escalators.

The most recently inaugurated rapid transit system in the United States has been characterized by a continuing increase in riding. In its second year of operation, riding increased 11.3 per cent. The use of 1,900 parking spaces adjacent to the line has encouraged large numbers of persons to ride it who otherwise would have driven their cars or not come downtown at all. Seventy-one per cent of the persons using the lots were new riders. This system is the only means of bringing more people into downtown without imposing additional burdens on already overloaded streets. In 1958 an extension of this line was opened, along with 1,500 new parking spaces. The immediate success of this extension necessitated the addition of 500 parking spaces at one station. While transit riding as a whole in this city declined 10 per cent in 1958 as compared with 1957, rapid transit riding nearly equalled the year before, and actually increased with the upturn of business and employment in the fall before the opening of the extension.

Future developments in rapid transit on the West Coast are anticipated. The Board of Supervisors of one large city has recently rejected \$300,000,000 worth of additional freeways for the city, two recently-completed elevated freeways having been considered such eyesores that the entire public rebelled against them. Consideration is now being given to subways. Rapid transit planning for five counties in this area is now progressing at a rapid rate. The cost of the contemplated system lies between \$500,000,000 and \$1,000,000,000. The public "rapid transit district" created a few years ago is now endeavoring to get favorable legislation allowing the use of bridge tolls up to \$113,000,000 for constructing a tube under the bay between the two principal cities, this cost to include the approaches. The "district" people are making very good progress, and expect to have their report before the people in May 1960, so that bonds may be voted on in November, 1960. Rapid transit within the city and tie-ins with existing surface systems are under study.

Summary written  
July 15, 1959 - W.S.R.

Summary

TRANSIT ON EXPRESSWAYS

Twelve of the companies responding to these questionnaires report the present or contemplated operation of transit on expressways.

A new era in local transit history began in June, 1958, with the opening of an express rail rapid transit line in the median strip of an expressway in a large Midwestern city. This is America's first such facility designed to be integrated with a multiple-lane automobile highway. While not fully completed at this time, present benefits of this new operation are many. The operation is characterized by a saving in maintenance of way and structures, and greater safety. Running time between terminals has been reduced 28 to 30 per cent, and greater speeds will be obtained when the project is completed. Public acceptance has been spontaneous and gratifying. Plans are in process of development and some work is actually under way for other such projects in the city. Financing was a joint undertaking of the Federal, state, county and city governments, and the transit operating Authority.

One company reports two modified expressways of short length completed close to the downtown business district. Diversion of service from regular routes during base periods when headways are wide would cause poor service on arterial streets, and would not accumulate satisfactory passenger loads. In the rush hours, however, with closer headways and greater loads, these expressway segments are being used to advantage. Four routes have definitely scheduled rush-hour trips which run nonstop over them, being alternated between other trips which use the regular arteries. This provides fast service to downtown passengers at the very peak of the rush hours.

Another company reports a similar experience with four of its routes, and feels that the speeded-up service has increased the riding on those lines.

A reporting company states that its first limited line was established over an expressway in November 1954. Since that time fifteen new express lines have been added to give suburban residents a fast ride to and from town via the expressway system. Buses operate nonstop on the expressways at the same speeds as the automobile. Several "park-ride" stations located at shopping centers along the way keep many automobiles from coming downtown and aid in supporting express service. This operator believes that expressway service by transit is very important in the interest of faster speeds for the transit rider. More expressway routes are being planned for the future.

One West Coast property has operated one expressway bus route for about seven years. It operates over only 1-1/2 miles of expressway. A newer route operates over another 2-1/2 miles of this same expressway between two residential districts.

A southern company in October, 1958, inaugurated its "green flag" express A.M. and P.M. rush-hour service from a suburban area to downtown, making use of a recently opened turnpike. Considerable travel time is saved by this premium service, for which an additional charge of 5¢ is made above the fare for regular buses on this route. Traffic congestion is avoided by use of the expressway.

A large mid-Western property reports a future 400-million-dollar expressway system for its metropolitan area. While much of this is in the planning stage, two major arteries are now being constructed for early completion. Company is operating five express lines over completed sections of these expressways, and eventually expects to have up to 14 routes operating on their inner portions - with anticipated cuts in travel time of from 25 to 50 per cent under present schedules. In the early stages of this highway program, company successfully obtained a policy decision from the State Highway Department to provide turn-outs and loading facilities for buses on all expressways under construction or contemplated. A company suggestion for the establishment of "park-ports" at these turn-out locations, to be included in the cost of the project, is being supported by the local press. This would promote "park and ride" use of the expressways, thus increasing their passenger-carrying capacity many times.

Such use of highways by express buses provides one approach to a rapid transit system, with buses traversing surface streets for pick-up in residential areas, using the expressway for high-speed travel to town, and local delivery of passengers within convenient reach of their downtown destinations. It is this company's view that such a program will produce good results until the expressway becomes so congested that the speed advantage will ultimately be lost. Based on the experience of other cities, it feels this could occur in a relatively short time. It, therefore, advocates some sort of exclusive lane for transit vehicles - either on the expressways themselves, or by means of a separate right-of-way facility.

A southwestern company has experimented with expressway service since September, 1957, during the A.M. and P.M. rush hours, between an outlying residential section and downtown. This was planned to give a more direct route (by 0.8 mile) and a faster ride (time saving, 10 to 12 minutes out of a former 38-40 minutes) by operating on the expressway at 40 to 45 miles per hour with limited stops. In introducing this service, complimentary tickets were distributed to the people living in the vicinity of this express route - good for one free ride on all zones with a one-month time limit on their use. No premium fare was charged for this service.

A recent innovation by this same property over this same expressway is a deluxe air-conditioned shopper's express service, which grossed a very satisfying revenue per hour during its first four days of operation. This service was merchandised as an "experiment in custom bus service." It leaves the residential area every hour on the hour, operating locally in the area served, and goes to town via expressway in 26 minutes - a substantial time saving. It leaves the downtown district every hour on the half-hour. Every effort has been made to attract the shopper - new gold-and white exterior, attractive two-tone comfortable seats, radio and air-conditioning. At the inauguration there were free gifts for the ladies and balloons for the children, plus a welcome from an attractive hostess. Prior to inauguration, uniformed supervisors distributed 3,600 schedule cards in the area. News media cooperated in promoting the service.

This company's interest in expressway services can be measured by its recent request for the reservation of a median strip on a proposed expressway in the northern portion of the city for future high-speed transit service. This request has been receiving favorable consideration from the city and from the state highway department.

Three other companies report interest in future expressway operations. One contemplates operation on a new expressway now nearing completion. Another has applications pending with the city to operate over certain streets connecting with that portion of the principal state throughway lying within city limits. Company plans supplemental express service between the downtown section and various areas of the city over this facility, and over certain other expressways now in the planning or construction stages. The third company in this grouping, a public authority, has reached an agreement with the state highway commission for construction of suitable bus turnouts and passenger interchanges on a freeway scheduled for completion next year. It has also indicated its desires to discuss adequate facilities on other freeways which may be planned in the future.

Summary written  
July 14, 1959 - W.S.R.

Summary

IMPROVED VEHICLES AND FACILITIES

Rapid Transit Cars:

Within the past five years one large Eastern operator has purchased 1,400 new rapid transit cars at a cost of \$145,000,000. These cars are interchangeable as between the different series and completely compatible as to operation and training. They feature dynamic braking, improved control and propulsion equipment with faster accelerating and braking rates, and permit faster schedules to be operated. All journals, motors and auxiliaries are equipped with roller bearings. There are improved all-electric doors and controls, public address systems, and draft gear of the twin-cushion shock - absorbing type. Trucks are cast steel frame with cast steel bolster and spring plank and forged steel equalizer bars, shock absorbers and insulating cushions. They afford greater rider appeal through more comfortable seating, improved diffused fluorescent lighting, and greater reliability of operation. The ventilation, thermostatically controlled, is of continuous circulation design. Cars have white porcelainized ceilings and two-toned tiled floors. Ten cars are equipped experimentally with fiberglas seating. All other cars have red vinyl plastic covered seats with synthetic foam cushions. Ten cars are equipped experimentally with air conditioning.

Modernization of 400 subway cars has been undertaken on this same system, with a rearrangement of seating and floors; improved lighting; renewal of cables and wiring; installation of modern control equipment; improved paints for greater durability and appearance. Roller bearings will be substituted on some traction motors. Car floors are being resurfaced with renewal of under-flooring truss plates where necessary.

A large midwestern property has replaced the antiquated wooden cars taken over from a predecessor company with new all-metal subway-elevated cars. These cars, with remote controlled doors and public address systems, have permitted a drastic reduction in trainmen. Spectacular speed improvements were immediately accomplished, and the quiet smooth operation of these modern vehicles added greatly to passenger appeal. By using some parts of its former street cars in building rapid transit cars this authority saves \$20,000 per car as compared with the cost of cars built from all new components. The saving in capital outlay for 570 cars will amount to \$11,400,000. Approximately 450 older steel cars were equipped with up-to-date remote door controls, which reduced train requirements from 5 to 2 men. The \$575,000 cost of this conversion was saved in less than one year, and the economies have been continuing ever since.

In another Eastern city the company has assumed financial responsibility in a cooperative project with the city for acquisition of 270 new subway-elevated cars for a line owned in part by the city and in part by the company, as well as for the rehabilitation of the city-owned section of that line. These expenditures will amount to about \$27 million, bringing to \$63 million the total of recent transit improvements, all without any expenditure of tax funds. The purchase of this group of cars will be financed by a city bond issue, with the company meeting all interest and amortization.

The newest American rapid transit system ordered twenty additional rapid transit cars in 1957 costing \$1,600,000. These were needed to carry the

increasing number of riders on its recent west side extension. Because of the heavy riding 84 of the 88 cars owned have been in service in rush periods, leaving only two two-car trains as spares, one at each end of the line.

Modernization of Surface Systems:

Companies have continued in recent years the modernization of their properties through programs of vehicle conversion. Greater flexibility in operations, both physically and economically, has been the goal. Major re-routing changes have been possible.

One large company has carried on a broad-scale surface modernization program over the past four years involving the acquisition of a new fleet of more than 1,000 vehicles. This and other plant rehabilitation cost some \$36 million.

Another property reports the expenditure between 1943 and 1956 of \$68,400,000 for completely modernizing and improving the system. A complete new fleet of buses and trolley buses replaced all street cars after World War II. Transit riders, through the system, paid nearly \$1,750,000 towards resurfacing abandoned street car areas, thus transforming major streets into smooth, modern roadways. New modern coaches have been added in the past three years, some being used to replace trolley buses. Five of the vehicles are deluxe coaches for high-speed charter service. All coaches have a "new look" attractive color scheme.

One company reports conversion to all bus by June of 1954, having spent \$11,000,000 for 525 new diesel buses. The change to buses made service elastic and pliable, with direct termini and turnarounds at industries and offices, curb loading, and no mid-street obstruction due to rails. Poles and wires were eliminated. Operating performance was improved by use of a single type vehicle. Economy in operation was helped by elimination of employees in power plants, overhead, track and underground crews. Flexibility of all-bus operation fits in with governmental plans for parking, highways and freeways, as well as shifts of some larger industries and offices to the suburbs. It has also made access to large shopping-center developments practicable.

Discontinuance of the use of all two-man street cars and operation of one-man cars on five routes was reported by a company which has also acquired 380 new diesel buses to replace obsolete equipment.

One public transit authority took over a surface system fleet of 3,773 vehicles, only 980 units of which were modern equipment at the time, and 2,666 of the street cars required two men to operate them. By the end of 1958 this authority had completed the substitution of one-man buses for two-man street cars, scrapped all over-age street cars and converted 570 of its 600 PCC street cars to subway-elevated cars - thus saving \$7,980,000 in depreciation costs that would have been required to cover abandonment losses. The conversion to a one-man bus system effected tremendous savings in labor costs for conductors, maintenance of ways and structures, power costs, and related economies through the greater speed potential and operating flexibility. Motor buses also permitted expansion of services without incurring the heavy capital costs of track and power distribution facilities. Also of great importance was the cost differential between the various vehicle types.

Another property reports having run, in 1954, 120 street cars on 3 routes and 200 trolley coaches on seven routes at costs up to 45 per cent per mile greater than for diesel buses. A streetcar barn and trolley coach depot were required, along with 24-hour track, overhead, and distribution system maintenance. The conversion permitted closing of the car barn. Traffic congestion was relieved by elimination of street car tracks, passenger safety islands, and other obstructions to the normal flow of traffic. The diesel bus afforded reduced costs of operation, and more flexibility in operation. A part of the trolley coach conversion program has been completed - the remainder scheduled by the fall of 1961. When completed, it will permit the closing of the trolley coach depot and eliminate the costs of overhead, power distribution and maintenance crews. The change will relieve the ever-increasing traffic congestion, and provide more flexibility in operation with fewer delays due to fires, street repairs, etc.

In April, 1958, under authority granted by the Public Utilities Commission, motor coaches were substituted for the rail service over an important Western trans-bay bridge, replacing 88 articulated cars.

Four additional properties report substitution of motor buses for trolley coaches within recent years and months. Among the advantages claimed are

- improved appearance, especially in the business district, by removal of overhead wires
- reduction in total number of units required to fill schedules
- flexibility for, and economy from, rerouting, through routing, and service extensions.
- lower fuel costs
- reduced maintenance through a standardized fleet
- schedule economies

A fourth company is NOT converting to diesel buses, believing its trolley coaches to be equally, if not more acceptable to the riding public. It is, however, replacing older equipment with newer and using a variety of paint jobs to get attention. Company restricts outside advertising to the two rear corners' of its vehicles, believing that this upgrades the service and makes it more acceptable to the public.

A large city on the eastern seaboard claims to be among the first in the United States to undertake a modernization program after World War II. This program began to materialize in 1947. Within the next ten years a total of 24 lines were converted from rail to bus or trackless trolley operation. This permitted freeing streets from street cars, fewer street cars downtown, material reduction of transit vehicle turns, institution of through service direct to town without shuttle and transfer, reduction of circuitous routings, and institution of express service on some of the new bus lines.

#### Motor Bus Replacement Programs:

Fourteen companies report extensive purchases of new diesel buses, and a high percentage of modern vehicles in the fleet. In most instances such

programs were accompanied by rigid maintenance programs for the older equipment - in one case an annual saving of \$350,000 in material and labor being reported over former "hit or miss" maintenance procedures.

In some instances there is a trend towards fleet standardization by make and model to reduce the variety of buses in service on a given property.

Companies doing extensive school bus business have purchased school buses instead of integral transit buses for this service, getting, perhaps, three school buses for the price of one integral unit.

Special deluxe buses for charter and special services are among the reported purchases.

One company reports that it has not purchased new equipment for some time, due to shrinking volume of business and excellent maintenance program. The saving in depreciation expense plus other economies have resulted in "black" figures for the company recently.

Among the reports of equipment purchases are such comments as these:

- Each order has embodied improvements in design and construction for the greater convenience, safety and comfort of passengers
- Completely new front end, wider seats and aisles, lower steps and a panoramic windshield, greatly improving visibility.
- Use of 102-inch wide buses (where legally permissible).
- Buses are the "new look" type, with attractive interior colors.
- It is not possible to place a dollar value on increased revenue because (of new equipment), but it certainly has been a big factor in keeping the passenger decline way below that of the national average.
- Some extras were included. Actually the company spent \$1,500 per coach above the base price on extras just to give them a "dressed-up" appearance. Vehicles were equipped with melamine paneling, bright colored interiors, new exterior color scheme, picture windows....The colors were arrived at after considerable discussion with manufacturer's color experts.

#### The New Look in Bus Design

Typical of the trend toward more rider appeal in its vehicles is this report of a southern California company:

This company claims responsibility for the initial "push" that was given the search for a new bus design. It has purchased 50 new GMC 48-passenger buses in the past three years at a cost of \$1,350,000. An additional 30 vehicles, (the GMC "new look" buses) at a cost of \$900,000, should be delivered late in 1959 or early in 1960. Company is about two-thirds of the way along in a reconditioning and painting program for 60 of its present 45-passenger coaches involving improvement of interior design and seats, floors and painting.

In the opinion of management, one of the most significant items revenue-wise is the assignment of new equipment of the company's latest "aircraft design interiors."

Sometime ago company hired an airplane designer from a local plane plant to help with the interior design of its new buses. It was decided to aim the interior design to its women riders, who represent two-thirds of the daily passengers and 85 per cent of the base patronage; also, to use materials that would maintain their original appearance longest with the least maintenance.

When it came time to assign 30 of these coaches, each department had a different idea:

- public relations - one on each route - keep everybody happy
- traffic - saturate 1 or 2 routes P.M. peak - save one or two coaches
- safety - keep off certain routes - difficult turns
- maintenance - place on high mileage routes - maximum savings
- transportation - spread between divisions - keep drivers happy

Management's decision - as originally conceived - "aim at the women." Their percentage is highest in base, when a comfortable seat means most and interior design and color can be enjoyed. So, company saturated base schedules of heavily traveled routes with these vehicles. On each route so equipped, any woman stepping onto a coach during the base period would board a new coach.

When company got 20 more new coaches it followed same procedure - plus handing a baby orchid to each woman passenger as she boarded the bus the first day between 9:00 A.M. and 2:30 P.M. The word spread real quickly in the neighborhoods served by these vehicles.

A study of the last two routes shows company's riding along them increased, compared to all other routes, by 3.62% notwithstanding a mileage reduction on them of 2.63% as contrasted with 1.33% on all other lines. This is a significant increase in revenue. Prior studies have indicated that the added revenue per coach alone equals the annual depreciation. In addition, savings in maintenance again equal the annual depreciation cost. In other words, company believes that these new coaches have added 3.6% net revenue. This is more significant when it is realized that this is not a "gadget-type" special service - it involves the company's basic service to the public, which brings in 95 per cent of gross revenue.

#### Air Conditioned Vehicles:

Air conditioning is being tested experimentally in rapid transit cars.

Three companies are experimenting with air conditioned buses:

- (1) In 1956, three air conditioned buses were introduced in city service experimentally.
- (2) For experimental purposes, a new factory air conditioned coach was purchased, and air conditioning units were installed in two existing diesel coaches.

- (3) In an attempt to win back lost riders, the company placed air conditioned suburban-type buses in service on one line. Operating records indicate that an increase of 4 per cent in riding on the line can be attributed to the air conditioning.

Another company has gone beyond the experimental stage. A large number of the company's buses have been air conditioned in the past two years. This year it will have available for service 188 air conditioned units - enough to handle practically all base service and approximately 40 per cent of the rush hour service. Up to this time company has spent about \$600,000 from its own financial reserves on this program.

The largest air conditioned bus fleet is employed by a company which features special services at premium fares. Company's modern, attractive fleet of vehicles has gained considerable recognition. As a late development, 245 of these vehicles have been air conditioned for express and shopper services. Early experiments were conducted in the summer of 1956 with two vehicles which were rotated on company's premium-fare rush hour express lines. Encouraged by passenger response, 100 buses were equipped during the summer of 1957. By 1958 the number of air conditioned buses reached 140, completely equipping 8 of the company's 18 rush hour express lines.

During the summer of 1958 records show that air conditioning was responsible for an average of 12 per cent in new transit customers on these eight lines. This was in addition to the increase realized from local service passengers who switched to air conditioned buses at a higher fare. The average daily increase in revenue on these lines during the summer was 16.4 per cent; two-thirds of this increase was retained during the winter months.

In the summer of 1959 company's complete express operation was air conditioned. In addition, these buses were switched to major local lines serving the downtown area during off-peak shopping hours Mondays through Fridays and all day Saturday. Air conditioned buses are being used to equip all major lines on Sundays, as well as other special service vehicles.

#### Facilities and Equipment:

A large Eastern property is planning the consolidation of two large rapid transit shops. Approximately \$1,000,000 will be spent for new and modern machinery and equipment, and assembly-line methods will be developed for efficient operation. This will culminate a five-year program of shop rehabilitation which has included the purchase of three wheel-turning machines, a double-ended axle lathe, an ultrasonic reflectoscope for detecting metal fractures, two automatic mica commutator undercutting machines, closed circuit television for observing car equipment under actual operating conditions, and an exterior car washing machine. Repair work on traction motors now repaired under outside contract will be done in authority's own shop, with considerable saving in cost.

On another large property five modern new shops, garages and stations were built or purchased; several others were greatly improved to better working conditions and to provide better performance and appearance for vehicles. In 1958 a \$1,500,000 garage was opened, replacing out-moded facilities at three other locations.

One eastern seaboard property has carried on a ten-year progressive plan of plant modernization. Three divisions were extensively remodeled, and the main shops were likewise remodeled and modernized. In 1947 general offices were removed from a downtown location to the company's shop location. Along with the office modernization program, certain division offices were completely remodeled, and two new ones were constructed.

In one city the State Parks Commission appropriated a company's older shops building. This necessitated the building, in 1957, of a new garage and shops. Substantial additions were also made to company's maintenance facilities in the principal city which it serves. All heavy maintenance is now done at one location for greater efficiency and economy.

The remodeling of shops and garages in another city was completed early in 1959. This improvement, plus lesser maintenance requirements on the newer coaches, made it possible to reduce manpower 7 per cent in June. The release of plant space allowed company to rent a portion of unused space at a fair rental. New washing facilities and procedures, as well as a new cyclone cleaner, brought about a marked appearance in vehicles. Space efficiency will permit company to move entire transportation department into main office building for better communication and greater efficiency.

A far western Municipal Authority has built new general offices, rehabilitated maintenance facilities, and modernized buses taken over from predecessor. An eastern private company has erected a new operating headquarters and central bus maintenance shops, while also modernizing several of its operating locations. A third property reports an expenditure of \$2,000,000 for additions to and reconstruction of garages.

Within the last few years a medium-sized property has installed an automatic bus washer and two "cyclone" bus cleaners. The entire fleet is now cleaned inside each day, and outside every other day. Company feels clean vehicles are one of the most important factors in attracting and holding customers. A new single-story office building with fluorescent lighting and combination heating and air conditioning has been built at the shop location. A substantial saving in building rental has resulted. Greater operating efficiency has resulted from having management in closer contact with the operating departments.

All companies report improved maintenance techniques, reduced costs, and improved dependability in service with fewer delays as a result of plant and facilities modernization programs.

#### Bus Shelters

One company is endeavoring to get the city to build downtown bus shelters at heavy loading points. In another case, the city put up five spacious shelters, roofed with green plastic, as a convenience for the company's passengers. Rain or shine, when they get off at "the square" downtown they are protected from the weather.

Summary written  
July 18, 1959 - WSR

Summary

IMPROVED SAFETY AND CLAIMS EXPERIENCE

Nineteen companies report intensified efforts over the past several years to improve standards of safety and to reduce claims costs. Programs vary from the simple to the elaborate. Considerable progress has been claimed in gaining control over this important element of cost.

Among the steps used in various combinations by these several properties are the following:

- A permanently-staffed training and accident prevention department for training and retraining supervisors and operators.
- Study of accident frequencies and causes, with suggestion and testing of remedial measures.
- Use of Polaroid cameras by depot superintendents for taking pictures of vehicles involved in accidents, street conditions, etc.
- Periodic safety contests with prizes of various sorts, including "food fests."
- Selection of winning depot and basis of greatest reduction in accidents per 100,000 miles compared with same period of previous year.
- Use of "white buses" bearing safety messages, rotated from depot to depot, and among the operators daily.
- Accident point-rating system for employees to determine when individual employees may require major reinstruction or disciplinary action.
- "Grass roots" driver meetings in small group to discuss safety and related topics.
- Safety coach incorporating psycho-physical tests for operators. Coach is available to outside groups working with teen-age groups of driving age.
- Courses covering claims and legal problems, traffic enforcement, safety engineering, and relationship of safety to public relations.
- Operators refresher courses and "experience" meetings.
- Use of staff safety committee meeting periodically to formulate and better disseminate preventive information, and to find possible methods of attack on accident problems and design programs around them.
- Use of "bogey" based on past operating accident experience on each line. Lines exceeding this become "target lines" for concerted preventive action - handouts, posters, reminder material, additional supervision and instruction, private operator interviews, etc.

- Mapping of high accident locations and study to reveal remedial actions appropriate in each case.
- Bestowal of company "safety emblem" for accomplishment.
- Stiffened attitude by transportation department on accidents.
- Stiffened attitude by claims and legal personnel on "harassing" claims.
- Faster, tougher claims policy.
- Safety campaigns.
- Better maintenance, use of push-type doors, properly designed and placed grab-rails, etc.
- Employee safety programs. Instruction in use of vehicular safety equipment.
- Complete safety records kept for each operator.
- Applicants screened by using ATA tests and brake reaction tests.
- Available safety and warning devices installed on all vehicles.
- Special courses on obtaining complete information for the accident report, how and why accidents happen, importance of immediate and thorough investigation, how to investigate, how to question witnesses, what clues to look for, measurements, diagrams, how and what to photograph, how to make a complete report.

Results:

- Since the beginning of public operation the number of traffic and passenger accidents has decreased nearly 48 per cent. Savings run to several million dollars a year.
- Claims costs reduced from 10-1/2 per cent of gross revenue in 1947 to 6 per cent today.
- Reduced accidents 57 per cent since 1941, while city's traffic accidents increased 135 per cent in same period. By 1957 total accident frequency reduced to 14.92 from 15.98 per 100,000 miles, a reduction of 6.7 per cent. Won ATA gold award for 1,100,000 consecutive man-hours without a single lost-time accident. Cited by local Safety Council for reducing accident frequency rate over past ten years from 36.50 to 16.97 per 100,000 miles - a reduction of 61 per cent. By 1958 this was reduced further to an all-time new low record.
- Traffic accidents which averaged 16.8 per 100,000 miles in 1953, in spite of increased congestion, dropped to 11; total operating accidents dropped in same period from 23.1 to 17.5 per 100,000 miles. Number of witnesses increased from a July 1954 low of 1.8 per accident to an August 1956 high of 4.5. "No report" accidents dropped

from a September 1954 high of 19.4 per cent to an August 1956 low of 8.4 per cent. Percentage of "no witness" reports in August 1956 reached an all-time low of 18.9 per cent. Some phases of company's program have cost money, but company prefers that money go to employees rather than to a claims-conscious public.

- Of the 954 operators in service as of December 31, 1958, more than three out of four went through the entire year without a single chargeable accident. 216 operators have completed ten years or more of service with unblemished safety records, and 450 others have five or more years of safe driving to their credit. Company's safety emblem is worn by a total of 919 operators, or 96.3 per cent of total work force.
- Recent experience good - the expensive cases of today are those which happened many months ago.
- Reduction in injuries and damages expense of 1¢ per mile.
- Passenger accidents per 1,000,000 passengers reduced from 10.29 in 1954 to 7.32 in 1958. Traffic accidents per 100,000 miles reduced from 11.74 in 1954 to 6.36 in 1958.
- For year ending June 30, 1958, company had 613 collision-type accidents, whereas by June 30, 1959, this had been reduced to 524 - a reduction of 14-1/2 per cent. This occurred with only a 4 per cent reduction in miles.
- No employee lost-time accident in transportation department since December 1954, and in mechanical department since September 1957. One city in group has operated "over 4 million man-hours to date without a lost-time accident" - setting a national record.
- In 1958 as compared with 1957, chargeable accidents were reduced by 28 and total accidents by 189. The estimated amount to settle claims outstanding was reduced by more than \$16,000.
- In 1958 the number of accidents was reduced 71 per cent below the 1948 total. There was a 30 per cent reduction in 1958 accident frequency below 1957. Chargeable accidents dropped 82 per cent and "no accident" days more than doubled. This meant a 16-1/2 per cent reduction in claims department expense. Percentage of gross revenue dropped from 5.4 to 4.6. Company has received the ATA award for outstanding achievement.
- First five months of 1959 show an improvement of 30 per cent in claims paid and outstanding, and a reduction of 48 per cent in accident frequency.
- Company's accident toll has been more than cut in half during the past decade.

- In the face of heavier traffic, company's buses now average an accident per 22,000 miles as compared with one per 7,500 miles ten years ago. Claims paid last year totaled \$109,000 down from \$145,000 in 1953 despite a steady rise in the size of awards in accident cases and repair costs.
- Company's safety record speaks well for itself - over last twelve years it has paid out in claims approximately 4/10 of 1 per cent of its gross revenue. This is about one-tenth (according to this company!) the average outlay over the country.

Summary written  
July 18, 1959 - WSR

Summary

IMPROVED PUBLIC RELATIONS

Transit companies continue to maintain and expand the excellent public relations measures which they have been exploring and using for many years.

Institutional Activities:

Among the measures reported in bringing the importance of transit to the attention of city officials, business leaders, etc., are the following:

- Management participation on traffic and transportation committees, traffic flow and control committees, other chambers of commerce committees, "downtown" committees, "citizens'" committees, special "mayors'" committees, etc. Many benefits, such as reserved lanes for transit and better curb parking control, have resulted from such participation - with increased speed and convenience of service resulting therefrom.
- Mailing of brochures and reprints to individuals and organizations, newspapers, radio and TV stations.
- Indoctrination of teachers from public and parochial schools as to transit problems achieved in day-long sessions at company headquarters.
- Use of direct mail to reach public officials and business and civic leaders.
- Press releases to newspapers, radio and television stations.
- Illustrated slide lectures on company's extension and improvement programs presented to civic groups, chambers of commerce, church groups, clubs, etc. This has been well received.
- "Fair share of the streets" publicity campaign through newspaper advertising and bus posters, directed to downtown merchants and city officials.
- Educational campaigns through newspaper ads and posters in and on buses.
- Working with labor organizations and the state public utilities commission to keep them abreast of transit problems. Their informed support is helpful in time of fare change, etc.
- Talks are made before civic and other groups on the subject of transit operation. A booklet - "How Transit Operates" is distributed on such occasions.
- Public speaking at service clubs and over television to indoctrinate the general public with the essentiality of transit to the community, and its need for assistance in speeding service through congested areas.

- Seeking commendation rather than condemnation from city officials. Seeking police department cooperation to expedite transit movements.
- Public relations program covering radio, "take ones," and leaflets to special groups.
- Keeping council members and other civic leaders who have connection with transit informed by means of Passenger Transport, and with other articles on the subject which reach company from A.T.A. or elsewhere.
- Appearances before chamber of commerce committees, city-wide transportation committees, etc.

#### Informational Activities

Practically all reporting companies employ one or more means of advising the public as to routes, schedules, special services, etc. Among the means reported were:

- Printed schedule leaflets, with or without route map, for each route operated - paid for directly or through sale of advertising incorporated therein. Distribution may be on vehicles, in stores, house-to-house, by mail, at civic centers, downtown supervisory locations, etc.
- Posting of timetables for all routes passing heavy loading points in the downtown area, at transfer intersections throughout the system, and at "wide-headway" outlying locations.
- Large, multi-color route maps of system made available through motels, hotels, service organizations and mail.
- Use of "welcome wagon" service to distribute schedules to newcomers in the city.
- Mailing of schedules and promotional "stuffers" to as many as 135,000 homes.
- Personal contacts are made, when new lines are initiated, with residents within two blocks of the route, and a pamphlet is left with them.
- Twenty-four hour telephone information service, where inquiries about service, fares and routings are invited, particularly on those lines not covered by public timetables. (During 1958 one such service handled 1,117,000 calls for bus information - an average of 3,060 calls per day.)

#### Employee Participation

Most reporting companies are conscious of the vast "public relations potential" represented by the twice-daily contacts between their vehicle operators and their patrons, and have instituted programs of various sorts for capitalizing upon this valuable asset. Such programs include:

- Refresher conferences annually for all operators and supervisory people emphasizing the need for better customer relations, etc.
- Drivers' "Customer Relations Round-Table," consisting of three meetings of one-half hour each in which the drivers discussed the best way of handling customers for their own (as well as customer's benefit. The "teaching technique" here was the main reason for its success. Company did not use the lecture method, but rather directed questions at the drivers to bring out their ideas about customer relations.
- "Salesman-of-the-month" campaign to encourage high standards of salesmanship and courtesy on the part of operators. Interest manifested by bus operators and passengers continues at a high level. Savings bonds awarded one driver monthly at each of company's four operating divisions in recognition of outstanding current general performance. Similar awards are made to their spouses. Commendations now frequently equal or exceed complaints or criticisms.
- Appropriate awards made to employees completing 25 years of continuous service, and an employee suggestion plan has produced many helpful ideas for improved service, efficiency and economy.
- Efforts to acquaint passengers with ways by which they can help speed service, such as signaling operator in time, having correct fare ready, etc.
- Each month colorful posters on employee bulletin boards reports revenue passenger record as compared with previous year - and urging greater efficiency and courtesy.
- Driver instruction in handling vehicles for the comfort, safety and assurance of the older riders, and for courtesy and safety in general traffic.
- Provision of free "strollers" for mothers with babies to use on downtown shopping trips. Free rides in summer to children on their way to swimming lessons; and on three Sundays a year - Easter, Palm Sunday and Motor's Day, churchgoers get a free lift.
- Creating atmosphere of neighborly friendliness. Encouraging operators' cheery "good morning." Meetings with small groups of drivers in which company president points out that "fewer passengers mean fewer jobs." Discussion of ways to make ride more pleasant so that riders will be retained.
- Intensive program to make operators more considerate of their passengers. This seems to be "paying off."
- Public is invited to write letters of commendation, and each month the operator receiving the largest number of commendations is designated the "man of the month." He receives an award, and his picture appears on a car card. Public response to this is good.
- Suggestion contest being conducted with employees to get benefit of their constructive ideas.

### Advertising Efforts

The following information was reported with respect to transit "advertising":

- Company started an advertising campaign with the arrival of new buses last September, and has continued it for some time. The budget for advertising is modest but continuous. Three media were used: Newspaper to launch the campaign with the new buses, followed by radio and exterior advertising on its buses.
- Company does very little commercial advertising (newspaper, TV, etc.) because it has not been convinced of a satisfactory program.
- Company's promotional advertising is largely by means of its own facilities - car cards, posters, over street banners, the reverse side of transfers, booklets, brochures, etc.
- Company has been conducting a 13-week advertising program, covering newspaper, radio and television advertising. The present 1959 spring program consists entirely of daily spot announcements alternating weekly on four local radio stations.
- Most advertising space is purchased to promote charter service with newspapers, car cards, direct mail and selected special publications used. Colorful bulletins are posted at principal industrial plants - 875 posters in all. These urge, employees to make use of public transportation.
- A large metropolitan authority in this company's area has opened a new rapid transit line in company's territory which will cut into a considerable volume of regular riding. To combat this loss, company has advertised in newspapers and via pamphlets distributed by operators and inspectors to inform the public that it is establishing feeder lines to this new rapid transit operation. Company expects favorable results.
- Consistent use is made of newspaper advertising space, radio spot announcements, and transit advertising. Company received a "first place" award from the local advertisers' association in 1958 for its newspaper display advertising.

### Results of Public Relations Activity

Reporting companies made the following comments with respect to the results of their public relations activities:

- No specific result can be credited to these activities, but on the face of them they should help maintain patronage.
- Since the start of company's courtesy crusade, commendations to operators have increased from 183 in 1948 to 1,208 in 1956, or 560 per cent. Operator complaints declined 47 per cent in this period. At the same time, complaints about service were reduced 70 per cent.

- These good will efforts haven't prevented a continued loss of passengers. In this respect this city is no different than most other urban places. Its revenue passengers have been decreasing since 1946, but company officials believe their efforts have slowed the drift away to competing forms of transportation, and there are signs that the trend may have been arrested.
- No direct results can be assessed from (some of this) activity. The company is confident that it helps improve the climate in which it operates, and facilitates acceptance of service reductions and fare increases by the public generally.
- Company is presently enjoying excellent public relations with both the riding public and the city officials. While a revenue increase cannot be directly attributed to this, it has had a very definite effect on company's ability to obtain traffic improvements from the city, and to receive other special considerations in its bus operations.
- All of the things enumerated above have improved company's public relations remarkably in the last six months. Company seems to have gained the confidence of governmental bodies, the riding public, and its own employees. Most important - the riding has, as of April 15, 1959, been stabilized to a point where company is experiencing no decline under the previous year. (NOTE - Company reported that this trend still maintained during May and June, 1959.)
- The improvement of public relations is a result of improvements which have been made in service, plus a betterment in labor relations, and the cooperation received from daily newspapers, which give the authority a "fair shake." Authority is sure that placing transit's story before the city's leaders has done a lot of good.
- Public relations on the whole are excellent.

Summary written  
July 21, 1959 - WSR

Summary

COMMENTS ON IMPROVED FINANCIAL STABILITY

This company is consistently in the black financially, and it has managed to get along without a fare increase since 1956 in the face of steady increases in equipment and labor costs. Besides, it has purchased \$2 million dollars worth of new "red and yellow" buses to provide its customers with smoother rides. The majority of the 1300 transit systems in the United States either are losing money or doing little better than breaking even. In some cities the situation has become so desperate that the faltering private companies are being taken over by the municipalities - about 30 such take-overs have occurred since World War II. Yet, this has proved no solution, since the same basic problems that plagued their private predecessors continue to confront the publicly-owned systems.

Regular dividends of 15¢ a share per quarter have been paid by another since August 1955. The company has been brought to sound financial position. When 61,000 shares of the capital stock were placed on the market by private holders in 1958, they were purchased by the company and are held in the treasury.

One company's only claim to fame is that it "has earned money each year since beginning operations in this city - not as much as it should earn, but at least some earnings."

One smaller Transit Authority has been operated on a self-sustaining basis, including payment of the principal and interest on its bonded indebtedness.

Transit system (a municipal operation) is debt free and has been since January 1, 1952. It receives no help from the city government in the way of a subsidy. It appears now that some longstanding negotiations may result in the extension of service into areas which will not support transit service on the basis that any losses sustained will be made up by the city. This is an important first step toward the awareness which must be created in the minds of the Mayor and the City Council that transit must have help. Particularly in the case of rapid transit, if mass transit is to serve the community as a community should be served in the interest of over-all economy.

Summary written  
July 20, 1959 - WSR

Summary

EXPRESS AND LIMITED SERVICES

(See also: "Transit on Expressways")

One of the pioneers in establishing rush-hour express service says that the establishment of these and other special services is based on a belief that transit must move in two directions in order to increase its appeal and attractiveness: (1) Speed; and (2) Social Acceptance. There are, of course, many additional factors, such as comfort, convenience, accessibility and so on; but in all surveys probing motivation, speed and prestige seem to be important. In this company's opinion, express bus service does a good job of incorporating both factors.

The above company started with five lines and 45 buses in 1946; it now has 18 rush-hour express lines using 240 buses. The pattern has been to duplicate the routes of existing local lines in the outer pick-up areas and then to use the most direct arterial thoroughfares to downtown for the express or limited zone of operation. In some cases express lines start farther out than the companion local service, providing high-speed travel during rush hours only to residents of outlying suburban communities.

In many cases company has been able to effect a saving of up to 30 minutes round trip on express vs local services. The range is from 20 to 30 per cent in increased speed. The social acceptance factor is difficult to measure, but company knows that many of its patrons consider it "smart" to say that they are "express" riders, rather than just "bus riders." Results in this case in terms of increased patronage for express service were quite evident even before the new feature of air conditioning was added. Express service patronage has shown an increase of about 5 per cent as compared with an over-all decline in system patronage.

Another "pioneer" ran street car lines in express service 45 years ago, and has used express buses on city and suburban lines since 1926. Today it has 25 separate express services running in the morning and evening rush periods between suburban areas and the principal metropolitan center served. Express buses extend in all directions and use side avenues as well as main arteries of travel. Nine of these lines run express during the entire day and evening, and save patrons as much as 10 minutes in travel time between their homes, stores, and places of employment. Cooperation of city and traffic officials in the control of parking during morning and evening rush hours in the prevailing direction enables buses to use the curb lane.

One company reports peak-hour express service on ten lines at regular fare; another has expanded fast express service to 27 areas, thus increasing speed of operation and reducing travel time for customers. A third company is now operating express service on seven lines with gratifying results, including operations over two expressways within city limits. From one location 14 minutes are saved by express buses on the freeway as compared to local streetcar lines between the same locations.

A distinct service improvement for passengers was instituted by one company through the elimination of two weak and unsatisfactory suburban shuttle routes of low population density, and their replacement by limited stop service directly into the downtown area. Limited stops are spaced about a mile apart, and are usually at important crosstown street intersections, or transfer points where traffic signals would cause a stop anyhow. Between five and ten minutes are saved in a 13 to 15-mile run over local running time, and passengers are pleased because a fast ride is given to outer areas. Added mileage has been recouped by curtailing poorly patronized night and Sunday services in these areas.

One company has increased revenues through two premium-fare express routes which operate during rush periods from residential areas into the downtown business district.

Several "servant limited" lines have been started by one operator, designed especially for domestic help. These limited lines operate an expressway to suburban parts of town where regular bus routes cannot be justified, using buses which would otherwise pull into the garage after the morning rush hour.

Another company reports the installation, since 1954, of 22 new limited lines. All but six of these lines operate on expressway. Three new lines of this type are scheduled for installation shortly. In the main, these limited lines furnish fast express-type service to new suburban residential areas at a premium fare.

A midwestern company has recently inaugurated express services in its area. A western transit authority has started express service on three lines on a minimum basis. It is growing in a manner to indicate the need for expanding this type of service in the immediate future.

One company reports an extremely low population density which greatly reduces the opportunity to successfully operate express and local services. Local service is essential; the express would "rob" the locals and leave headways too "long" to attract riders. Since most of company's longer local routes have speeds of 14 to 20 mph anyway due to long stretches of open roadway, the advantages of express service are less apparent than in other cities. Certain express bus experiments, underwritten by the city, may be conducted in the future.

A company reports installing, between 1956 and 1958, three express bus lines. One of these operates in territory not otherwise served; two of them originate in territory already served by other lines. Premium fares are charged -- the regular city fare plus 5¢. Results, while not spectacular, were favorable enough to keep these lines in operation. Express trips during morning and evening rush hours at premium fare have also been tried experimentally. For a number of reasons this plan has failed to produce additional revenue, and company will remove these express trips as soon as feasible.

In all, eleven transit operators have reported investigation of, and actual operation of, express and limited bus services in the interests of speed and convenience for the riding public and sustained transit use.

Summary written  
July 16, 1959 - WSR

Summary

SHOPPERS' SPECIAL SERVICES;  
OTHER SPECIAL SERVICES AND FARES

Operators continue to experiment with, and to adopt as integral parts of their operations, many forms of special transit service. These include:

Shoppers' Special Services

For a number of years this property has operated a Shoppers' Special with air-conditioned buses on a five-cent fare. On this fare this project just about pays for its out-of-pocket cost; however, it has been an excellent public relations project. Recently a deluxe air-conditioned shoppers' express service was started which "grossed a satisfying \$6.60 per hour its first four days of operation." It was merchandized as "an experiment in custom bus service." It leaves the residential area every hour on the hour beginning at 10:00 A.M., and comes to town via an expressway in 25 per cent less time than an equivalent local transit ride. Buses return from the downtown area on the half-hour. Buses feature new gold and white exterior, attractive two-tone comfortable seats, radio and air-conditioning. Service was inaugurated with attractive hostesses and free gifts for the women shoppers and children. More than 3,600 schedule cards were distributed in the area prior to the start by uniformed supervisors, and other news media were used to promote this innovation.

One company employs eight special bus lines to provide a deluxe-type service for shoppers between residential areas and downtown during off-peak hours. These are operated at a premium of 5¢ over the regular fare, and have proved very popular.

Another company started its shoppers' special service late in 1958. it is a loop service in the downtown area on ten-minute headway over two parallel one-way streets for about 3/4 mile in each direction. These parallel streets are separated by one city block. Regular cash fare is 20¢; shoppers' special fare is 10¢ cash with no transfers issued or accepted. Service is very popular with its patrons, but not enough of them use it to the extent that it will pay its own way. It is slowly building up, but management does not think it will reach a self-sustaining level. Some merchants have offered to subsidize the service should the company find it necessary to discontinue it.

Late in 1958 another company started a shoppers' special bus which connects a small shopping district, a medical center, the central business district, and the administrative offices of the city and county. It was designed to encourage the short rider. Revenues are approximating out-of-pocket cost of operation. During the Christmas shopping season, and during certain "sales days," the merchants maintain a parking lot about three blocks from the end of the shoppers' special line, and during these periods company extends the line into the parking lot. This extension is subsidized by the merchants, and it has been mutually profitable to them and to the transit company.

A reporting company states that it is making out-of-pocket expenses and getting some good will from its shoppers' special operation. This bus runs midday through the downtown area, and is augmented during the noon hour with a second bus. Fare is 10¢ without transfers.

One company plans to establish a new route to service a new college shopping center when it opens a year from now. This route will cross four others so that people will have an opportunity of transferring when proceeding to and from the new shopping center.

Another company - an extensive operator of rush-hour express services - inaugurated off-peak shopper express service in 1954. This system provides fast, direct service from various sections of the city and county to downtown, and has grown from four lines at the start to twelve lines today. In many cases shoppers' routes were inaugurated in areas where direct downtown service was not available previously. Their growth has been slow, but steady and, like company's rush-hour express services, they have gained considerable impetus from the use of air-conditioned vehicles.

#### Special Excursions

In 1957 a company inaugurated a series of Sunday excursions to points of interest in the county and the neighboring countryside. These tours - which are operated in the spring, summer, fall, and at Christmastime - have served the recreational needs of thousands of citizens, and have become very popular. Fifteen excursions were operated in 1958, the largest of which took 1,295 persons in 47 buses to the foothills of the Ozarks for a display of fall foliage last October.

Special service revenues of another company have been increased through the operation of multiple-day, all-expense tours. Passengers who have been patronizing one-day excursion trips form an excellent nucleus for longer packaged trips, which are growing in favor daily. In addition to its popularity, this type of trip generally produces a better financial return than the one-day trip.

One company features summer Sunday bus excursions to points of interest in the western part of its state. These have been a popular feature, providing an all-day tour at a fare of \$4.00. Sometimes arrangements are made for a luncheon for those who do not wish to bring picnic lunches, and passengers are given their choice of either plan.

#### Rail-Bus Joint Fares

Late in 1958 a city and two railroads, with a transit company, embarked on an experiment to encourage greater use of public transportation facilities. Service was increased on a certain single residential branch of each railroad's commuter operation, and both the rail fares to the city center and joint bus-rail fares were reduced. City agreed to subsidize the railroads' increased costs of additional trains to the extent of \$160,000 for a six-months' period. Company receives 11¢ out of a total 40¢ charged for a bus-railroad trip to the city center. Regular bus fare is 10¢ token or 20¢ cash. Nine of transit company's bus lines serve as feeders to eight stations on the two railroads, and the number of passengers taking advantage of the reduced joint fare ranges between 1,300 and 1,900 one-way trips per week. The riding increase on the railroads thus far has been about half that estimated as necessary to off-set the fare reduction which they have granted. City may subsidize the experiment for another six months, and is considering broadening the experiment to include another branch of one of these railroads.

Special Events:

Nine companies report the promotion of special bus services for special events. Some of these include:

- Direct service express routes from suburban areas and suburban parking lots to home games of National League baseball team for every night, Saturday and Sunday game. Round-trip fare is 80¢. When baseball interest is high, three or more buses are needed on some routes, and 2,000 passengers may use this service to important games.
- Similar direct service express routes are operated on Saturdays in football season to games in stadium of local university. Parking space is limited near the field house, but available on another campus two miles away. For important basketball games played at the field house, company supplies a park-ride service between the parking lot and the field house at a 20¢ round-trip fare.
- Special services from four residential sections of an industrial city to the amusement bowl at least twice a year - for the "soap box" derby and opening university home football game. Due to local newspaper publicity, this service is well patronized, and more people each year are taking advantage of these direct trips.
- Eleven special service accounts have created a substantial increase in gross revenue for one operator. These include routes to amusements as well as educational programs. Whenever company becomes aware of some special want and feels that it can be remunerative, it immediately applies to Department of Public Utilities for a special service certificate.
- Direct service from many points on a transit system to practically all race tracks within reach. Race track patrons will rise early and tolerate a five-hour bus trip, if necessary, to reach a race track even in the middle of winter. Today there is direct service to race tracks twelve months a year. During the winter months the trip to the nearest race track involves a round trip of 5 or more miles. Revenues from race track operations increased from \$394,000 in 1956 to \$538,000 in 1958, and the business is still growing.
- Special Sunday schedules, carefully arranged to deposit churchgoers at church doors within ten minutes before the start of the morning service, and to pick them up within ten minutes after the close. Company checked with churches along its routes before drawing up the timetables. One church changed the time of its service to fit the bus schedule better.
- Direct service from "west end area" of town to special events at the Convention Hall.
- Direct service to new suburban industrial plant established in 1958 on three routes.
- Special sightseeing service during "summer fiesta" in open-air coaches, with driver-barker.

- Through-service from downtown to site of Centennial Exposition to be held this year, at a 25¢ fare without transfers; also, some intramural service from parking lots to exposition buildings (on a chartered basis).
- Special rides to all points of interest, amusement, athletic events, educational institutions, etc., on week ends and holidays - year-round for those who lack automobiles or who tire of driving and bucking traffic. These rides have helped keep many people using transit services. In 1958 company's revenues were \$51 million, and of that amount \$2.5 million represented chartered and special service revenues - about 5 per cent of gross.
- Air-conditioned buses for direct service to home baseball games as a cooperative project with the baseball team, whereby company is guaranteed against loss. Patronage has grown each year, and relieved congestion around the ball park. Some 113,000 passengers were carried last season, in addition to baseball fans carried on regular transit routes serving the stadium.
- Operation of five special express lines to the municipal theatre in the park during the 12-week summer opera season. Although this operation is at night when the family car is available, and there is ample parking space around the theatre, company's air-conditioned buses carry some 85,000 passengers to and from the opera each season.

Other Promotional Fares and Services:

One company reports experimentation, during the 10-year period 1947-1957, with some sixteen (16) types of promotional services, such as:

- limited stop service;
  - shoppers' special express service;
  - businessmen's express service;
- baseball and football special express;
  - service to industrial plants;
  - park-ride service.

Another company's rate schedule includes several promotional-type fares designed to serve the various needs of different classes of riders. For shoppers, a 20¢ cash rate prevails on a system-wide basis from 9:00 A.M. to 3:00 P.M. Mondays through Saturdays. During this same period a 10¢ fare for travel within the downtown district is available on all regular lines. For shoppers and others a round-trip rate of 35¢ is offered to single-zone riders. Finally, for the regular commuter, the fare structure includes a token rate of 22-1/2¢ vs the regular 25¢ fare through the purchase of four tokens for 90¢. On the other hand, fares for long-haul rides and premium services are generally 5 to 10¢ above the regular rates. - Company likes to think the transit rider pays for what he gets, and gets what he pays for - which in itself has promotional value.

Summary written  
July 19, 1959 - WSR

Summary

RIDE-AND-SHOP PLANS; MERCHANT VALIDATION

Many companies are endeavoring to get groups of local downtown merchants to see that their transit customers are entitled to the same treatment as their automobile customers. These merchants have been encouraged, in some instances, to survey their customers to satisfy themselves as to the dollar value of the transit shopper to the store. If the merchant provides free parking space to the shopping motorist, he should also consider a corresponding courtesy to the transit shopper.

One company has a validation plan which it calls a "merchant's refund plan." Upon request the operator hands out a ticket to the passenger, who then presents it to one of the participating merchants listed on a folder in the "take-one" boxes. Merchants may or may not require a minimum purchase, or any purchase. He gives the patron a 22-1/2¢ token which is indistinguishable from any other token. He buys these wherever tokens are sold, so that there is no actual check on the plan. Company furnishes merchant a window-card identifying him as one of the group. Company is not "out" any revenue in this operation, which encourages off-peak use of transit.

A fairly large operator reports "we are encouraging ride-and-shop" (validation). Another reports that it has continually cooperated with the merchants and other responsible agencies in the promotion of its services. Various plans have been initiated in an effort to stimulate riding and to keep the company a progressive one. A third reports discussions of a transit validation plan with a group of local merchants without having formalized a workable plan to date. A fourth experimented with "a shop-and-ride" plan and various other experiments which added up to "just about zero" - except for the good effects of "some little public relations value."

A large midwestern property reports close work with merchant groups, primarily in the downtown district, in various promotional ventures. This has included validation plans for special sales events as well as a continuing cooperative program. On semi-annual "downtown sales days" in April and November free rides home are provided for transit patrons. They receive a return-trip ticket in the "going" direction which is good for the free ride home after validation by any of the participating stores with a purchase in any amount. The cost of the ride is borne by the merchants, with the company contributing to the promotional program. In addition to these "campaign" events, company has had a continuing "stamp plan" in effect with downtown stores for several years. This plan, called "co-transit," has become somewhat complex in administration, and company is now working with downtown merchants in the development of a new and simpler arrangement to be called DBP (downtown bonus plan). In June 1958 a new organization of downtown interests was created to promote and expedite redevelopment of the city's central business district. Company has taken an active part in this organization, which has an annual budget of over \$200,000. It has participated in all promotional events sponsored by this group, and is also voicing the interest of transit in all planning and redevelopment measures.

One company reports two successful "fare refund" days in cooperation with downtown merchants. These were in connection with area-wide downtown sales, promoted cooperatively by all downtown stores, and were approximately six months apart - thereby preserving the "novelty" or surprise element. No

stamps or transfer-type tickets were employed. A coupon appeared in the daily newspapers with sufficient promotional copy. If clipped, name and address inserted, and presented at a redemption-desk in selected stores, it would be validated (stamped) for a return ride home. No purchase was required, Out of an average fare of 23¢, company contributed 3¢ to assist in the advertising, and the Merchants Association paid company 20¢ for each validated coupon lifted by transit operators. Company's revenues rose noticeably on the two days on which this promotion was tried.

Another company reports a fare validation plan called "Ride 'N Shop" in cooperation with the "Downtown Associates" organization. Thirty-seven business establishments in the downtown area participated. The plan worked as follows:

All inbound passengers on company buses were given, on request, a twin coupon up to 9:00 P.M. This coupon bore a number to indicate the day of the month - month not shown. On the reverse side of each half were listed the participating firms. Each firm set its own minimum purchase. By visiting two stores and presenting one-half of the double coupon at each one, a passenger could get two tokens. Tokens were purchased from company at 5¢ discount, and sold by Downtown Associates at cost plus 5 per cent to the firms. In this way, Downtown Associates acquired funds for advertising and administration. Results have been disappointing due to the fact that no large stores joined the movement, that participating stores did not always give full cooperation, and because Downtown Associates has failed to "push" the plan to any great extent.

For two years one Indiana company has been maintaining that downtown merchants must in the long run pay transit fares as well as parking fees if they are to continue to have a transit system. Just recently the downtown merchants association started a new "freeway" plan. Company is optimistic over the program. All major stores except one are in the plan, together with five downtown banks and one or two professional men. The first ten days of this trial have been most interesting. Transit coupons have been used in increasing numbers. Under the "freeway" plan all participants will pay for both parking and transit validations on the basis of proportion of their individual sales to the total sales of the group. The banks are in on the basis of 10 per cent of the cost of the whole plan, for preliminary trial. Estimates are that cost to merchants will be approximately 1/4 of 1 per cent of sales, or 20 to 25 per cent of the whole plan. Objective is to attract the housewife downtown for shopping - not to pay transit fares for those who work in the downtown area and constitute a "captive" buying audience.

Under former "co-park" plan, each merchant paid for stamps used on the basis of 5¢ parking value for each \$2.00 purchase. Some stores boosted the stamps, and some did not. The largest department store dropped out of the former plan a year ago when they took up S & H Green Stamps. When this store was planning a move to a brand new beautiful store building about a block off the town's principal transit street, it suggested the possibility of giving Green Stamps with the sale of tokens in their store by cash or credit. This plan was adopted in September 1958. The exact plan was later adopted in other American cities. Sales of company's tokens in this manner have amounted to about \$20,000 per month, consistently. Company cannot say this has been reflected in increased riding, but it certainly has aided in speeding up service at heavy loading corners in the downtown district,

where operators have been "relieved" of token sales and change-making for many riders. Another advantage is that this large store knows that many of its customers are regular transit riders.

Another group of companies reports the sale of bus tickets at downtown department stores, including privilege of charging bus tickets to store accounts. Some stores have given trading stamps for the purchase of bus tickets, thus helping company and themselves by bringing people into the store.

A company reports that in April 1958, at the time of a general fare increase, eight downtown merchants joined in a validation program. They bought strips of ten tickets from the company at \$2.30 per strip and sold them to their customers on completion of a purchase of merchandise at \$2.00 per strip. The return of tickets from this source amounts to 20 to 25 per day. In January 1958 one large department store purchased tokens and presented one to each customer who made a purchase of \$2.00 or more. Company has no record of the number of such store patrons receiving tokens, but the plan is fairly popular.

#### Stop-and-Shop Transfers

Three companies report the recent inauguration of "stop and shop" transfer privileges - both in the downtown area and in the neighborhood shopping centers on various lines. These arrangements permit layovers for shopping, after which another bus may be boarded for the rest of the trip home. One company says that it cannot estimate the financial result, but there have been usage of and favorable comments on the new system. In one case, a 2¢ charge is made for the stop-over transfer.

#### "Special Days"

For one operator, special days fall into two main classes.

On shopping days held annually, usually one day in the spring and fall, Downtown Associates charters for a lump sum all downtown-bound bus trips for a limited period - such as 9:30 to 11:30 A.M. The fare box is covered and all passengers are carried free inbound. Charge is based on normal riding for the period at the token rate plus cost of any extra service.

On days promoted by a single store, the store furnishes coupons for distribution by bus operators to all adult passengers riding during certain downtown hours. The coupons are redeemable for one token at the store on the special day only, with no purchase being required. Company records show that one-half of those receiving coupons redeem them at the store.

Both types of promotion have produced favorable results. Both stores and company promote these events through newspaper ads and, when possible, car cards. The increased riding more than pays for cost of company's promotional work.

Summary written  
July 18, 1959 - WSR

Summary

PARK-RIDE and COURTESY PARKING SERVICES

Great interest continues in "wedding" the advantages of the private automobile and public transit through park-ride arrangements.

In a large midwestern city PARK-N-RIDE lots have been provided at rapid transit stations to attract more riders. Their combined capacity is 1,070 cars. These lots met with immediate public acceptance, and many more spaces would be utilized if funds were available to provide them.

In another city a new 400-car parking field provided by the city in 1956 was opened at one terminus of the city-owned subway. It was an immediate success, and filled to capacity every morning at 8 o'clock. These are all-day parkers, with very little turnover. A 200-car addition to this lot will soon open. Company believes that as many as 4,000 motorists would park and ride if there were facilities for them. Land acquisition costs in the face of existing residential developments precludes them. Other parking lots at ends of rapid transit lines are likewise filled, and more space could be used if it were available.

A large Eastern bus operator uses a lot established late in 1955 in connection with an underwater crossing and a metropolitan bus terminal. Lot was provided by the tunnel authority and operated by the company under lease. Space originally was provided for 1,175 vehicles. Capacity has been increased by successive clearings and conditionings to 1,300 spaces. In the maximum day 1,734 cars were parked (with some turnover), with 8,446 cars in the top week. During rush hours express service between the lot and the terminal is provided on a 4-1/2 minute headway. In off-peak hours a 12-minute service is maintained. The popularity of this arrangement is attested by its growing use. Cost to the driver for parking and round-trip transportation remains at \$1.00, the fare for additional passengers was recently raised from 54¢ to 58¢ round trip.

One company tried park-ride services in 1956 without success. Notwithstanding this, it has urged future park-ride services to the north, east and south of downtown when a beltline expressway is completed in about four years.

Another rapid transit operator leases parking lots near its stations to attract motorists. The rental income derived from lessees of the lots in 1958 amounted to \$93,000, which was in addition to passenger revenue provided from patrons of 712,000 automobiles using the lots during the year.

A small midwestern property has provided free parking lots at the ends of lines. Another company has three lots for park-ride and limited express services. A third company reports a beginning with expansion as opportunity permits. A fourth company reports an effort in cooperation with merchants to work out a perimeter-parking plan - without success up to the present time. This one is principally an interurban operator, which may have some bearing on its lack of success.

A large midwestern property has won many new patrons through park-ride services inaugurated in 1953. In addition to its virtues of speed and social acceptance, park-ride offers the combined use of the private automobile and public transportation, combining the best features of each. Company's most

successful venture is operated from a 1,200-car municipal parking lot in a public park adjacent to an open-air theatre. It is five miles from downtown, situated well for drawing patronage. Company provides five-minute bus service to downtown during rush hours, and fifteen-minute service midday for shopper travel. Running time is 14 minutes, with a fare of 30¢ one way or 50¢ round trip. Patronage amounts to 1,500 persons daily - or 1,000 cars kept out of downtown each day. Over 70 per cent of these people were former motorists to downtown. Company has sought city help in the development of other locations, which are not easily found. Company cannot do the job alone with economic feasibility, for parking must be free - or almost free - in order to make the service attractive. Lots must also be located at accessible strategic locations. Company will continue to seek city support for the expansion of this highly successful experiment. It is also advocating parking lots at transit turnouts planned for future expressways.

The country's newest rapid transit operator is an ardent advocate of park-ride. The use of 1,900 parking spaces - later expanded to more than 2,000 - in lots adjacent to rapid transit stations has encouraged a large number of people to ride who otherwise would have driven downtown or not gone there at all. Of the persons using the lots, 71 per cent are new riders. The further development of parking facilities in connection with the rapid transit line will be pursued.

#### Courtesy Parking

In one locality 100 gas service stations in the metropolitan area are participating in a park-ride plan with the transit system. Any person may park free and ride the bus to town.

In another city arrangements have been made with the operators of 25 service stations to provide free parking for bus riders. Company furnishes park-and-ride swinging signs made in its own shops to these stations. Nothing is paid to the operators thereof. Company also has a 30-car parking space on its own property for such free park-ride service.

Elsewhere 37 service stations located along principal well-served transit arteries carry company's signs featuring courtesy park-ride. It is suggested that motorist park at the oil station and use transit to town and back. No charge is made. Stations permit the free parking, and company maintains the signs. The station proprietor hopes that from time to time the motorist will purchase gasoline, oil, lubrication, etc., in return for the parking space.

Summary written  
July 18, 1959 - WSR

Summary

CLUB BUS SERVICES

Two companies reported the use of "club coach" services.

In one of these cities, club coach service was introduced in 1954. These extra fare buses pick up regular suburban customers at their doors in the morning and take them downtown with no stops. Riders are similarly returned to their doorsteps in the evening. This service was slow to "catch on," but is now reported to be "a solid money-maker."

Three "club flyer" routes continue to operate in the other city giving guaranteed seat service in morning and evening rush hours. Patrons pay \$11.00 per month as a "standby charge" plus 10¢ each time they ride. Approximately 170 subscribers use these routes. They are valuable in serving high grade residential areas where all day service is not warranted.

Summary written  
July 15, 1959 - WSR

Summary

ECONOMIES IN SCHEDULING

Transit companies remain alert to the necessity for efficiently scheduled services. Equipment purchases, as noted elsewhere, reflect interest in faster acceleration and deceleration and improved performance of propulsion and control equipment. Interest in the improvement of traffic flow through the public streets has been heightened. Careful study of passenger traffic volumes is maintained -- in many cases on a regular, progressive and systematic basis.

Herewith are comments offered by several of the reporting companies.

- New cars feature dynamic braking, improved control and propulsion equipment, with faster accelerating and braking rates. They will afford faster schedules for the convenience of the riding public.
- Company's second step was to revise route structure and schedules so that there was an actual saving of a million miles a year.
- Schedule economies have been effected through the periodic adjustment of headways, and the adopted load standards are strictly enforced.
- By operating buses off route on deadhead trips between garages and route terminals, company has obtained substantial savings in operating costs. As pull-in and pull-out trips may be operated much more quickly to and from the garage on "off routes," the accumulative saving in time becomes substantial. Many vehicles are "cross-routed" from one line to another during the A.M. and P.M. peak periods. This has enabled the company to maximize the use of its equipment at times when vehicles are most needed.
- In the northern portion of one of the counties served, duplications of service by this company and three other bus companies were materially reduced through exchange of operating authority among the companies. By reduction of duplication it was possible to realize a substantial saving in operating expenses.
- Company has an interesting variation of service adjustments that has proved successful. There was a system transfer at 12:15 A.M. with 14 vehicles, and this did little else than take care of second shift workers from a big industrial plant in this location. Rather than cut this off completely, company worked out three special routes with different neighborhoods and accommodated all of the workers when riding. It even picked up a few. The other eleven buses were brought into the garage at 11:00 o'clock. This saving in the course of a year

amounted to a sizable sum, and yet no one was inconvenienced except the very few who might have been riding from the center of town, and there were not enough patrons at that time to justify any mass transportation.

- In January 1959 company installed new schedules for Sunday service and night service after 9:00 p.m. which established basic 30-minute service on all routes and provided for a positive meet and lay-over of all coaches on all routes in the downtown area - with a sufficient length of time to permit persons to walk from any route entering downtown to any other route and find a bus waiting. The installation of this system resulted in savings of \$200,000 a year, and met with public approval.
- Company made a study of the closing times of stores and shops, and adjusted schedules to make better connections and to furnish more service. Result -- favorable, as less waiting for buses and more convenience to customers were obtained without any additional expense.
- Company has reduced and, in some cases, eliminated night and Sunday service.
- Economies have been made by substituting diesel buses for trolley buses. In some instances, routes have been changed to avoid duplications of service. In general, company attempts to tailor its mileage to meet riding requirements.
- Traffic and load counts are taken continuously, and service is adjusted to demands revealed by the counts.
- In a company this size headways have been increased over the years to make them fit the riding, so that company feels it is ill-advised to widen them any further - lest it chase away what little riding there is left.
- Working with the new regulatory authority, the company was able to re-draw its schedules and routes so that the mileage its buses travel on a weekday was cut to 17,000 miles from 23,000. The authority also permitted the company to curtail night runs, on many of which the driver made his lonely rounds in almost complete solitude.
- Schedule economies have resulted through the combination of loop routes into through routes, which resulted in the saving of buses and of vehicle miles and hours.

Revised Schedule-Making Procedures:

- Schedule mileage is adjusted on basis of passenger checks and data processed in Remington Rand Univac machines. The company's program for "schedule automation" was aimed at (1) determination of passenger load and vehicle requirements, (2) establishment of headways, and (3) run assignments for operators. Univac does the work in a matter of hours, whereas under the previous system it might take weeks. Also, a degree of accuracy is achieved that was impossible under usual manual methods. The new scheduling techniques have enabled company to maintain its high standard of service to the public. In many cases it is now in a position to give better service because it can adjust more quickly to riding patterns as they develop. By far the most outstanding benefit it has received from Univac from the operational standpoint has been in terms of actual dollar savings.
  
- A substantial segment of company's schedule making program is now handled through its IBM 650 data processing system. This gives increased flexibility in schedule preparation to more rapidly meet changing service conditions. Schedule preparation having been satisfactorily mechanized, the company is now proceeding with the planning and programming of the run-cutting procedure. A substantial dollar saving in reduced clerical cost due to the mechanization of the traffic survey and the running time survey has been accomplished. Control information, such as mileage for each "block" en route, provided automatically as a by-product of schedule preparation has resulted in considerable savings in man-hours. Clerical drudgery has been taken out of scheduling, permitting the schedule maker to devote more time to creative thinking and planning.

Summary written  
July 22, 1959 - WSR

Summary

ECONOMIES IN OPERATION AND SUPERVISION

Transit companies continue to seek means of improving the dependability and convenience of their services on the public streets, and to effect economies in the supervision of these relatively "far-flung" activities. Mobile supervision and the use of two-way radio communication have been notable advances in this field.

Reporting companies offer the following comments on this general subject:

- Company reduced number of operating divisions from eight to three.
- In order to expedite passenger loading and speed flow of buses, pay-leave system of fare collection is employed during the evening rush hour in the downtown centers of concentration. This has materially reduced the time required to load at such points. This has made the service more attractive, avoided suggested rerouting of certain lines, and has entailed no fare registration problems.
- Company's (very small) supervisory force consists of two men - one A.M. and one P.M. supervisor. It uses combination "cashiers and dispatchers," having three of these with their hours overlapping so that rush hours can be cared for without trouble. Company has one relief man who gives supervisors each a day off per week, as well as the "cashier-dispatchers."
- In one of the related cities the main plant has an excellent central location, and company closed a second division and now operates out of the one location; downtown office was moved to this location. In a second city, company has closed two divisions, is seriously considering closing a third.
- The following brief summary of savings (on one rapid transit property) in certain transportation labor costs is of interest: Pay-hours, all trainmen, reduced 59.8 per cent between 1948 and 1958; pay-hours, all transportation employees, reduced 53.0 per cent; revenue vehicle miles over this period decreased but 10.7 per cent, revenue passengers decreased 22.3 per cent, and maximum P.M. scheduled vehicles declined 20.5 per cent. The total reduction in pay-hours for this major group of transportation employees of 53.0 per cent represented an annual saving of \$11,220,000 at 1958 wage rates and related fringe benefits. (Many other savings were reported by this property in its transportation costs.)
- The introduction on this property of 100 new mainline rapid transit cars with their increased carrying capacity allowed the authority to use four-car trains, instead of six-car trains during the rush hours, and two-car trains in place of four-car trains off-peak. This resulted in a reduction in 1958 of approximately 900,000 miles on the mainline elevated, with a consequent decrease in maintenance and operating costs. Under state legislation, one guard is required

for every two rapid transit cars operated. By the operation of fewer new-type rapid transit cars, which replaced smaller-capacity cars, the authority realized substantial savings in manpower requirements.

- Street supervision has been reduced. When trolley coach operations were abandoned company closed one station.
- Over the past few years company has reduced its supervision.
- Company's street supervision is zoned so that it has closer supervision of "service supervisors" and better control over what they are doing. This is done simply by splitting the city up into different districts and assigning a chief supervisor to each area.
- Company is acquiring 870 registering lock fare boxes. This is eliminating a large part of turn-in and travel time, amounting to approximately \$250,000 a year. Other benefits on which it is not possible to place a dollar value are the improved safety factor in operation, and relief to the operator from the fatiguing effort of retrieving the return coin.
- At one time vehicles were housed in nine operating divisions. At first the number of divisions were reduced to five; then in 1956-57 further reduced to only three locations. Certain brake, electrical and cleaning work is now done by the same forces for both trolley and motor buses. The buildings vacated have generally been sold.
- The company found it helpful on seven separate lines to test the loading of passengers on a pay-leave basis at all pick-up points in the business area. This has speeded the loading of buses over the former pay-enter system, delays being cut to one-fourth the former amount. Change has been made permanent. City traffic bureau applauds the change, which has substantially eased congestion. At a large metropolitan terminal it was found desirable to establish a pay-leave system of fare collection for all lines in the evening rush hour. The time required for loading buses has been reduced by two-thirds, thereby increasing capacity of the loading spaces.
- Company has had 100 per cent mobile street supervision since 1952.
- Company eliminated Sunday dispatching - a practice of years - and substituted a local college student sitting at the telephone to answer schedule information queries and notify men of runs assigned to them for next day as they called in. Saving has been about \$30.00 per day. Company anticipated the possibility of some union protest because extra operators were used as part-time dispatchers on Sunday, but none materialized. Since 30 per cent of company's employees are share holders in the company, they seem to realize that management must cut expenses wherever possible.
- An electrically-operated line supervision control system, providing for accurately dispatched and closely supervised train operation, was placed in service in 1951 on a large part of the rapid transit system. This resulted in more regular and efficient service with

fewer trains, and reduced supervisory personnel requirements. In 1957 a two-way communication system was tested that will enable the central control dispatcher to talk directly with motormen and even passengers on "in-service" rapid transit cars.

Short-Wave Radio Communication:

- Company operates its own short-wave radio communication system, providing three-way communication between motorized supervisory cars, maintenance vehicles and operating headquarters. These facilities are also installed in automobiles used by company's executives.
- Company restudied its street and mobile unit supervision of operations, and as a result drastically reduced the number of "point men" and increased the number of supervisors in cars with mobile radio - with a net saving of \$61,000 a year.
- Company has substantially improved performance through use of its own short-wave radio station, through which motorized supervisors are in constant touch with the dispatcher, as are all maintenance vehicles.
- Company is acquiring four more 2-way radio sedans to be used by inspectors. This will enable it to reduce supervisory force by four inspectors, and will save the cost of the cars in a few months. After this, the savings in wages will be a direct, continued, permanent reduction in expenses.
- Company has, of course, tried to eliminate unnecessary street supervision, but is anticipating the use of two-way radio, which will be still more efficient and require fewer street supervisors.
- In 1947 two-way radio communication between supervisors and a radio room was initiated, and company modernized its supervision. This has been expanded until at the present time service supervisors are completely mobile with radio communication.
- Company believes that most important improvement it has made within recent years is the use of two-way radio on buses. This allows telephone service between dispatchers and drivers. Problems encountered during operations can be handled immediately, with improvement in service. Schedule adherence has been improved. Passengers can be given requested information promptly. Late night connections can be made with other routes by relaying information through dispatcher. Lost articles can be promptly located, and loser's mind put at ease. Lost children are readily accounted for. Bus operators can check passenger leaving buses at events so that supervisors are not required for this duty. "Blockades" can be handled without delay or need for street supervision. Company saves on manpower and operational costs.

Summary written  
July 23, 1959 - WSR

Summary

ECONOMIES IN MAINTENANCE, SERVICING, CLEANING

Companies report a continual search for greater efficiency, better facilities, and more effective procedures for handling the maintenance, repair, servicing and cleaning of transit vehicles. This search results in improved dependability and more attractiveness of vehicles in service, and lowered equipment costs.

Among the comments received are these:

- The mechanization of maintenance operations, particularly servicing and cleaning, resulted in a net saving of \$68,000 per year.
- Every activity in maintenance, repair and cleaning is carefully scrutinized. The employees at the end of 1958 were 358 as compared with 385 at the end of 1957.
- The car equipment maintenance organization has been completely revamped, with new and more efficient repair schedules having been placed in effect. This has resulted in increased production, reduced quotas, and a saving of many millions of dollars. More efficient methods of car cleaning were developed, with the use of improved materials, equipment and machinery - the various operations being performed more frequently, with stress on the use of mechanical equipment and other aids.
- Servicing and cleaning activities have been completely revamped, and new and modern methods established.
- Company has made use of automatic washing machines and bus vacuum cleaners.
- Maintenance expense has been reduced substantially by improved methods, new vehicles; and garage operation has benefited by an improved method of layout of the cleaning operation, with a consequent saving of twelve cleaners without sacrificing any cleaning operations.
- Company has acquired and is operating four "cyclone" vacuum cleaners, with a resulting saving of many hours in car cleaning expense. In the past four years the car cleaning force has been reduced by 19 employees, approximately 20 per cent.
- As rapidly as street car lines were converted to bus lines, the maintenance facilities at respective locations had to be remodeled and retooled for bus maintenance, and competent personnel readied to take over. Strategic location of refueling stations, service pits designed for efficient greasing and inspection, installation of modern bus washers and interior cleaners greatly improved servicing and cleaning facilities, and effected savings in personnel. Modern shops are equipped to handle all phases of bus repair and overhaul. Work is efficiently scheduled through the shops, and man-hours data, labor and material costs of the work can be readily ascertained and used to control the

search for further economies. Car houses and garages of earlier vintage have been abandoned, and modern units, fewer in number, have been constructed. Supervisory and building maintenance costs have been reduced, along with dead mileage, fuel costs, etc. Each year has shown progressive efficiency, longer service life on new and repaired units, fewer mechanical road delays, better fuel economy - and, at the same time - a reduction in personnel. Surface system personnel alone engaged in all phases of maintenance and operation were reduced from 17,267 at date of acquisition of properties (by the authority) to 9,279 at December 31, 1958 - a decrease of 46.3 per cent. Revenue vehicles owned or leased over this period dropped but 9.7 per cent. This decrease in personnel, at 1958 annual wage rates plus related benefits, amounts to an annual saving of \$48,100,000.

- Operating expenses has been reduced from \$6,800,000 in 1954 to \$4,500,000 in 1958. Reduced shop forces, improved shop equipment and techniques are responsible.
- Company's principal goal has been continually to increase operating efficiency. One of the big items in this regard is maintenance, in which it has led the large operators in the industry for the past thirteen years.
- In 1948 there were five main rapid transit shops and ten terminal shops located throughout the system. By 1958 this had been reduced to one main shop and seven terminal shops. These remaining shops have been modernized and equipped for efficient maintenance procedures.
- Overall operating performance and costs will be improved through the extension of inspection and overhaul mileages through introduction of new cars. Old cars inspected at 1,350 miles; new cars inspected at 7,500 miles - with far fewer operations to be performed. Some older type cars require an overhaul at 14 to 16 months. Newer types have a major overhaul schedule in excess of six years for most major components. The consolidation of the two major repair shops at one location will release valuable land for housing, recreation or other urban use in an area now largely slums.
- There has been a complete revamping of the vehicle inspection area and equipment, with an increase in inspection period from 3,000 to 6,000 miles.
- Company plant has spread over 3-1/2 square city blocks under combined motor coach and trolley coach operation. Company is now spending about \$75,000 to remodel its plant and consolidate the entire operation into two city blocks. It will effect a saving in manpower, and have cleaner and better-maintained coaches.
- At company's main repair shop a separate building once housed a parts storeroom, a small print shop, and the fare box repair shop. By cleaning up the basement of the main shop building and by finding some room in a division building, these three activities were removed from the separate building, which, with certain adjoining land, will be offered for rent.
- The erection of company's new operational headquarters and central bus maintenance shops has permitted it to integrate operational functions which were formerly performed at eight different locations

throughout the system. This new shop has enabled company to attain the utmost in efficient and economical bus maintenance.

- Company gave up three old garages scattered in various parts of the city, and built new storage units at a cost of \$215,000 in a central location, which will house 112 buses. In this move company renovated an area of the existing garage to provide new general offices at a cost of \$70,000, which, it is estimated, has paid for itself through savings in a three-year period.
- Repair operations have been concentrated at the main repair shop, and certain shop procedures have been eliminated.
- An analysis was made of the company's mechanical inspection system to determine whether or not it could be "stretched out" to a greater number of miles between inspections of vehicles. Crankcase oil was analyzed, and based upon the findings the inspection period was increased by 66-2/3 per cent. No unfavorable results have been noted. A saving of 20 per cent in mechanical department manpower was effected.
- Company has developed good business procedures to increase profits. It has built up an excellent management team who first eliminated some 15 varieties, sizes and shapes of buses by selling the entire fleet and purchasing brand new buses from one manufacturer in two sizes. This brought about a reduction by 50 per cent of maintenance cost; and due to the fact that the new vehicles were built to company's own safety recommendations there was a reduced cost in accidents. Company actually reduced the number of buses in use due to their greater size, but increased the total seating capacity.
- About the only decreased expense company has had has occurred in its equipment replacement program. For the past three years company has replaced 40-passenger gasoline buses with 51-passenger diesels, which has resulted in considerable platform, fuel, and maintenance savings. This program will be continued until all gasoline buses and trolley coaches are replaced.
- When this company took over from its predecessor there were seven different types and makes of buses on the property. Today there are two kinds. Company is headed toward full diesel operation. The result of this standardization of the fleet has been a reduction in maintenance cost per mile.
- This company brought in a new superintendent of equipment in 1952. After a period of observation and study, this new man launched a program of improved maintenance methods consisting of
  - cleaning and modernizing shops
    - preventive maintenance inspections
    - elimination of "deadwood" personnel
      - transfer of small unit overhaul to divisions
  - reconditioning of worn parts
    - use of magnaflux to detect flaws
    - new methods of parts cleaning
    - establishing diesel maintenance school

Some results:

- inspection intervals widened
  - backlog of "bad order" buses cleared up
    - improved condition of equipment
    - fewer complaints about engines
- freer flow of equipment in maintenance areas
  - better oil consumption
    - increased miles per mechanical failures
    - reduced cost per mile in spite of higher wage rates per hour
- cut in maintenance man-hours as follows:
  - February 1952            58 man-hours /1,000 miles
  - early 1958              25 man-hours /1,000 miles

Summary written  
July 23, 1959 - WSR

Summary

ECONOMIES EFFECTED THROUGH REORGANIZATION,  
REASSIGNMENT OF DUTIES, MECHANIZATION

(See also Case Histories Nos. 1a ("self-help" portion) and 34 (entire report). These arrived too late for inclusion in these summaries.)

Overhead, office, supervisory and clerical personnel

- Throughout the organization the general manager has instilled in the minds of department heads the necessity for eliminating unnecessary personnel. It is always "tough" to pare the overhead down to meet the reduced volume of passengers, but considerable progress has been made in this direction.
- Supervisory staff, as well as clerical workers, has been greatly reduced. These economies were made possible by the combined operation in one location of shops, garage and all general offices and departments. Personnel reduction has brought about reduced general and administrative expense in all departments.
- Early in 1954 a program of installing machine accounting was begun. The number of employees in the auditing department has been reduced from 26 to 12.
- Company (small) has recently reviewed all reports and office procedures, as well as statistical compilations, with the result that it has cut off one employee in the accounting department with a saving of \$4,000 per year.
- The installation of IBM machines in controller's department has made possible the production of neater, more accurate records in less time with fewer personnel, thus effecting a substantial savings in labor. A variety of work is processed through this punched-card equipment - all pay rolls, pay checks, ticket collections, ticket sales, accounting, inventory of fare-registering equipment and coin-counting machines, ticket refunds, franchise taxes, and many other accounting functions. A continuous study of procedures is made to determine the feasibility of converting other methods to the punched-card system.
- Cost-cutting fervor swept into the company's offices, where the clerical force has been cut by a third in five years. A typical move: A full-time switchboard operator was dropped, and four clerical workers from the accounting department now take turns handling the chore.
- Company has inaugurated a program of not replacing office personnel who retire. This is accomplished by improving methods constantly, and through the use of National Cash Register bookkeeping machines. Company also reviews constantly its various forms, and thus effects economies periodically. It has recently consolidated its cashiering function, and reduced expenses as a result.

- (Small) company has in its auditing department a National Cash Register Company bookkeeping machine, by use of which it does all bookkeeping with two women and one man.
- Several years ago after a thorough study of its system of accounting, company purchased four National Cash Register accounting machines and mechanized its system of accounts. This complete change in methods, together with other adjustments in clerical force, has resulted in an annual savings of approximately \$31,600.
- Studies of methods and procedures effected substantial economies by consolidation of departments and modernization of office procedures - particularly as applied to pay rolls, pension records, operating reports, schedule department analysis, special surveys and checks, revenue accounting, audit of trip sheets, machine distribution of pay roll and other expense items, and mechanization of materials and supplies records, including a perpetual inventory record. Pay roll department has been reduced substantially, greater efficiency and accuracy were realized. .... Total accounting department personnel has been reduced by 158 persons, or 43.3 per cent. A complete duplicating department has been set up at the central offices for handling the work of all departments - forms, pamphlets, bulletins, reports. Trip sheets, vouchers and other items are microfilmed for quick reference and to save storage space. A new telephone-dictaphone-typing service is used extensively. Services of photographic section are helpful to claims and publicity departments. The various services performed by this department effect an annual savings of between \$75,000 and \$100,000. .... This organization has built up and maintains a complete staff of engineers, and is continually studying and investigating possibilities of improved methods and procedures in all phases of transit operations.
- (See "Improved Scheduling" Summary.) Two companies have revised schedule-making and mileage-compilation procedures through mechanization - one through use of Remington Rand Univac; the other with IBM 605 data processing system. Greater accuracy, faster service changes, and economy in personnel costs are among the advantages cited.

#### Other personnel reductions

- Under the present favorable labor market the company has been able to reduce its force without the laying-off of any permanent employees. Every vacated position is carefully studied, and when duties can be reassigned this is done. During the past five years the force (other than operators) has been reduced by 12-1/2 per cent.
- Through improved efficiency of performance company has attempted, like most transit companies, to eliminate unneeded service and personnel in order to have some return. Personnel has been reduced in all departments, and company has reduced (and in some cases eliminated) night and Sunday service.

- System-wide personnel reductions between 1948 and 1958 have been outstanding:
  - vehicle miles reduced 11.97 per cent;
  - maximum scheduled vehicles reduced 10.35 per cent;
  - total personnel reduced from 23,368 persons to 13,733 persons, or 41.2 per cent;
  - at 1958 annual wages (including related employee benefits) this represents an annual saving of more than \$58 million.
  
- At the end of last year (small) company eliminated one department head entirely, and split his work among three others. He was given a job as one of two cashiers, and the second man returned to his former job as a bus operator. Now company is going to cut the cashier office to one man. This will save another \$5,000.
  
- Through complete reorganization and reassignment of duties for incurred efficiency and economy, personnel was reduced from 1,032 employees at December 1954 to 556 employees at December 1958. This demonstrates the economies effected through pay roll reduction. Present organization is doing a more efficient job than the former one. .... Another company in this same group is still "fat" in spots, but here again the organization has been reduced by roughly 800 employees over the past four or five years. This figure includes operators, who would naturally be reduced as service requirements have decreased.
  
- During the past decade the stores department has consolidated and reduced from 32 to 21 the number of storerooms throughout the system, and reduced the value of inventories from \$7,000,000 in 1947 to \$5,600,000 in 1958. Interest alone at 4-1/2 per cent represents an annual saving of \$66,000 due to this reduction in inventory. Since 1947 storeroom personnel has been reduced by 41 employees, which represents an annual saving of \$226,000 at 1958 average annual wages, including related employee benefits.
  
- With the decline in revenue the jobs of one clerk and another employee used part time in the money room were eliminated. The job of safety supervisor was discontinued, and his duties assigned to the superintendent of transportation and his assistant. The monthly salaries of 2-1/2 employees were saved.
  
- During the last two years reorganization of the company's operating division has effected economies and resulted in improved efficiency. The property was formerly divided into seven divisions, each headed by a division manager. There are now four "directional" divisions, each headed by a manager and divisional staff. Divisions are subdivided into nine districts, with the districts retaining the former division names.
  
- Along with the continual evaluation of service company has had a continuing evaluation of personnel, and has made economies in office and maintenance divisions. Company tries to reduce personnel to the same percentage reduction as the reduction in passengers. This procedure has been used in the reduction of street supervision, while that supervision itself has been improved through the use of two-way radio system.

- Company has gotten improved efficiency of performance by a general "tightening up," and by complete conversion to motor bus operation.
- A merger of maintenance, stores and line departments resulted in a reduction of two persons. Two persons were eliminated in the transportation department.
- By means of a highly coordinated IBM tabulated prevention program, the authority has successfully reduced its accident rate in 1958 as follows:
  - total accidents per 100,000 miles, 7.2 per cent reduction;
  - collision accidents per 100,000 miles, 11.1 per cent reduction.The authority has made substantial operating savings by the use of duplicating equipment in conjunction with varitypers in the designing and printing of all forms and printed matter used throughout the system.

Summary written  
July 23, 1959 - WSR

Summary

TAX EXEMPTION AND TAX RELIEF

One large municipal corporation was exempt from payment of all Federal taxes, and all state and city taxes with the exception of state motor fuel tax, state vehicle license, and state tax on electric power; and city vehicle licenses and city tax on electric power. When a private motor coach operation was acquired in 1952, the authority was required to assume a franchise tax paid by that company to the Park District to reimburse it for wear and tear of boulevards over which certain bus routes were authorized to operate. In recent years the authority has been exempted from payment of all the aforementioned taxes, with the exception of the city franchise tax reflected in bills for electric power, miscellaneous city license fees costing less than \$8,000 in the year 1958, and a nominal state vehicle license fee of \$2.00 per vehicle. .... In addition, the authority is waging a determined campaign to have the city assume the cost of snow and ice removal from city streets over which its buses operate. This would save \$750,000 to \$1,000,000 per year. .... The authority has also been instrumental in introducing bills which it is hoped will relieve its full-fare paying patrons of the obligation to subsidize student riders at reduced fares. The student subsidy for 1958 amounted to \$4,256,000.

Contrariwise, tax relief has taken an unfortunate turn in a neighboring state. Through the state "city bus operators association" company worked hard for a year to line up legislators on company needs, and company finally succeeded in getting a bill for elimination of all state fuel taxes in the city and five miles beyond through the last legislature. The attorney general's opinion was that the company had amended only one bill when it should have amended two, and thus it would be unconstitutional because gasoline would be exempt from fuel tax, but not diesel and propane. Governor signed the bill anyway because he knew the transit companies needed this relief - and the constitutionality was a matter for the courts to decide. Company feels that the intent of the legislators was quite clear, and will file a suit for declaratory judgment in one of the county courts within the next few days. It still has a "fighting chance" to get this relief. In this same city a street use franchise fee is paid upon percentage of revenues, with a minimum of \$13,000 per year. Two years ago city agreed to amend the franchise so that all costs of sanding and salting streets in snow and ice conditions would be paid by the city to the company out of the receipts of this franchise tax. Company now intends to approach the city for elimination of the franchise tax as well as continuing the payment for the snow and ice work.

In another city, effective the second quarter of 1957 the state, by legislative action, reduced the cost of bus license plates from an average of \$304.00 per year per bus to \$10.00. This has helped the company's financial situation immeasurably. At the present time, through efforts of the state transit association, a measure has been introduced in the legislature calling for a reduction in the bus seat tax from \$4.00 to \$1.00 per passenger. This bill has been referred to a Committee for study. Also under consideration is a House bill which would exempt the state's transit companies from a 5¢-per-gallon state motor fuel tax.

Another company, along with others in its state, was finally successful in getting relief from a 2-per-cent tax on gross revenues, to begin in January 1960. It also shared in an exemption from the increase in taxes on gasoline and diesel fuel enacted by the 1959 legislature. In the field of city taxes, company

received some relief in the franchise tax on its vehicles. It also hopes, in the light of the recent action by the state, to get exemption from a 1% of gross revenue tax levied by the city.

One company reports that the city has given it a "break" on its taxes. For many years it paid a 3% gross receipts tax which went for the operation of parks. Three years ago this tax was redirected to the transit authority to be used for the benefit of the bus riders and the company. With these funds, the authority constructed an efficient \$1.2 million office and garage building to replace the dilapidated quarters previously occupied. The \$60,000 rental which company pays the authority now has completely replaced the tax which had amounted to \$90,000 a year. Relieved of the burden of financing these badly needed facilities, company was able to purchase a fleet of modern new buses.

Another company reports success with the state legislature in getting about 40 per cent of the tax relief it had asked for. A petition for abandonment of two of its properties filed with the P.U.C. just prior to the opening of the legislature helped produce this result. No decision has been handed down on the abandonment. Company will continue to press for abandonment, as the tax relief amounts to only half the operating losses on these properties.

The General Assembly of another state during its 1958 session passed the following tax relief measures affecting urban and suburban bus companies:

- Two per cent suburban bus road tax eliminated on the county portions of four of company's lines;
- The 0.2 per cent valuation tax on all gross revenue was eliminated effective January 1, 1959;
- Amount state license tax was reduced from 70¢ to 30¢ per hundred weight effective March 1959.

Considerable savings have resulted from these changes.

Other reports include the followings:

- Attempts to secure tax relief at state and local levels only partially successful. Eliminated "privilege fees" locally; state relief delayed because of state financial problem.
- Tax relief granted in 1959 legislative year as result of efforts of state motor bus association.
- Company active with others in its state in obtaining lowered franchise tax.
- Company has been fighting to get tax relief for the last three years, but appears no nearer tangible relief than it has ever been.
- A successful effort by all transit operators in the state, spearheaded by reporting company, resulted in the elimination of state fuel taxes at 6-1/2¢ per gallon - a \$99,000 annual saving to this one operator alone.

- In one of the states fuel tax relief was granted by the legislature, but due to poor drafting of the bill there is a very grave question as to whether the law will be effective.
- In 1957, along with other transit companies in the state, this operator persuaded the legislature to reduce the annual fee for transit bus licenses from approximately \$350 per bus to \$10 per bus.
- Sale of property has resulted in reduced assessment valuation for one company. Notwithstanding tax rate increases, taxes have been reduced from \$373,000 in 1954 to \$292,000 in 1958.
- Company is endeavoring to obtain tax relief at the local as well as the state level.
- Company obtained small direct tax relief from the city - some \$100,000 per year - by cancellation of the gross receipts tax and imposition of a "per-vehicle license" as a basis for the "occupation tax."
- Company joined with other companies in the state in petitioning the legislature for tax relief. As of April 1, 1957 the annual license fee per transit vehicle was reduced from an average of \$360 to \$10.

Summary written  
July 21, 1959 WSR

Summary

SAVINGS IN "FIXED CHARGES"

One large transit authority completed, by the end of 1958, substitution of one-man buses for two-man streetcars; scrapped all over-age streetcars; and converted 570 of its 600 light-weight streetcars to El-subway cars, thus saving \$7,980,000 in depreciation costs that would have been required to cover abandonment losses. . . . . Exceptionally favorable interest rates have been negotiated for equipment trust certificate financing of rolling stock purchases by giving their debt service requirements prior lien on depreciation reserve funds. On an average of approximately \$12,000,000 outstanding per year, the average interest saving has been between \$60,000 and \$90,000 a year over the past eight years. . . . . Retirement of revenue bonds in advance of maturity through sinking fund and bond amortization fund monies has effected principal savings of \$647,000 and reduced interest costs substantially on accumulative basis in each of the past seven years.

A large western property saves interest payments wherever possible by making payments in advance. When obligations become due and involve interest if they remain unpaid, payments are expedited with the cooperation of all departments involved.

One company, effective January 1, 1956, changed the depreciation of buses for corporate purposes from a ten-year to a fifteen-year life basis. The undepreciated book value of the buses at that date is being spread over the remaining life as extended and no adjustments of the depreciation reserves have been made. A change in depreciation practices with respect to railway and trackless trolley operating property and bus bases, etc., had no effect on provisions for income taxes, as depreciation deductions for tax purposes continued as before. For buses, however, a reduction of \$22,386 for the year 1958 in the reserve for deferred income taxes was required to restore to income the amount equivalent to increased income taxes. . . . . The change in company policy for depreciating railway and bus property effective January 1, 1956, has resulted in reducing expenses for depreciation by a considerable annual amount. A direct comparison as to what the charges would have been for the years 1957 and 1958 is not determinable without considerable work. Company submits, however, the following charges to depreciation that have been made annually for railway and bus property -

1949	\$2,514,128
1950	2,645,331
1955	2,102,158
(Jan. 1, 1956)	
1958	1,466,221

which indicate that since the change in company's depreciation policy there has been a marked decline in the annual charge to expense for this item.

Another company reports a reduction in bond interest due to reduction in bonds outstanding from \$4,685,900 in 1954 to \$3,737,800 in 1958. Bonds were purchased from proceeds obtained from sale of overhead equipment. Still another states that the addition of fifteen new diesel buses to company's fleet has resulted in lower depreciation because of the elimination of the depreciation on overhead and trolley buses.

One company has adopted the "sum-of-the-digits" method of depreciation on all new buses purchased. This has resulted in a tax saving by increasing the depreciation during the first few years.

Another small bus property expresses the feeling that a rapid depreciation schedule lends itself well to keeping a property in efficient operating condition. Therefore, it has maintained its depreciation schedules as high and as rapid as possible. However, with the present governmental policy of higher taxes, company has asked the city to buy it out; and, at the moment, it appears that city will take company over sometime during the next six months.

Summary written  
July 20, 1959 - WSR

Summary

A NEW REGULATORY BODY

In 1952 a southern company's affairs had reached such desperate straits that it announced it was going out of business. At that time the mayor got together in a series of urgent meetings with local business leaders and the general counsel for the bus company (now its president) in a last-ditch effort to save the service. The result was not only the complete revamping of the company, but a basic revision of the city's system of regulation.

New Regulatory Body

A new city agency, called the Transit Authority, was set up in an effort to take the question of routes and fares out of politics as much as possible. Almost immediately the bus line was permitted to eliminate some of the unprofitable routes. The city also built the system a new terminal and granted it some tax concessions. The bus company in turn launched a vigorous cost-cutting drive within its own organization, and, almost as important, it began a campaign which is still continuing to convert its corporate image into a more benign form, and to eliminate the "public be damned" aura that seems to surround so many transit companies, at least in the public's mind. Within twelve months the company was making a profit and it has stayed clear of red ink ever since.

The job of regulating the transit system went from the 21-man city council to a streamlined 5-member transit authority, whose members were appointed by the mayor and who serve without pay. It was an impossible situation when the council was regulating bus service because the councilmen were naturally under tremendous political pressures, and they were always adding stops or changing routes so the bus would go by some constituent's front door. At the same time they were adding stops and lengthening routes, political pressures forced them to oppose fare increases.

The authority has the power to eliminate the transit company's profits. If profits exceed a fixed limit based on the company's assets and volume of business in any one year, the excess is put into a fare regulator fund which is used to make up the difference when earnings fall, thus easing the pressure for fare increases in bad times.

Summary written  
July 20, 1959 - WSR

Summary

STUDIES MENTIONED IN REPORTS

I.

Three or four years ago a company tried to convince its State Highway Department, the county officials, and the city officials that a joint venture should be undertaken for financing of a total transportation survey to produce a master plan of highways and rapid transit so that all forms of transportation - private car, truck and transit - would be coordinated under a single master plan. Progress was slow and the transit system, in order to participate, had to get special enabling legislation which caused further delay. Last October agreements of the four agencies resulted in a preliminary survey to determine the scope which a complete survey should cover, the area which would have to be surveyed, the time required for it, the estimated total cost, etc. That preliminary survey (costing \$30,000, one-fourth paid by each) is now complete, and it appears that company will have the support of many citizen groups and city officials in attempting to raise the approximate \$1,000,000 to pay the cost of the final survey. This complete transportation survey, if made, would permit the transit system to consider seriously for the first time the installation of rapid transit to serve the metropolitan area.

A new organization of downtown groups called the Central Association will not only actively sponsor the above total transportation survey, but is moving as rapidly as possible toward the development of a master plan for downtown. Citizens are beginning to see the effects of many years of educational efforts as the central group starts its planning on the basis that mass transit is essential; that it must be helped and fostered in order to preserve the values and usefulness of the central business district.

II.

An appraisal of transit service in this city was completed during 1957 by a nationally known firm of transportation engineers to set up a guide for present and future operations of mass transportation. The appraisal included the following items:

1. The problem of operating a transit system in this city
2. How good is the present transit service?
3. Express service program
4. Freeway express service
5. Freeway parking shuttle plan
6. Extensions and modification of service.

III.

At the present time a member of the House Armed Services Committee of the United States Congress has requested an investigation of the adequacy of the transportation systems which will include this entire area. The investigation is to cover highway and freeway networks as well as rail and air transportation. This member of Congress stated that the transportation problem is particularly acute in this area. In addition to rapid transit planning now going on, plans are being formulated for another bridge across the bay. This would be south of the present bridge. It would cost approximately \$250 million dollars.

IV.

A report prepared for company in May 1958 was submitted to all state and city officials as well as to the local press. It was very well received, and editorials and news releases were beneficial to the company. Most of the recommendations regarding traffic improvements have been put into effect, resulting in a more dependable and better service to the public. Other phases of the report are being studied, and further changes will be made.

Summary prepared  
July 20, 1959 - WSR

Case History No. 1a

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Conversion to Motor Buses

In 1954 this operator ran 120 streetcars on three routes and 200 trolley coaches on seven routes at costs up to 45 per cent per mile greater than for diesel buses. A streetcar barn and a trolley coach depot were required, along with 24-hour track, overhead, and distribution system maintenance.

The conversion from streetcars to buses permitted the closing of the car barn. It also contributed to the relief of traffic congestion by eliminating car tracks, passenger safety islands and other obstructions to the normal flow of traffic. The diesel bus afforded reduced costs of operation, and more flexibility in operation.

A part of the trolley coach conversion program has been completed. The project should be completed in the fall of 1960. When completed, it will permit the closing of the trolley coach depot and eliminate the costs of overhead, power distribution and maintenance crews. The change will materially relieve the ever-increasing traffic congestion, and provide more flexibility in operation with fewer delays due to fires, street repairs, etc.

New Rapid Transit Cars

Within the past five years new rapid transit cars have been purchased to the extent of 1,410 units at a cost of \$145,000,000.

These cars feature dynamic braking, improved control and propulsion equipment, with faster acceleration and braking rates. All journals, motor and auxiliaries are equipped with roller bearings. There are improved all-electric doors and controls, public address systems and draft gear of the twin cushion shock-absorbing type. Trucks are cast steel frame with cast steel bolster and spring plank and forged steel equalizer bars, shock absorbers and insulating cushions. The ventilation, thermostatically controlled, is of continuous circulation design with concentric louvers that blend into the interior car design, which is highlighted by fluorescent lighting diffused by glass lenses.

The car interior paint is a blue-gray combination with white procelainized ceilings and two-toned vinyl-asbestos tiled floors. Destination signs and route signs are easily readable type.

Cars are interchangeable as between the different series and completely compatible as to operation and training; ten of the cars are equipped experimentally with air conditioning and also, experimentally, ten others with fibreglas seating. All other cars have red vinyl plastic covered seats with synthetic foam cushions, and liberal use is made of rigidized stainless steel panels to enhance the car interior.

These cars will afford higher accelerating and braking rates, thus allowing for faster schedules. They should afford greater riding appeal to the public, more comfortable seating, improved lighting, and greater reliability of operation.

### Revised Inspection and Overhaul

Over-all operating performance and cost will be improved through the extension of inspection and overhaul mileages through the introduction of these newer cars; for example, certain older cars are inspected at 1,350 miles; the newer cars at 7,500 miles with many less inspection and repair operations to be performed. Other older-type cars require an overhaul at 14 to 16 months; for the new type the schedule is in excess of six years for most major components.

The consolidation of the two major repair shops at one location will release valuable land for housing, recreation or other urban use in an area now largely slums.

### Rehabilitation of Older Cars

Modernization of 400 subway cars has been undertaken, with a rearrangement of seating and floors; improved lighting; renewal of cables and wiring; installation of modern control equipment; improved paints for greater durability and appearance.

Modernization of older traction motors on some cars will be undertaken by installing roller bearings to replace present sleeve babbitted type.

Other improvements include resurfacing of car floors at an accelerated rate with the renewal of underflooring truss plate where necessary and the elimination on all passenger cars of the kerosene tail lamps and their replacement with electric tail lights.

### Maintenance Organization

The car equipment maintenance organization has been completely revamped with new and more efficient repair schedules having been placed in effect, resulting in increased production, reduced quotas, and a saving of many millions of dollars. More efficient methods of car cleaning were developed, with the use of improved materials, equipment and machinery, the various operations being performed more frequently with stress on the use of mechanical equipment and other aids.

### Plant Facilities and Equipment

In connection with the consolidation of two shops referred to above, approximately \$1,000,000 of new and modern machinery and equipment will be purchased, and assembly-line methods will be developed for efficient operation.

The plan is to be extended in the near future to perform with the authority's own labor a considerable amount of repair work on traction motors and other equipment which is now repaired under outside contract, resulting in a considerable saving in operating expense.

The new equipment and machinery will operate in conjunction with other facilities which have been purchased and installed during the past five years, and which include three wheel-turning machines for restoring wheel contours;

a double-ended axle lathe; a Sperry ultrasonic reflectroscope for detecting fractures in axles and other components; two automatic mica commutator under-cutting machines; closed circuit television for observing car equipment under actual operating conditions; and an exterior car washing machine.

#### Cycled Maintenance

"Cycled maintenance" has been put into effect in the Maintenance of War Department in all but the Elevator, Escalator, and Turnstile Sections. The department will, within the next two years, place these additional groups on "cycled maintenance."

"Cycled maintenance" is literally a term for doing maintenance work to a given degree through a given period of time, which period of time and amount of work are determined as a result of experience in maintaining the unit involved. Cycled maintenance also takes the form of protective maintenance. This is particularly true with respect to the signal, elevator, escalator and turnstile equipment as well as light replacement and fixture cleaning wherein, as the result of knowing the breakdown cycle of a piece of equipment, company can determine the period of time which can lapse without a breakdown. As a result of cycling protective maintenance work on this equipment on that basis, costly breakdowns are avoided and a level of high repair maintained without extensive costs. ....To gain maximum benefit from cycled maintenance, standardization of materials, methods and procedures is required built around mechanical equipment operation, together with fixed routine procedures for performing the various units and classes of work involved.

Service to the public is improved by reducing delays, which in turn means a faster ride.

After the first full cycle has been completed within the next two years, operating economies will be attained from both a manpower and materials standpoint.

#### Park and Ride Project

This has begun, and will be expanded as opportunity permits.

#### Rapid Transit Improvements

The \$58,000,000 Chrystie Street project to link the BMT with IND on the lower East side, which will add 2-1/2 miles to Manhattan's subway system when completed in 1962, and which will eliminate a major bottleneck and increase capacity of the system for rush-hour movements to and from downtown Manhattan.

The integration of the former Rockaway Division of the Long Island Railroad with the New York City rapid transit system at a cost of \$54,000,000, to serve 72,000 year-round residents and a summer population of 170,000. 3,500,000 passengers were carried in 1958.

April 20, 1959

Case History No. 1a (Cont'd)

(Note: This information arrived too late for inclusion in Summaries.)

TRANSIT "SELF HELP"

Company reports the following items in response to the question, "What has your company done to help itself?"

Economies in Scheduling, Operation and Supervision

To facilitate the handling of passengers in rapid transit stations, as well as to improve the convenience of the ride, new high-speed automatic elevators, new two-speed escalators, and improved transfer connections have been placed in service at appropriate locations. New station entrances, stairways and mezzanines have also been installed. Pre-stressed concrete platforms will replace badly worn wooden platforms at several stations to reduce maintenance costs and provide better flooring. Great progress has been made with the installation of fluorescent lighting for station platforms, about forty having been completed in the past fiscal year.

In surface operations a major revision of bus schedules was placed in effect about a year ago reflecting changes in riding and drawn to meet passenger needs more effectively. This provided more frequent rush hour services and reduced little-patronized service in the night and pre-dawn hours. In order to improve communications between personnel supervising operations on various bus routes and headquarters, tests are being made with pocket-size transistor radio-telephones.

Two programs for giving bus operators recognition for exceptional service were instituted - in the form of commendations for safety in operation, and for exceptional courtesy to passengers.

Schedules became effective on certain rapid transit trains which eliminated the rear guard (or secondary conductor.) This produced substantial reductions in operating costs without affecting service to passengers, and without placing undue burdens on employees.

A wasteful rapid transit shuttle service was terminated because of reduction in its usefulness and patronage.

"Skip-stop" service was instituted on a lengthy rapid transit line to improve the speed and convenience to passengers in the morning rush hours. Trains were separated into expresses, which skip eight of the 16 stations, and locals, which skip six. Both trains stop at two of the stations for transfer between the services. This resulted in a reduction of four minutes in express running time, and three on the local.

To reduce queuing of passengers to purchase tokens, installation of 300 rented token vending machines was started in 1958. During the year over 4-1/4 million tokens were purchased from these machines. Their use permitted elimination of overtime rush-hour token selling assignments covered by railroad clerks at busy locations.

### Economies in Maintenance, Servicing, Cleaning

During 1958, 121 new diesel buses were placed in revenue service, enabling the retirement of buses no longer dependable in service and uneconomical to maintain. This replacement program will continue. The new buses are of the most modern types with the latest safety devices, units and equipment. New interior plastic materials enhance their appearance and have greater life expectancy and are easier to maintain.

New garages are under construction which will reduce the "dead" mileage operated by buses between garages and their assigned routes. This will lessen nonproductive costs, and also release land for various improvements planned by the City. At one garage with insufficient indoor storage space heaters were installed to circulate hot water through the cooling and heating systems of buses stored outdoors. This eliminates engine idling in cold weather and provides a warm bus at the start of passenger service.

Improvements were made in maintenance procedures to provide cleaner, more dependable vehicles. These improvements, together with new buses and the complete overhaul of 350 older units has resulted in a steady decrease to new low levels of the number of bus failures in service. Bus defects have dropped from 2.67 per 1,000 miles in 1955 to 0.88 this year.

Training activities have continued at all staff levels. All personnel involved were given intensive formal and "on-the-job" training in the maintenance and operation of the new bus prior to their receipt. During 1958-1959 a course was given to supervisory employees on authority policies and operations.

### Advertising and Concessions

The authority has the right to develop a "park-ride" program. It has granted a concessionaire the right to operate two parking lot areas adjacent to transit properties for a six-months trial period.

Plans are under way to enter into a contract with the successful bidder for advertising on elevated structures. Advertising is now permitted on the outside of buses, and such space will be rented for this purpose.

Substantial new revenues will be realized from these activities.

### Personnel and Public Relations

As of June 30, 1959, the authority had a total of 36,930 employees - 1,129 fewer than a year ago. This reduction, as in previous years, has been accomplished entirely by attrition. Since July 1, 1955, the work force has been reduced by 5,921 employees.

Training programs have assisted employees in adapting to new jobs, and in stimulating safer and more skilful performance of work, as well as in preparation for advancement. A major training program in "methods improvement" was started in December 1958. Up to the end of the year over 500 supervisors participated in the training. Over 500 proposals for improvement have been submitted and studied. The 27 adopted have saved an estimated \$136,000 per year.

There were also an additional 360 suggestions submitted by employees. Three awards for outstanding service were made to employees.

#### Public Relations and Promotion

A new map and station guide of rapid transit lines has been distributed. Everything is shown in bold, schematic form with all extraneous geographical material eliminated. Over one-half-million folded pocket-size copies have been distributed, and copies placed in all rapid transit cars. A larger map with plastic coating has been placed in stations.

An arrangement was made with a large manufacturer covering a nine months' period of operation under which three coupons from labels from his products were exchanged for a token. 670,000 coupons were exchanged for tokens and redeemed.

A special direct-service express train was operated from mid-town to a beach and amusement area for a special fare which included the transit ride and several rides in the amusement park.

The general information film, "Transit is Everybody's Business" was shown to large audiences on television and in school and civic groups. Special visits for school groups and editors of high school papers were conducted.

#### Improved Safety and Claims Experience

The results of the authority's safety activities were marked by reductions in accidents and many awards and certificates. Ten units of the operation were awarded certificates by the American Transit Association for working a specific number of man-hours without a disabling injury, as well as a special ATA citation to the authority for its achievements in traffic and passenger safety.

#### Comparison of Accident Rates

				%
		<u>1959</u>	<u>1958</u>	<u>Decrease</u>
Employee Accidents per )				
1,000,000 man-hours worked)		8.4	10.5	20%
Passenger Accidents per )				
1,000,000 passengers )				
Surface lines		5.9	6.4	8%
Rapid Transit		9.2	9.6	4%
Traffic Accidents per )				
1,000,000 vehicle miles )		7.4	8.6	14%

#### Administration and Organization

Measured by annual consumption of punched cards, the work done by the Data Processing Department has increased by 33% over last year to 8,000,000 cards per year. This department now has three electronic computers in a total of 90 machines. This department now handles the following records and reports:

- car and bus mileage
- pension schedule
- sick leave
- employee and public accidents
- social security data
- stores catalogue of 90,000 listings
- stores inventory (14 storerooms - 150,000 items)
- 2,000 stores transactions per day
- crew dispatching schedules
- employees' passes
- production of pay rolls (started)

Revised record retention policies have saved space to the equivalent of 1,500 file cabinets.

The central dictating and transcribing pool has been reorganized as the Bureau of Reporting and Stenographic services. This Bureau, in addition to its stenographic work, records all hearings and meetings. Type material is turned out to the extent of 2,000,000 lines per year.

Summary written  
July 31, 1959 - WSR

Case History No. 1b

TRANSIT IMPROVEMENTS

Company reports the following transit improvement activities in which it has recently engaged:

Consolidation of Properties

Company took over another large transit operating company in its own general area, as the result of a bankruptcy and reorganization proceeding. Company has been engaged in rehabilitation of the property taken over, and in the improvement of services. It has caught up deferred maintenance on the acquired property, and rehabilitated repair and garage facilities. It also bolstered up the revenue fleet through the purchase of 75 vehicles.

Relief from Burdens

Company has been quite active with other companies in its state in obtaining a lowered franchise tax.

April 15, 1959

Case History No. 1c

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Alternate Stop Arrangement

During World War II this company in cooperation with the City Traffic Bureau, developed an alternate stop arrangement on the principal street in the central business area to expedite the movement and loading of buses. The plan provided for example, that line A would stop at the first and third cross streets, whereas line B stopped at the second and fourth cross streets. The number of buses at any one corner by this arrangement was cut in half, and with this cut went the congestion at the bus pickup points. The plan has been further refined and still exists today. In fact, it set a standard for loading that has been copied by many other properties operating in the larger cities.

Exclusive Loading Lanes

Another "first" for this city was the establishment of exclusive twin loading lanes for buses on one of the main streets beginning December 1956. This street leads directly to the railroad station and due to the shortage of parallel highways, it is the principal artery for the east-west movement of buses to the heart of this city. In the peak hour 226 buses move along the north side of the street loading passengers at all bus stops. Not infrequently, before the twin exclusive loading lanes were established, a solid line of buses stretched for a half mile between the principal cross street and the railroad station. The dual lanes and loading and the assignment of definite lines to each lane, speeded the movement of buses by as much as 20 per cent.

Exclusive Transit Lanes

Recently much publicity has been given to the establishment of exclusive lanes for transit vehicles in many cities. Actually, here in this city there has been for all practical purposes, an exclusive lane for buses on the main street for the past thirty years. It was established shortly after buses were substituted for street railway service.

Traffic Improvements

Numerous other relief for the traffic congestion problem have been developed by working with the traffic bureaus of various cities and towns. Some solutions have been the elimination of left-hand turns at busy intersections, the establishment of one-way streets, the lengthening of bus loading zones, readjustment of traffic light cycles, installation of parking meters (which eliminated dual parking), the establishment of tow-away parking zones, whereby the automobilist either removes his car by a stated time, or it is towed away. Some of these solutions meant little individually, but collectively they have proved of real assistance in speeding traffic.

Improved Fare Collection Methods

The company found it helpful on seven separate lines to test the loading of passengers on a pay-leave basis at all pickup points in the business area.

This has speeded the loading of buses that heretofore was delayed three or four times as long under the pay-enter system of fare collection. The test worked so well that the change was made permanent. The Traffic Bureau likes this move by the company because it substantially eased congestion at the heavier loading points.

At the Port Authority bus terminal in the principal city across the river, it was found desirable to establish a pay-leave system of fare collection for all lines in the evening rush hours. The time required for loading buses had been reduced by two-thirds, thereby increasing the capacity of the loading spaces.

#### Flexible Signal System

Another innovation to reduce traffic congestion in the central city was inaugurated by the city traffic engineer, on Raymond Boulevard, a main east-west artery constructed over city subway that now occupies an old canal bed. Raymond Boulevard is a six-lane two direction highway, and the traffic engineer, through a flexible signaling system, established the boulevard as a main artery inbound to the central city in the morning rush and in the reverse direction in the evening. The movement along Raymond Boulevard has been speeded even though the change attracted traffic from parallel highways.

The westward movement of buses along this boulevard has been expedited, and 17 of the company's lines serving the railroad station with 90 trips in the P.M. peak hour have saved as much as five minutes in running time. Express service on two lines which run the full length of Raymond Boulevard has been speeded up even more, and patronage on all express buses had increased. Similar benefits were realized in the morning rush hours.

#### Express Service

This company has pioneered express service on city and suburban lines for the last thirty-three years. As a matter of fact, certain streetcar lines as long as forty-five years ago had express service.

Today there are twenty-five separate express services running in the morning and evening rush period between suburban areas, and the principal metropolitan center served by the company. These express services extend in all directions and use side avenues in addition to the main arteries of travel. Nine of these lines run express during the entire day and evening, and save patrons as much as ten minutes in traveling time between their homes and places of employment, department stores and the commercial area. The speed up in service was made possible by the cooperation of city officials and those of the suburbs in banning parking during the morning and evening rush periods in the direction of the heavy traffic. Buses were thus enabled to use the curb lane. The operations along the main streets in two suburbs are outstanding examples of how traffic congestion can be eased by the cooperation of county and municipal officials.

#### Park and Ride

On November 1, 1955 a park-ride service was inaugurated between the tunnel parking lot and the bus terminal in the city across the river. The parking lot located just north of State Highway No. 3 and west of State Highway No. 1 was built by the Port Authority and is run by the Transit company under lease.

Space is provided for parking 1,175 vehicles, although the capacity has increased to 1,280 cars by the addition of 105 spaces during periods of top demand. In 1958, the southwest area of the lot heretofore unused was graded and paved for parking adding 37 parking spaces. Before summer of 1959 it is expected that 84 additional spaces will be provided by conditioning another piece of unused property to the north of the viaduct.

After the dedication of the parking lot on Tuesday, November 1, 1955, it was open for business on Wednesday November 2 and 190 cars were parked. In the first full week 1,299 cars used the facility. These compare with the maximum day when 1,734 cars were parked and the top week when 8,446 cars were parked. The turnover of customers at the lot accounts for the extra number of cars parked compared with the capacity of the lot. During rush hours express service between the lot and the terminal is provided on a four and one-half headway. In off-peak hours service is run every twelve minutes. The charge of \$1.00 pays for the parking of the car and round trip transportation for the driver of the car. Other passengers pay 29¢ each way on the bus.

The parking lot has an enclosed heated waiting and rest rooms and is supplied with daily newspapers for purchase. The trip under the river between the parking lot and the terminal takes about eleven minutes. The popularity of the lot is increasing monthly and is the most successful park-ride service in the country today.

#### Public Timetables

For the guidance of the traveling public 149 of some 200 lines operated by the company have public timetables. These are similar to railroad timetables and frequently contain a map outlining the route of the line with the towns served and points of interest. Last year almost 6 million copies of timetables were printed to meet the demand of the traveling public on these lines.

#### Special Rides

The company's patrons enjoy one of the lowest rates of fare in the country which has encouraged the patronage of short riders and has kept the residents transit minded. The company helps the situation by promoting special rides to points of interest, amusement, athletic events, educational institutions, etc. on week ends and holidays, year-round for those who lack automobiles or who tire of driving and bucking traffic. These rides are largely promotional and the company believes they have contributed to the substantial number of people who have remained on transit vehicles. In 1958 the company's revenues were 51 million dollars, and of that amount 2.5 million represented chartered and special service revenue, or about 5 per cent of gross revenues.

#### Telephone Information Bureau

The company maintains a bus telephone information bureau at the city telephone exchange. Inquiries about service, fares and routings are invited, particularly for those lines not covered by public timetables. In the year 1958 the telephone operators answered 1,117,000 calls for bus information or an average of 3,060 calls per day. This is just another service rendered to keep patrons and neighbors transit minded.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

General

During the past few years company has been trying to improve its financial position through reductions in unprofitable service, by increasing fares and by seeking relief from traffic congestion through elimination of parking on busy thoroughfares in the direction of the heavy flow of traffic. These of course, are among the usual devices employed by transit companies in the constant struggle to stay "in the black."

In order to furnish material that might be useful in this project, a careful review of operations was made. The items that bear mentioning have proven their worth in dollars and cents. Others have been successful, although it has not been possible to place a dollar value on them. Still others have not yet reached their full potential.

Race Track Service

Company has been able to increase its special service revenues by operating direct service from many points on its system, to practically all race tracks within reach. It has been found that race track patrons will rise early and tolerate a five-hour bus trip if necessary, to reach a race track even in the middle of winter. The intense desire of these patrons has encouraged company to always have service to a race track, so today there is direct service to race tracks, twelve months a year. During the winter months the trip to the nearest track involves a round trip of 500 or more miles.

Revenues from race track operations increased from \$394,000 in 1956 to \$538,000 in 1958, and the business is still growing.

Tours

Special service revenues have been increased through the operation of more and more multiple-day, all-expense tours. The passengers who have been patronizing one-day excursion trips, form an excellent nucleus for longer packaged trips which are growing in favor daily. In addition to this type of trip gaining in popularity, it generally produces a better financial return than the shorter, one-day trip.

Air Conditioned Buses

In an attempt to win back lost riders, the company placed air conditioned suburban-type buses in service on one line, a wholly intrastate operation, linking a number of suburbs and the principal city in the area. Operating records indicate an increase of 4 per cent in business on the line can be attributed to the air conditioning.

Park-Ride

The patronage between the company's park-ride service in the northern part of the state and the large bus terminal across the river continues to grow despite a slight increase in charges to the customer. While the cost

to the car driver for parking and his round-trip transportation remains at \$1.00, the bus fare for additional passengers was raised from 54 to 58¢ round trip last December 21.

The popularity of this service necessitated the enlargement of the lot by improving two undeveloped portions of the lot. These have been paved and put to use increasing the lot's capacity by 126 spaces to a total of 1,300 spaces.

#### Pay-Leave Fare Collection

In order to expedite the loading of passengers which in turn speeds the flow of buses, the pay-leave system of fare collection is employed during the evening rush hour in the downtown centers of concentration on the system. This system has proved most helpful by reducing the time required to take on passengers at the heavy loading points. This has made the service more attractive, avoided suggested rerouting of certain lines, and has entailed no fare registration problems.

#### Divisional Reorganization

During the last two years, a reorganization of the company's operating divisions has effected economies and resulted in improved efficiency. The property was formerly divided into seven divisions, each headed by a division manager. The organization is now made up of four divisions, northern, southern, eastern and western, each headed by a manager and divisional staff. The divisions are subdivided into nine districts, with the districts retaining the former division names.

#### Interchange of Operating Rights

In the northern portion of one of the counties served, duplication of service by this company, and three other bus companies was materially reduced through the exchange of operating authority between the companies.

By the reduction of duplication it was possible to realize a substantial saving in operating expenses.

#### IBM Machines

The installation of IBM machines in company's controller's department has made possible the production of neater, more accurate records in less time with fewer personnel, thus effecting substantial savings in labor.

A variety of work is processed through the use of this punched card equipment, including all pay rolls, pay checks, ticket collections, ticket sales accounting, inventory of fare-registering equipment and coin-counting machine, ticket refund, franchise taxes and many other accounting functions.

A continuous study of procedures is made to determine the feasibility of converting other methods to the punched card system.

April 30, 1959  
July 7, 1959

Case History No. 2

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Consolidation of Properties

This transit organization became an operating entity in 1947, taking over the actual operation of a large city surface operation and a large rapid transit facility. A separate private motor coach operation was taken over in 1952.

A major problem was the consolidation of these formerly separate company managements. The Authority welded all of these groups into a single efficient operating organization, without laying off a single person. Subsequent reductions occurred as a result of normal labor turnover, retirements and deaths.

Improved Methods and Procedures

This organization has built up and maintains a complete staff of engineers and is continually studying and investigating possibilities of improved methods and procedures in all phases of transit operations.

Mechanization of Office Procedures

Studies of methods and procedures effected substantial economies by consolidation of departments and mechanization of office procedures. The major applications of mechanization have to do with pay rolls, pension records, operating reports, schedule department analysis, special surveys and checks, revenue accounting, audit of operators' trip sheets, machine distribution of pay roll and other expense items, machine distribution of accounts payable, and mechanization of materials and supplies records, including a perpetual inventory record.

The pay roll department personnel has been reduced substantially, greater efficiency and accuracy were realized, and personnel reductions made possible in revenue accounting, the distribution of expense items through bookkeeping practices effected a 36 per cent decrease in personnel, as also did the machine handling of accounts payable. In materials and supplies, not only was a positive inventory control gained, but a 39 per cent reduction in personnel was effected. Total accounting department personnel has been reduced by 158 persons, or 43.3 per cent.

A complete duplicating department with modern equipment has been set up at the central offices. Most financial and other reports for all departments are typed here and reproduced in multiple copies. Forms, pamphlets and bulletins are reproduced. Trip sheets, vouchers and other data are microfilmed for quick reference and to save storage space. A new telephone-dictaphone-typing service is used extensively. Services of the photographic section are helpful to the claims and publicity departments. The various services performed by this department effect an annual saving of between \$75 and \$100 thousand dollars.

### Store Room Consolidation

During the past decade the stores department has consolidated and reduced from 32 to 21, the number of storerooms located throughout the system and reduced the value of inventories from \$7 million dollars in 1947 to \$5,600,000 at December 31, 1958. Interest alone at 4-1/2 per cent represents an annual saving of \$66,000 due to this reduction in inventory. Additional consolidations of storerooms are in progress. Since 1947 storeroom personnel has been reduced by 41 employees which represents an annual saving of \$226,000 at 1958 average annual wages including related employee benefits.

### Training and Accident Prevention

A permanently staffed training and accident prevention department was established to train supervisors and new operators and retrain others when necessary or desirable. Accident frequencies and causes are studied and remedial measures advanced. Since the beginning of public operation the number of traffic and passenger accidents has been decreased nearly 48 per cent. It is impossible to evaluate the extent of savings made, but they no doubt would amount to several million dollars per year.

This Authority has been a self-insuror of its buildings and rolling stock since 1952. Its experience has been excellent. Deducting losses and premium for excess coverage from what a full insurance coverage would have cost, shows a saving of \$115,700 for the year 1958.

### Interest Rates

Exceptionally favorable interest rates have been negotiated for equipment trust certificate financing of rolling stock purchases by giving their debt service requirements a prior lien on depreciation reserve funds. On an average of approximately \$12 million dollars outstanding per year, the average interest saving has been between \$60,000 and \$90,000 a year over the past eight years.

Retirement of revenue bonds in advance of maturity through sinking fund and bond amortization fund monies, has effected principal savings of \$647,000 and reduced interest cost substantially on accumulative basis in each of the past seven years.

### Tax Exemption

This operating entity being a municipal corporation, was exempt from payment of all federal taxes, and all state and city taxes with the exception of state motor fuel, state vehicle license, and state tax on electric power; and city vehicle licenses and city tax on electric power. When the motor coach company was acquired in 1952, the Authority was required to assume a franchise tax paid by that company to the Park District to reimburse them for wear and tear of boulevards over which certain bus routes were authorized to operate. In recent years the Authority has been exempted from payment of all the aforementioned taxes, with the exception of the city franchise tax reflected in bills for electric power, miscellaneous city license fees costing less than \$8,000 in the year 1958, and a nominal state vehicle license fee at the rate of \$2.00 per vehicle.

In addition the Authority is waging a determined campaign to have the city assume the cost of snow and ice removal from city streets over which its buses operate. This would save \$750,000 to \$1,000,000 per year.

The Authority has also been instrumental in introducing legislative bills which it is hoped will relieve its full fare paying patrons of the obligation to subsidize student riders at reduced fares. This student subsidy for 1958 amounted to \$4,256,000.

#### High Standard of Service

During the past five years many transit systems have been compelled to resort to drastic service reductions to balance income with outgo. Comparison with nine other large cities shows that the average passenger loss in the nine large cities was 30.3 per cent as compared with 22.3 per cent in this city. The average reduction in revenue miles in the nine large cities was 23.0 per cent as compared with 5.4 per cent in this city. The average reduction in maximum vehicles scheduled in rush hours was 22.6 for the eight large cities (one not available) as compared with 10.4 per cent for this city. The foregoing data indicate that modernization of rolling stock, expansion of coverage, and improvements in services, have enabled the Authority to retain a greater percentage of its patronage than has been experienced in almost every large city in the United States.

#### Charter Service

Charter service has been promoted extensively to increase productivity of revenue vehicles during off-peak hours. The total charter service revenues of the Authority and former motor coach company were \$144,000 in 1948. In 1957 this source of revenue had been increased to \$247,800. In 1958 it amounted to \$295,600 and 1959 charter service revenues to date are running well ahead of the comparable 1958 period.

#### Personnel Reductions

System--wide personnel reductions between 1948 and 1958 have been outstanding when compared with the service reductions during the same period -- 11.97 per cent in vehicle miles and 10.35 per cent in maximum vehicles scheduled in the rush hours. Total personnel has been reduced from 23,368 persons at the time of acquisition to 13,733 persons in 1958. This is a reduction of 41.2 per cent. The above reduction in personnel at 1958 average annual wages including related employee benefits represents an annual saving of more than \$58 million dollars due to the changed character and scope of operations.

#### Rapid Transit Improvements and Economies

Elimination of wasteful duplicate and competitive services between the surface and rapid transit systems, the closing of 54 lightly used stations, and the inauguration of skip-stop express service materially improved main-line service and reduced operating costs of the rapid transit system during the early years of Authority operation. The operational changes reduced trip time from 20 to 30 per cent, produced a 13 per cent over-all improvement in service with reduced equipment, increased riding volume by 6-3/4 per cent, all of which meant an increase of \$100,000 in annual revenues and at the same time reduced operating expenses of \$200,000 annually.

Between 1948 and 1958 seven branches of the rapid transit system serving suburban communities or low traffic areas, were discontinued and adequate motor bus services substituted. Considerable ground-level train operation was eliminated when these branches were discontinued, thereby reducing accident hazards at street crossings and reducing a number of

crossing flag men and gate men. Savings were made by eliminating towers and tower-men's wages, switching crews and station and terminal facilities. A new rapid transit loop was constructed to eliminate a cumbersome and costly yard switching operation, and to permit doubling of service frequencies.

In 1948 there were five main shops and ten terminal shops located throughout the system. By 1958 this number had been reduced to one main shop and seven terminal shops. These remaining shops have been modernized and equipped for efficient maintenance procedures. Substantial supervisory and other shop personnel reductions were made in addition to savings in building maintenance, and cost of light, heat and power.

An electrically operated line supervision control system, providing for accurately dispatched and closely supervised train operation was placed in service in 1951 on a large part of the rapid transit system. This resulted in more regular and efficient service with fewer trains and reduced road supervisory personnel requirements. In 1957 a two-way communication system was tested that will enable the central control dispatcher to talk directly with motormen and even passengers on in - service rapid transit cars. This has great possibilities to control train operation and will be invaluable in emergencies. Looping operations in the central business district which formerly required two tracks with corresponding station personnel have now been consolidated on one track except during weekday rush periods. Automatic crossing gates have been installed at numerous locations. Two electronic automatic interlocking plants have been installed. A tuned pickup coil carried on the front of trains operates the switches to set up the required route. One stub-end terminal was made automatic with supervisory control from the central office. These devices eliminated the need for towers and towermen at the respective locations. Approximately 90 station platforms are being extended to permit the use of longer trains and all car doors, thereby providing as great, or greater carrying capacity with a fewer number of trains.

New all-metal El-subway cars have replaced the antiquated wooden cars taken over from the predecessor company. The new cars with remote control doors and loud speaker systems permitted a drastic reduction in trainmen. Formerly an 8-car train required a crew of eight men, now an 8-car train made up with the new modern cars requires only a motorman and one conductor. A saving of six guards for each 8-car train. Spectacular speed improvements were immediately accomplished and the quiet smooth operation of the new modern cars added greatly to passenger appeal. Lesser car requirements and lower maintenance costs followed as a natural consequence. By using some parts of its PCC street cars in constructing rapid transit cars the Authority saves \$20,000 per car, as compared with the cost of rapid transit cars built from all new components. The saving in capital outlay for 570 cars will amount to \$11,400,000 dollars.

Approximately 456 older steel cars taken over from the predecessor company had more modern door controls, but still required a five man crew to operate an 8-car train. In 1949 the Authority equipped these cars with up-to-date remote door controls which reduced train crew requirements from 5 men to 2 men for this type for an 8-car train. The \$575,000 cost of this conversion was saved in less than one year, but the economies have been continuing ever since because 448 of these steel cars were still in active service at the close of 1958.

Agents at many low traffic stations are now on duty only during rush hours. At all other hours, fares are collected on the trains by the conductors. Automatic turnstiles, coin change-making machines and automatic transfer issuing machines have been installed at strategic points in many stations, particularly in the subway. These devices which reduce waiting time to get through the agents turnstiles are proving very popular, particularly during rush hour periods.

Platform men (walking information booths) were formerly considered a necessity at heavy traffic stations, however, the Authority through educational programs, booklets on how to use the El-subway, large maps displayed in stations, a public address system connecting certain station locations, with the central line supervisory office, and extensive passenger directional sign programs, have practically eliminated this job classification. Pay hours for platform men between the years 1948 and 1958 have been reduced 86 per cent, representing a 1958 wage saving of approximately \$310,000.

Park-N-Ride Lots have been provided at five rapid transit stations to attract more riders. Their combined capacity is 1,070 automobiles. These parking lots met with immediate public acceptance and many more spaces would be utilized for a combination auto-rapid transit ride if funds were available to provide them.

The following brief summary of saving in certain transportation labor costs is of interest: Pay hours - all trainmen reduced 59.8 per cent between 1948 and 1958; all transportation employees pay hour saving between 1948 and 1958, 53.0 per cent. Revenue vehicle miles over this period decreased but 10.7 per cent, originating revenue passengers decreased 22.3 per cent, and maximum vehicles scheduled in P.M. rush hours declined 20.5 per cent. The total reduction in pay hours for this major group of transportation employees was 53 per cent representing an annual saving of \$11,220,000 at 1958 wage rates and related employee benefits.

Passenger appeal of the modernized and fast rapid transit system service is reflected in the decline in riding -- 18.9 per cent between 1948 and 1953, and only 4.2 per cent between the years 1953 and 1958. The surface system of this Authority experienced a 26 per cent loss in passengers between the years 1953 and 1958, even though its rolling equipment has been completely modernized.

At the present time the Authority is rebuilding a station structure to eliminate a bottleneck where 4-track operation on each side merges into a 2-track section for 1500 ft. When completed there will be a smoother, faster and safer flow of traffic through this area. It has also started a program to elevate the ground level section of one rapid transit route over a 2-1/2 mile section. When completed 22 grade crossings will be eliminated thereby eliminating an extremely hazardous operation effecting substantial saving in wages of crossing flagmen and gatemen, and greatly increasing the speed of operation.

Fifty double-end controlled single car units designed for operation either as single cars or in trains composed in part of two-car units are on order for delivery in late 1959. These cars will be operated in owl service principally as one-man cars and will effect savings by elimination of conductors' wages, as well as power, maintenance and related costs applicable to approximately 1,145,000 miles per year for second car miles saved. At present the shortest possible train is composed of standard two-car units semi-permanently coupled, and require a 2-man crew.

A new era in local transit history began on June 22, 1958 with the opening of the new westside subway in the median strip of the Congress Street expressway. America's first rail rapid transit facility designed to be integrated with a multi-lane automobile highway. At the present time a considerable section at the west end of the route is being operated over ground level temporary tracks pending final completion of the Congress Street expressway. However, the present benefits of this new operation are many. A considerable amount of operation at ground level and elevated structure has been eliminated with a resulting saving in maintenance in ways and structures and with greater safety. Running time between terminals has been reduced 28 to 30 per cent and greater speeds will be obtained when the balance of the branch is moved to its permanent location in the median strip. Public acceptance has been spontaneous and gratifying.

#### Surface System Improvements and Economies

When the Authority took over the surface system fleet there were 3,773 revenue vehicles, only 980 units of which could be classified as modern equipment at that time, and 2,666 of the street cars required two men to operate them. By December 31, 1958 the Authority had completed the substitution of one-man buses for two-men street cars, scrapped all over-age street cars and converted 570 of its 600 PCC streetcars to El-subway cars, thus saving \$7,980,000 in depreciation costs that would have been required to cover abandonment losses.

The conversion to a one-man bus system effected tremendous savings in labor costs for conductors, maintenance of ways and structures, power costs and related economies through the greater speed potential and operating flexibility. Motor buses also permitted expansion of services without incurring the heavy capital outlay necessary to provide tracks and power distribution facilities. Also of great importance was the cost differential between the various vehicles. In 1948 the unit prices of a street car was \$25,500 vs \$18,000 for a trolley bus and \$16,100 for a motor bus.

Between the years 1948 and 1958 surface system single way miles were increased from 1,404 to 1,878.

Within the city, which has an area of 224 square miles, over 99 per cent of the population is within 3/8 of a mile of transit service. In addition this service passes through, enters or borders on 29 incorporated suburban communities.

In the year 1958 street cars operated less than 1 per cent of total surface system miles and the last street car line in the city was converted to motor bus operation in June 1958. Total pay hours decreased 48.2 per cent between 1948 and 1958. Revenue vehicle miles declined 13.4 per cent. Originating revenue passengers declined 48.4 per cent, while maximum vehicles scheduled in P.M. rush hours declined only 6.3 per cent. This indicates that a high standard of service has been maintained despite the disproportionate fall-off in riding.

The total reduction of 13,423,631 in pay hours, represents an annual saving of \$19,527,000 at 1948 average hourly wage rates (including related employee benefits). However, comparable hourly wage rates between 1948 and 1958 have increased 84.3 per cent. This increased rate applied to the total trainmen and operators pay hours for 1958 increased 1958 labor costs by \$17,690,000. Thus a potential saving of \$19,527,000 was reduced to a net saving of only \$1,837,000.

All of the above saving in pay hours was not due entirely to elimination of conductors. The flexibility of motor buses coupled with more efficient supervision, practically eliminated late time on routes (a reduction of 95 per cent was made in this expense category). Efficient scheduling and utilization of manpower effected a reduction of 2,448,000 pay hours in such nonproductive costs as bonus to make eight hours daily guarantee, premium pay after ten or ten and one-half hours per day, second run penalty time, and premium for over forty hours per week.

In 1947 the Authority took over 15 surface system car houses and garages from the predecessor company. In 1952 the Authority acquired five more garages when the motor coach properties were taken over. Between 1948 and 1958, eleven of these car houses and garages were abandoned and three new modern garages were constructed. The remaining garages were modernized and remodeled for efficient motor bus operation.

The elimination of 11 operating garages effected substantial savings in supervisory personnel and other transportation and shop employees. Reduced building maintenance and related costs made possible phenomenal savings in pull-out and pull-in mileage, and incidental operators' wage costs, maintenance, fuel cost, etc. The new Beverly Garage constructed at a cost of \$941,000 made possible immediate savings of approximately \$100,000 per year, in pull-in and pull-out mileage and operators' wage costs. Thus the building paid for itself in less than ten years. Similar, but not such outstanding savings have also been made at various other locations.

Early in 1949, as soon as spare motor buses were available over week-ends, the Authority started substituting motor bus service for two-man street car service on Saturdays and Sundays to the full extent of buses available. This not only saved the difference in operating cost between two-man cars vs motor buses, but permitted the closing of street car stations on Saturdays and Sundays, with a resulting savings in transportation and maintenance department supervisory and other personnel labor costs and related expenses.

In 1947, the surface system maintenance facilities consisted of two main overhaul shops, known as the West Shops and South Shops, and inspection pits and housing for the maintenance inspection personnel at 15 operating car houses and garages. These facilities for the most part were specially constructed and adapted for street car maintenance.

The Authority's long range plan for survival by eliminating two-man street car operation in favor of one-man bus operation presented enormous adjustments in personnel and planning. The reeducation of personnel, expansion of service and scheduling of vehicles during this ten-year period were among the serious and difficult features of modernization. As rapidly as street car lines were converted to bus lines, the maintenance facilities at respective locations had to be remodeled and retooled for bus maintenance, and competent personnel ready to take over. Strategic location of refueling stations, service pits designed for efficient maintenance in greasing, and installation of automatic car washers and interior cleaners greatly improved servicing and cleaning facilities, and effected savings in personnel. The past decade has been one of continuous change, yet the end result has produced that the Authority believes to be as modern and efficient an operation as can be found anywhere in the transit industry.

Modern shops are equipped to handle all phases of bus repair and overhaul. A production code system records the time spent in each shop department, on each of the more than 600 reparable bus parts, by types of buses, and whether the nature of the work was a unit change, rebuild, repair, manufacture, etc. This permits efficient scheduling of work and provides cost data to determine whether to repair parts, or to replace them with new parts. Work output of like items in the South and West Shops can be compared and standard practices established for more efficient utilization of personnel and machinery.

Each year has shown progressive efficiency, longer service life on new and repaired units, fewer mechanical road delays, better fuel efficiency, and at the same time a reduction in personnel. Surface system personnel engaged in all phases of maintenance and operation were reduced from 17,267 at dates of acquisition to 9,279 at December 31, 1958; a decrease of 7,988 employees, or 46.3 per cent. The revenue vehicles owned or leased over the same period dropped 366 vehicles, or 9.7 per cent. The above drop in personnel at 1958 annual wage rates plus related employee benefits represents an annual saving of \$48,100,000.

Plans are now well under way to consolidate the West Shops repair and maintenance facilities with those of the South Shops at the South Shops present location. By merging the operations of the two shops the Authority will achieve improved efficiency and realize substantial savings by cutting duplicate inventories and material handling costs, reducing supervisory personnel, cutting down on labor forces and eliminating duplicate machinery and tool requirements, and decreasing heat, light, power and building maintenance expenses. Proceeds from the sale of the West Shops will go far towards paying for the added facilities required at the new location.

Over the years the Authority has agitated with some success for elimination of parking on transit streets; has inaugurated or expanded shuttle service in the central business district at reduced fares; obtained an exclusive transit lane on one of the principal streets crossing the central business district, which reduced the running time through this congested area of approximately 15 per cent in rush hours and 26 per cent during midday; redesigned operators' trip sheets, replaced obsolete fare boxes; simplified the design of transfers; pioneered in the use of push-out side exit doors, and many other innovations to speed up and improve the service. Express bus service is furnished in areas where feasible, at no increase in fare.

#### Public Information

This Authority's promotional advertising is largely by means of its own facilities -- car cards, posters, over-street banners, the reverse side of transfers, booklets, brochures, etc. It uses direct mail over an extensive list to reach public officials and business and civic leaders, and it sends releases to newspapers and radio and television stations.

The Authority also uses newspaper, radio and billboard advertising.

An illustrated brochure (called New Horizons) is a 30-page illustrated document describing the Authority's proposals for an improved rapid transit system including extensive installation of large capacity park-n-ride garages. Also, to present to the public the need for improvements in extensions of the rapid transit system, the Authority prepared an illustrated slide program consisting of discussion and artists' concepts of the facilities in the

program required by the Authority for construction with public funds. This slide lecture, approximately 16 minutes in length, was presented by Authority representative to a substantial number of civic groups, Chambers of Commerce, church groups, clubs, etc. and was well received.

Other publicity items produced for 1959 distribution entailing an expenditure of about \$75,000 include system map holders, timetables, booklets on three or four subjects. Of these booklets, those entitled "Why Public Transit is Important" and "The Big 'T' for Employers" and "Mass Transportation System" are especially aimed to point up the necessity for public financial assistance to provide improvements and extensions to this area's rapid transit system.

The modernization program for the properties taken over entailing a total investment, actual and committed in modern equipment and other facilities of about \$136,000,000 is the largest in the city's history, and the management has endeavored throughout to keep the public well informed on the program. Authority has now virtually completed the modernization of the properties obtained in the original purchase from the predecessor companies, and its objective now is to obtain public financial assistance to provide adequate extensions and improvements of the system, particularly in the rapid transit division. That traffic-free fast rapid transit will be used and appreciated by the public where it is conveniently accessible, is evident in the fact that the Authority's rapid transit riding for the first six months of 1959 was about 8 per cent above the volume for the same period of 1958. This is in contrast to the general continued decline in transit riding throughout the nation.

The Authority believes that the combination rail rapid transit and vehicular expressway in operation in the Congress Street Expressway sets a precedent for mass transit in major urban areas of the future. This coordinated project, the first of its kind was jointly financed by the U.S. Bureau of Public Roads, the State, the County, the City and the Authority. The project consists of a two-track rapid transit line in the median strip of a great 8-lane expressway connecting the central business district and the western suburbs. Plans are in process of development and some work is actually under way for other such coordinated projects in the city.

#### Charter Service

Charter service, although restricted by limited personnel and passenger equipment available yields about \$300,000 a year of revenue, and the Authority believes creates considerable good will. Users of this service includes schools, churches, fraternal groups, clubs, civic organizations, etc.

#### Advertising and Concessions

Another adjunct of public relations activities is concessions consisting of advertising display, station news stands and vending of confections, soft drinks, etc. The Authority realizes approximately \$600,000 a year of net income from these sources.

General

In its 11-3/4 years of operation, the Authority has emphasized strongly the objective of providing modern, convenient transit service for the people of this city and adjacent suburban areas. To the extent possible under the present basis of financing, the Authority has accomplished these things. However, the great transit needs of the area and of many other large urban areas, is increased traffic-free rapid transit service; and this Authority's experience has demonstrated emphatically that financing such instructions and improvements is entirely impossible from fares collected from patrons. There is a growing awareness among public officials and civic leaders as well as transit managements that financing of these vital necessities should and will be from public funds.

June 30, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Modernization of Existing Facilities

During the past four years broad-scale modernization of company's surface lines system, has been accomplished through the expenditure of \$36 million dollars of private capital for the acquisition of a new fleet of more than 1,000 vehicles, the erection of company's new operating headquarters and central bus maintenance shops, and the modernization of many of its operating locations.

In addition, the company has assumed financial responsibility in a cooperative project with the city for acquisition of 270 new cars for the subway elevated line, part of which is owned by the city, and part by the company, and for the rehabilitation of the city-owned section of that line. These expenditures will amount to about \$27 million dollars, bringing to \$63 million the total of transit improvements, all without any expenditure of tax funds.

The purchase of this group of rapid transit cars will be financed by a city bond issue with the company meeting all interest and amortization charges.

Operation Northwest

Last October the city and two railroads along with this transit company, embarked on an experiment to encourage greater use of public transportation facilities. Service was increased on the Chestnut Hill branches of each of the railroad's commuter systems and both the rail fares to the city center and joint bus-rail fares were reduced. The city agreed to subsidize the railroad's increased costs resulting from the operation of additional trains to the extent of \$160,000 for a six months period.

The company received 11¢ out of a total 40¢ fare charged for a bus-railroad trip to the city center. The regular bus fare is a 19¢ token or 20¢ cash. Nine of company's bus lines serve as feeders to eight stations on the two railroads and the number of passengers taking advantage of the reduced joint fare ranges between 1300 and 1900 one-way trips a week. This compares with some 70,000 one-way trips on the two railroad lines.

Company understands that the railroads need a 33 per cent increase in riders to offset the fare reduction which they have granted, but thus far the riding increase has amounted to about 17 per cent. It is probable that the city will subsidize the experiment for an additional six months and it is considering broadening the experiment to include another branch of one of the railroads.

Park and Ride

In September 1956, a new 412 car parking field provided by the city was opened at the northern terminus of the city owned subway. It was an immediate success and is filled to capacity every morning by 8:00 o'clock. As most of the parkers work in town the cars are left all day at the field and there is

very little turnover. A 200 car addition to the field is soon to be open to the public and will undoubtedly also be used to capacity immediately. Company believes that as many as 3,000 or 4,000 motorists would park at the subway terminal if there were facilities to accommodate them, but land acquisition costs, particularly in view of existing residential developments precludes such an expansion.

Company's parking fields at either end of the other subway-elevated line, are likewise filled to capacity early every morning and much more space could be used if it were available.

#### Escalators at Subway Stations

Escalators at five stations along the north-south subway were recently installed by the city and have, of course, been popular with passengers.

However, they have also created quite a problem from an operating standpoint, since state regulations require that a readily-accessible button be provided for stopping the escalators in an emergency, and these are toyed with by children. An employee must be dispatched with a special key to re-start stopped escalators.

#### Express Service

Express service during morning and afternoon peak hours at regular fare is operated on ten of company's bus lines.

#### Transit on Expressway

Another express route will be operated on a new expressway into the city center which is now nearing completion.

#### Shoppers Specials

Eight special bus lines providing a de luxe-type service for shoppers between residential areas and the city center during off peak hours have proved very popular. The fare on these lines is 5¢ higher than the regular fare.

#### Exclusive Transit Lanes

New block-long traffic islands have been installed by the city in one direction along our biggest shopping thoroughfare. They have had the effect of providing an exclusive lane for use of buses and have helped company to speed up service.

### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

#### Diversification of Activities

The company has a truck rental subsidiary which operates a fleet of 140 trucks. Sixty of these trucks are on a day to day, or short term rental basis and the remaining are on long term leases.

Vehicle maintenance work for other transit operators in this area is performed in company's central bus maintenance shops. Also, to a limited extent maintenance work is done on heavy duty diesel trucks for fleet operators, but company does not maintain a general truck repair shop.

#### Charter Service

To stimulate charter service business, company has just initiated a commission plan for employees, whereby they are paid 5 per cent for any new charter service business they originate.

#### Operation and Maintenance Efficiency

The erection of company's new operational headquarters and central bus maintenance shops has permitted it to integrate operational functions which formerly were performed at eight different locations throughout the system. The new central bus maintenance shops have enabled company to attain the utmost in efficient and economic bus maintenance.

#### Schedule Economies

By operating buses off route on deadhead trips between garages and the route terminals, company has obtained substantial savings in operating costs. As pull-in and pull-out trips may be operated much more quickly to and from the garage off the routes where they are not needed in passenger service the accumulative saving in time becomes substantial.

Also, many vehicles are cross routed from one line to another during the A.M. and P.M. peak periods and such cross routing has enabled company to maximize the use of its equipment at times when vehicles are most needed.

#### Charter Service - Payroll Saving

Through negotiation with the union all charter service work is now paid for on a straight time basis, whereas formerly most of it was paid at time and a half. This has enabled company to quote more competitive prices in the highly competitive charter bus field.

#### Accident Reduction

Polaroid cameras have been supplied to depot superintendents for taking pictures of vehicles that have been involved in accidents. Also, pictures are at times taken of the other vehicles which collide with company's. Street conditions, etc. so that company may immediately document all facts pertaining to accidents.

Monthly safety contests with prizes awarded by drawing are conducted on a year-round basis. The winning location is the one which shows the greatest reduction in accidents per 100,000 miles compared with the same month of the preceding year.

Three especially painted white buses bearing safety messages are assigned from depot to depot and a different operator is given each bus daily.

Company's accident point-rating system for employees determines when individual employees require major reinstruction or disciplinary action.

#### More Efficient Street Supervision

Company's street supervision is zoned so that it has closer supervision of service supervisors and better control of what they are doing. This is done simply by splitting the city up into several different districts and assigning a chief supervisor to each area.

#### Schedule Making

A substantial segment of company's schedule making program is now handled through its IBM 650 data processing system.

For years the company has recognized the need for increased flexibility in schedule preparation in order to more rapidly meet changing service conditions. In addition, company wanted to prepare the best possible schedule with minimum preparation cost. In order to accomplish these objectives it began seriously investigating the feasibility of automated transit scheduling early in the fall of 1957. By mid-November 1957 the feasibility had been determined and a program of action was begun. Since then many hours of planning and programming have been devoted to this problem, and today the IBM 650 data processing system has become an accepted tool of the schedule department.

Scheduling having been satisfactorily mechanized, the company is now proceeding with the planning and programming of the run cutting procedure.

A substantial dollar saving in reduced clerical cost due to the mechanization of a traffic survey and a running time survey has been accomplished. Control information, such as mileage for each block en route, provided automatically as a by-product of schedule preparation resulted in substantial savings in man-hours. Clerical drudgery has been taken out of scheduling permitting the scheduler to devote more time to creative thinking and planning.

May 1, 1959  
July 2, 1959

TRANSIT IMPROVEMENTS

Company reported a number of actual and prospective transit improvements by telephone in response to the "Improvements" questionnaire.

This report was given rather hurriedly and the notes of it do not form a satisfactory basis for reporting in this compendium of case histories.

There are three projects, however, which might be mentioned in this connection:

- No. 1 - The planned \$21 million dollar subway link nearly a mile in length paralleling an existing subway tube and necessitated by the travel requirements of a projected \$100 million dollar insurance center development.
- No. 2 - Possible future improvements to be necessitated by a proposed Federal, State and City Center, which will overload existing rapid transit facilities.
- No. 3 - A future plan to replace railroad commuter service to the south of the city with rapid transit, by rail or bus, at an estimated cost of \$21 million dollars.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Increased Revenues

In July, 1959, the operating authority will begin operation of a newly constructed rapid transit extension over the abandoned right-of-way of a railroad branch line. This constitutes a 9.4 mile addition to an existing subway in the city, and the new terminal point will be about 11.6 miles from the center of the system. Modern PCC type rapid transit cars will provide speedy low cost rapid transit service to a large residential area.

Parking Areas

Fringe parking areas are operated near rapid transit stations as an inducement to motorists to "park and ride". The rental income derived from lessees of the parking lots for the year 1958, amounted to approximately \$93,000, which was in addition to the passenger revenue provided for patrons of 712,000 automobiles using the parking lots.

Decreased Expenses

The introduction on this property of 100 new mainline rapid transit cars, with their increased carrying capacity, allowed the authority to use four-car trains in place of six-car trains during the rush hours, and two-car trains in place of four-car trains during the off peak hours. This resulted in a reduction during

1958 of approximately 900,000 miles on the mainline elevated, with a consequent decrease in maintenance and operating costs. Under State Legislation one guard is required for every two rapid transit cars operated. By the operation of fewer new-type rapid transit cars, which replaced smaller capacity cars, the authority realized substantial savings in man-power requirements.

In 1958, the engineering and maintenance department, and the power department, were consolidated into one department called the engineering department, with a chief engineer as administrative head of the combined department. The consolidation and the subsequent moving of the power department facilities, stock and personnel to the engineering department building, resulted in, and will continue to effect, a more efficient operation of both departments. The building formerly used by the power department was then rented.

In addition to the increase in overall efficiency, economies, both financial and operational, will be gained as a result of the elimination of some duplication of functions and overlapping of facilities. The consolidation will permit a sharing of personnel and equipment, as well as provide a more cohesive and coordinated approach to problems affecting the authority in related fields of engineering and power.

By means of a highly coordinated IBM tabulated prevention program, the authority has successfully reduced its accident rate in 1958 as follows: Total accidents per 100,000 miles, 7.2 per cent reduction, collision accidents per 100,000 miles, 11.1 per cent reduction.

The authority has made substantial operating savings by the use of duplicating equipment in conjunction with vari-typers, in the designing and printing of all types of forms and printed matter used throughout the system.

May 29, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Street Car Conversion

Within the last five years company has discontinued the use of all two man street cars and is now operating one man PCC cars on five routes.

Equipment Replacement

Company has acquired 380 new diesel buses to replace obsolete equipment.

Express Service

Company has inaugurated express service and limited stops on many of its lines. While the city has only two freeways within the limits of the city itself, company has taken advantage of them and operates express service over the freeways. From one location, it saves fourteen minutes by using buses on the freeway as compared to street car lines that operate between the same locations.

No Additional Freeways

The City Board of Supervisors have recently rejected \$300,000,000 worth of additional freeways for the city. The two elevated freeways recently completed have been considered such eye-sores that the entire public rebelled against them. In rejecting the elevated freeways, the thoughts of the people and also of the administrative groups, have now turned to subways. The mayor of the city and the governor of the state are now holding meetings so that freeways through this city may be built either in tunnels or as depressed freeways, but the elevated freeway is definitely out for the present.

Rapid Transit

Rapid transit for five counties in this area is now progressing at a rapid rate. The cost of the rapid transit system to the northeast and south of the city will be approximately between \$500,000,000 and \$1,000,000,000. The "rapid transit district" created a few years ago is now endeavoring to have a bill passed in the present State Senate to allow certain bridge tolls up to \$113,000,000 to be used to build a tube under the bay between the two principal cities, and this cost would also include the approaches.

The rapid transit district people are making very good progress and they expect to have their report before the people in May 1960, so that bonds may be voted on at the November election in 1960. The rapid transit within the city, and also the tie-in of company's various service lines with the rapid transit district are also under study. The city's Board of Supervisors recently appropriated \$125,000 for this study.

Bridge Buses

At the present time in this area on one of the principal bridges the

rails that were formerly used by a neighboring transit system for its trains are now being removed. The entire bridge structure is being reinforced so that the upper deck will be one-way traffic east and the lower deck one-way traffic west. The removal of the rails and the paving of the area will give them two additional lanes. This is a \$35 million dollar project and will be completed in approximately two and one-half years. When completed it will allow the buses of the neighboring transit system to move faster.

#### Proposed Study

At the present time a California member of the House Armed Services Committee of the United States Congress has requested an investigation of the adequacy of the transportation systems which will include this entire area. The investigation is to cover highway and freeway networks as well as rail and air transportation. This member of Congress stated that the transportation problem is particularly acute in this area. In addition to rapid transit planning now going on, plans are being formulated for another bridge across the bay. This would be south of the present bridge and would be a southern crossing. It would cost approximately \$250 million dollars.

#### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

#### Increased Revenues

During the past few years the railway has instigated and is now operating express service on seven lines. The results are very gratifying.

Company has acquired 380 new diesel coaches replacing worn out motor coaches. It is not possible to place a dollar value on increased revenue because of this, but it certainly has been a big factor in keeping passenger decline well below that of the average national decline.

Company acquired 66 used PCC cars which are a great improvement over the old two man operated cars. This, too, has helped maintain passenger revenue.

The public is invited to write letters of commendation and each month the operator receiving the largest number of commendations is designated the "man of the month". He receives an award and his picture appears on a car card. The public response to this is good.

Company maintains an information and passenger service bureau to answer telephone inquiries. Information given out by this bureau is very helpful to patrons and company received many letters confirming its belief that this service pays for itself many times in helping to maintain satisfied repeat riders.

Company does repair work on service automobiles belonging to other public utilities. While this work is performed at cost a judicious scheduling of the work at slack times enables the company to receive pay for services which in some cases might be lost time.

Decreased Expenses

Company is acquiring four more two-way radio passenger sedans to be used by inspectors. This will enable company to reduce its supervisory force by four inspectors and will save the cost of the cars in only a few months. After this time the savings in wages will be a direct, continued, permanent reduction in expenses.

Company has acquired and is operating four "cyclone" vacuum cleaners with a resulting saving of many hours of wages for car cleaning expense. In the past four years the car cleaning force has been reduced by 19 employees, or, approximately 20 per cent.

The company is acquiring 870 registering lock fare boxes. This is eliminating a large part of turn in and travel time, amounting to approximately \$250,000 a year. Other benefits on which it is not possible to place a dollar value is the improved safety factor in operating the vehicle, and the relief to the operator from the fatiguing effort of retrieving the return coin.

The acquisition of 66 PCC cars has enabled the company to convert its entire two man street car operation with the exception of a cable car operation to one man operation. The savings here have been tremendous.

Reduction in Force

Under the present favorable labor market the company has been able to reduce its force without the laying off of any permanent employees. Every vacated position is carefully studied and when duties can be reassigned, that is done. During the past five years the force for other than platform has been reduced by 12-1/2 per cent.

Savings in Interest

Where interest can be saved by making payments in advance this is done. When obligations become due, and involve interest if they remain unpaid, payments are expedited with the cooperation of all departments involved.

April 16, 1959  
June 5, 1959

Case History No. 7b

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Bus Substitution

On April 20, 1958 under authority granted by the Public Utilities Commission of the State, motor coaches were substituted for the rail service on an important trans-bay bridge service, replacing a total of 88 articulated units.

Bridge Remodeling

Since April 1958, the state has been engaged in the remodeling of this bridge terminal located on the other side of the bay. This terminal was originally built for the use of train rail commuter service across the lower deck of the bay bridge. The rail facilities were designed to carry 50 million passengers per year between the two cities. It is interesting to note however, that the greatest number of passengers ever carried was 22 million in 1945, the last year of World War II. At the time of the substitution of motor coaches for rail service, the rail operation was carrying only 5,500,000 passengers per year.

Upon substituting motor coaches for rail service, converting the building for an off-street all-bus loading and unloading terminal has been undertaken by the state. When completed trans-bay motor coaches will be able by use of elevated roadways, to use the terminal without traversing the city streets.

The cost of this remodeling is approximately \$950,000 and is part of a \$35 million dollar bay bridge revamping program to provide for one-way traffic on each of the bridge's two decks. It is estimated the work should be completed in four years.

As the work progresses more and more coaches operated by this company in its trans-bay service are removed from city streets on the other side of the bay. At the present time, some 77 per cent of all coaches in this service operate into and out of the elevated area of the terminal building.

While at the present time no appreciable reduction in running time across the bay bridge has been accomplished pending completion of the work, it is anticipated that substantial savings will result when one-way traffic is inaugurated.

April 23, 1959

Case History No. 9

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

General

This company believes that the transit companies' call for help from American communities today, is a very real one. To them, it is no "wolf" call. There are major problems facing transit in this community and in every other community in the United States. The primary problem is of course, automobile competition, and whether it is good or bad for the future of the country, the automobile industry is a principal "prop" of the American economy. Another problem faced by transit is the explosive growth of the central city. The trend has been toward a growth of suburban residential settlement as well as a decentralization of industry.

The result has been a changed pattern of travel for the community at large. This change has lessened the demand for trunk line service to downtown. At the same time, it has increased the need for diverse travel movements - in all directions. This is difficult for transit to handle because it is bound to mean more transferring from one line to another, and therefore, less attractive service.

The result of this transformation is that transit ends up with a bigger territory to serve but with fewer customers. At the same time, it is generally conceded by urban planners and engineers that transit must be sustained and encouraged. Its efficiency in the movement of masses of people in urban areas is essential to the economic and social welfare of these communities. Transit is therefore, deserving of community help, along with other essential services.

In some cases recognition of this fact has taken the form of public acquisition of transit properties in order to expedite and simplify the means of community aid. Whether this step is necessary is a matter for the individual community to decide. The fact remains that there are ways in which help can and should be provided regardless of transit's ownership status. However, before such aid can be justified, there must be some evidence that the proposed recipient has done everything reasonably within his power to help himself. In this city the company believes strongly in the philosophy that "the Lord helps those who help themselves."

In the following sections there is an account of some of the things done by this company to promote the use of its service and to continually improve its attractiveness. Through the years this company has pioneered many new services and other promotional devices in the transit industry. In fact, the Wall Street Journal recently referred to its operation as "a showpiece of good maintenance, and profitable innovations." The company knows it can't expect recognition and high priority in future planning if it simply offers a philosophy of futility - if all it does is cry for help. So, the company has been hard at work doing everything it can to help itself.

Its principal goal has been continually to increase operating efficiency. One of the big items in this regard is maintenance efficiency in which it has led the large operators in the industry for the past thirteen years.

### Safety

Safety is another big item. Continually improved safety performance has resulted in a reduction of claims costs from 10-1/2% of gross revenue in 1947 to 6% today. The continuing safety program which provides intensive training for new operators as well as refresher courses for the older employees has been largely responsible for this improved record.

### Transit Fleet

Company's modern, attractive fleet of buses and street cars has gained considerable recognition. The latest development in equipment improvement has been the air conditioning of 245 buses for express and shopper services. Company has led the way in this program, and has the largest fleet of air-conditioned transit buses anywhere.

### Customer Information

Company provides complete customer information service. This includes the periodic distribution of timetables, house-to-house in the service areas of many of its routes. On about 40 lines the company posts the bus schedules at each stop along the route in the inbound direction, a service pioneered in the industry. In addition it offers a 24-hour telephone information service, and distributes system guide maps and other service pamphlets.

### Rush-Hour Express Bus Service

The thinking behind the establishment of rush-hour express service as well as other special transit services, is based on a belief that transit must move in two basic directions in order to increase its appeal and attractiveness. These two factors are speed, and social acceptance. There are, of course, many additional factors, such as convenience, comfort, accessibility and so on. But in almost all surveys probing motivation, speed and prestige value seem to be important. In company's opinion, express bus service does a good job of incorporating both factors.

This company was one of the pioneers in establishing this type of service. It started with five lines and 45 buses in 1946 and now have 18 rush-hour express lines using about 240 buses. The pattern has been to duplicate the route of existing local lines in the outer pick-up areas and then use the most direct arterial thoroughfare to downtown for the express or limited stop zone of operation. In some cases express lines start farther out than the companion local service, providing high-speed travel during rush hours only to residents of outlying suburban communities.

In many cases company has been able to effect a saving of up to thirty minutes round trip on express vs local service. The range is from 20 per cent to 30 per cent in increased speed. The social acceptance factor is difficult to measure, but company knows that many of its patrons consider it smart to say that they are an "express rider." Whereas they might shun the more lowly classification of "bus rider." Results in terms of increased patronage for express service were quite evident even before the new feature of air conditioning was added. Express service patronage has shown an increase of about 5 per cent as compared with an over-all decline in system patronage.

### Shopper Express

In addition to rush-hour express service, company inaugurated off-peak shopper express service in 1954. This system which provides fast direct service from various sections of the city and county to downtown has grown from four lines at the start to 12 lines today. In many cases shopper routes were inaugurated in areas where direct downtown service was not available previously. Their growth has been slow but steady, and, like rush-hour express service they have also gained considerable impetus from the use of air-conditioned vehicles.

Inbound trips are operated generally between 9:00 A.M. and 11:00 A.M. and return service leaves downtown between 1:30 P.M. and 3:30 P.M. This off-peak pattern of operation offers obvious advantages in keeping pay roll costs to a minimum and has yielded a profitable operation.

### Park-Ride

Another important innovation which has won many new transit patrons for the company, has been the park-ride service inaugurated in 1953. In addition to its virtues of speed and social acceptance, park-ride offers the combined use of private automobile and public transportation, utilizing the best features of each. Travel from the outlying suburban community to the park-ride lot is made by automobile and the remainder of the trip in the congested city portion is made by transit.

Company's most successful park-ride service is operated from a 1200-car municipal parking lot in a public park adjacent to the city's open-air theatre. It is located about five miles from downtown and is situated in the central-west portion of the city with a tremendous potential drawing area from the west, northwest and southwest. Company provides five-minute bus service to downtown during rush hours from 7:00 A.M. to 9:00 A.M., and 4:00 P.M. to 6:00 P.M. and fifteen-minute service during midday for shopper travel. Running time to downtown is about fourteen minutes with a fare of 30¢ one way or 50¢ round trip. Patronage of this service is about 1500 persons daily which means that some 1,000 cars are kept out of downtown each day. It is also important to note that the vast majority of these people - over 70 per cent - were former motorists to downtown according to company's surveys.

In an effort to expand this service company has sought city help in the development of other suitable locations. It is not easy to find such spots in a mature city and based on company's experience it is not economically feasible for the transit company to acquire and develop the property needed without substantial community help. One of the reasons for this is that the parking must be free, or almost free, in order to make the service attractive. Another is that the parking lots must be situated in strategic locations in order to make them easily accessible. So far company has not been successful in gaining city support for the expansion of this highly successful experiment, but it intends to keep right on trying.

### Air Conditioning

As noted earlier company has completed the air conditioning of 245 buses, the largest city transit fleet so equipped anywhere. Its first experiment along this line was conducted during the summer of 1956 with two buses that were rotated on the company's rush-hour express line. Encouraged by passenger response to this test company equipped 100 buses for operation during the summer of 1957. By 1958 this fleet was increased to 140 vehicles, completely equipping 8 of the company's 18 rush-hour express lines.

During the summer of 1958 records show that air conditioning was responsible for an average increase of 12 per cent in new transit customers on these 8 lines. This was in addition to the increase realized from local service passengers who switched to air-conditioned service at a higher fare. The average daily increase in revenue on these lines was 16.4% during the summer. It is interesting to note that about two-thirds of this increase in passengers and revenue was retained during the winter months.

In the summer of 1959 company's complete express operation was air conditioned. In addition, these buses were switched to major local lines serving the downtown area during the off-peak shopping hours Mondays thru Fridays and all day Saturday. Air-conditioned buses are also being used to equip all major lines on Sundays and other special services such as shopper express, red bird express, municipal opera express, park-ride and Sunday excursions.

### Merchant Co-op Plan

Company has worked closely with merchant groups primarily in the downtown district in various promotional ventures from time to time. This has included validation plans for special sales events as well as a continuing cooperative program. On semi-annual "downtown sales days" in April and November free rides home are provided for transit patrons. They receive a return-trip ticket in the going direction which is good for a free ride home after the validation by any of the participating stores, with a purchase in any amount. The cost of the ride is borne by the merchants with the company contributing to the promotional program.

In addition to these "campaign" events, company has had a continuing stamp plan in effect with downtown stores for several years. This plan called "co-transit" has become somewhat complex in administration and company is now working with downtown interests in the development of a new and simpler arrangement to be called DBP (downtown bonus plan).

In June 1958 a new organization of downtown interests was created to promote and to expedite redevelopment of city's central business district. The company has taken an active role in this organization which has an annual budget of over \$200,000. Company has participated in all of the promotion events sponsored by this group and is also voicing the interest of transit in all planning and redevelopment measures.

### Use of Expressway

A 400-million-dollar expressway program for the metropolitan area is under way. Much of this program is still in the planning stage,

but two major arteries are now being constructed, one of which will be completed this year, and the other scheduled for completion in 1961.

Company has never taken steps to resist the development of expressways, although it seriously doubts their ultimate effectiveness in solving the community's traffic ills. However, it intends to make the best possible use of these arteries with its express bus system to achieve further and very impressive time savings for its express bus riders.

At the present time company is operating five express lines over completed sections of two expressways. Eventually it expects to have up to 14 routes operating on the inner portions of these expressways - with anticipated cuts in travel time of from 25 to 50 per cent as compared with present schedules.

In the early stages of this highway program, company successfully obtained a policy decision by the State Highway Department to provide turn-outs and loading facilities for buses on all expressways being built or to be built in the future. Company has also urged the establishment of park-ports at these turn-out locations to be included in the cost of the project. This would promote "park and ride" use of the expressways thus increasing their passenger-carrying capacity many times. Such a step has been supported by the local press.

Use of these highways by express buses provides one approach to a rapid transit system. Buses would traverse surface streets in the pick-up residential areas, enter the expressway for high-speed travel to downtown then leave the facility to deliver their passengers within convenient reach of their downtown destinations.

It is company's view that such a system will produce good results until the expressway becomes so congested that the speed advantage will be lost. Based on the experience of other cities, this could occur in a relatively short time. Company therefore advocates some sort of exclusive lane for transit vehicles - either on the expressways themselves or by means of a separate right-of-way facility.

One constructive step that can be taken now, while awaiting expressways and other future developments is the establishment of exclusive transit lanes on existing arterial thoroughfares. Company first proposed such a plan to city officials in 1955 and has urged an experimental trial of the idea on several occasions since then without success.

Company's plan which had strong press support calls for the setting aside of the curb lane in the flow direction during rush hours only for the exclusive use of buses. Reversible center lanes would also be established so that motorists would not be deprived of a lane. In addition, feed-in streets on the flow side - except for signalized intersections - would be closed off during rush hours, thus providing a semi-expressway. Such an arrangement would speed the travel of both transit and autos, but because of the exclusive lane transit would probably obtain the advantage required to win many motorists and thus greatly improve the artery's efficiency in moving people.

Company recognizes the fact that limited applications of this principle are already in effect in several cities. In its opinion however, the length of run in these instances is much too short to permit an effective demonstration of the dramatic speed advantage that transit could offer with such an arrangement.

#### Municipal Opera Express

For a number of years company has operated five special express lines to the municipal theatre in Forrest Park during the twelve-week summer opera season. Although this operation is at night when the family car is available, and there is ample parking around the theatre, company's air-conditioned buses carry some 85,000 passengers to and from the opera during the summer.

#### Red Bird Express

This is the fourth season of Red Bird express operation to all home baseball games at the stadium. Air-conditioned buses are now used in this service which is a cooperative project with the baseball team whereby the company is guaranteed against loss. Patronage of this service has grown each year, and it has played an important part in relieving traffic and parking congestion around the ball park. Some 113,000 passengers were carried on the three Red Bird lines operated last season. This is, of course, in addition to baseball fans carried on regular transit routes serving the stadium. One additional Red Bird line was added in 1959.

#### Sunday Bus Excursions

In 1957 company inaugurated a series of Sunday excursions to points of interest in the county and the neighboring countryside. These tours which are operated in the spring, summer, fall and at Christmas time, have served the recreational needs of thousands of citizens, and have become very popular. Fifteen excursions were operated last year, the largest of which took 1,295 persons on 47 buses to the foothills of the Ozarks for a display of fall foliage last October.

#### Promotional Fares

Company's rate schedule includes several promotional-type fares designed to serve the various needs of different classes of riders.

For shoppers, a 20¢ cash rate prevails on a system-wide basis from 9:00 A.M. to 3:00 P.M. Mondays thru Saturdays. During this same period a 10¢ fare for travel within the downtown district is available on all regular lines. For shoppers and others a round-trip rate of 35¢ is offered to single-zone riders. Finally, for the regular commuter, the fare structure includes a token rate of 22-1/2¢ vs. the regular 25¢ fare through the purchase of 4 tokens for 90¢. On the other hand, fares for long-haul rides and premium services are generally 5 to 10¢ above the regular rates.

Company likes to think that the transit rider in its city pays for what he gets, and gets what he pays for - which in itself has promotional value.

April 27, 1959  
June 18, 1959

Case History No. 10

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Rapid Transit Line

In 1956 the rapid transit line had 14,800,000 riders in spite of the many problems which normally appear with a new operation, the future of the rapid transit line is anticipated with a great deal of optimism. Riding has continued to increase, especially in the rush hours. These peaks can be expected to increase as more automobiles choke downtown streets and arteries with their limited capacities.

In the second year of operation, rapid transit riding increased 22 per cent on the west side and 9 per cent on the east side. The overall increase for the rapid transit system was 11.3 per cent.

The use of 1900 parking spaces in the parking lots adjacent to the rapid transit has encouraged a large number of people to ride it, who otherwise would have driven their automobiles or would not have come downtown at all. Of the persons using these lots, 71 per cent are new riders. The further development of parking facilities in connection with the rapid transit operation, will facilitate travel to all parts of the city, stimulating growth and development throughout the community.

The rapid transit is the only means of bringing more people into downtown without imposing additional burdens on already overloaded streets. In recent years traffic congestion has nearly paralyzed downtown streets during seasonal peak periods. Rapid transit cannot be expected to clear the streets of automobiles, but it will permit more persons to enter downtown for shopping and other activities. This was demonstrated during the 1955 and 1956 Christmas seasons.

In 1958 the new \$4 million dollar rapid extension, along with 1,500 new parking spaces took place, after an outstanding display of teamwork on the part of all system employees. The immediate success of this extension necessitated the addition of 500 parking spaces at West Park Station as the parking lot was filled to capacity on the first week-day the extension opened. New weekly and daily records have been set since the extension opened with a top of 84,000 passengers for a single day, and 422,600 for a single week. While system riding as a whole dropped off about 10 per cent in 1958, as compared with 1957, rapid transit riding almost equalled the year before. With the upturn of business and employment rapid riders in the early fall actually increased over 1957. Even before the west side extension was opened.

High Level of Service

The decline in vehicle miles has been remarkably small in this city as compared with transit systems of comparable size and with the industry as a whole. In 1941, 35,600,000 vehicle-miles were operated. In 1955 the system operated 42,000,000 vehicle-miles, or 18 per cent more than in 1941. Comparisons were made with four comparable transit systems, which are recognized throughout the industry as outstanding and well-managed properties. They are systems most similar to the one in this city in number of vehicles operated, mileage, employees and population served.

The system trend here in maintaining a high level of vehicles in operation is 40 per cent better than the trend for these four comparable cities and 23 per cent better than the transit industry trend.

For every 100 vehicles operated in 1941 this system is operating 113 vehicles today, while the four comparable companies are operating only 81 vehicles and the average for the industry is 92.

Data recently released by the U.S. Department of Commerce shows that this city's central business district total retail sales have increased \$20 million dollars, or 5-1/2 per cent between 1948 and 1954, while similar sales in the four comparable cities decreased \$99 million dollars or nearly 8 per cent. The record for department stores in this city is even better; they show a \$7 million dollar increase, or 4 per cent while the four comparable cities show a decrease of \$90 million dollars or a 15 per cent drop. Management is confident that this city's transit operation has contributed substantially to this favorable trend.

#### Modernization of Equipment and Facilities

Between 1943 and 1956 company spent \$66,400,000 for completely modernizing and improving the system.

A complete new rubber-tired fleet of buses and trackless trolleys replaced all street cars after World War II. In addition, transit riders, through the system paid nearly \$1,750,000 towards reservicing abandoned street car areas, thus transforming major streets to smooth modern roadways. Forty-two new air-ride buses were purchased in 1957 for \$938,000. The coaches gave a new look to the fleet by displaying a new blue and white color scheme. In 1958 thirty new blue and white coaches were purchased at a cost of \$700,000. These were put into service to replace the west side trackless trolleys. Five of these buses are deluxe coaches with higher, wider, deluxe seats and special differentials for high-speed, charter service.

Five modern new shops, garages and stations were built or purchased. Several others were greatly improved to make better working conditions for employees and better performance and appearance for vehicles. In 1957 construction began on a modern \$1,500,000 garage to replace outmoded facilities at three other locations. This garage was opened in 1958.

For several consecutive years the nationally prized ME award for having the cleanest and best maintained equipment of all transit systems in its category was won by this system.

The system expanded fast express service to 27 areas, thus increasing speed of operation and reducing travel time for customers.

The system also increased route miles 45 per cent from 1943 to 1955 expanding its operation from 452 to 654 route miles.

In 1957 twenty rapid transit cars costing \$1,600,000 were ordered to carry the increasing number of riders who are riding the rapid transit line and to carry the additional riders on the west side extension. Because of heavy riding 84 of the total of 88 cars have been in service in rush periods leaving only 2 two-car trains as spares, one at each end of the line.

Additional spaces for 239 automobiles were acquired at rapid transit stations bringing the total to over 2,000.

Attractive new shelters with benches have been placed at many locations as part of a broad program to provide more comfortable facilities for customers. This system is the first large transit system in the country to go into such an extensive shelter program.

#### Reduced Accident Costs

This system has reduced accidents 57 per cent since 1941, despite the fact that traffic accidents in this city have increased 135 per cent, and vehicle registrations have increased 46 per cent during this period. With this wonderful achievement the system and its employees are giving the public an outstanding example of safe transportation, and have gained recognition by winning many local and national safety awards. By 1957 total accident frequency for the system was reduced 6.7 per cent from 15.98 per 100,000 miles to 14.92 per 100,000 miles as of November 30, 1957. This system won the ATA Gold Award for 1,100,000 consecutive man-hours without a single lost-time accident. The system was also cited by the local Safety Council for reducing the accident frequency rate per 100,000 miles from 36.50 in 1947 to 16.97 in 1957, a 61 per cent improvement. The accident record has been even further improved for the first eleven months of 1958 by a reduction in the accident frequency rate of 16.6 per cent to an all-time new low record.

#### Public Relations

An aggressive merchandising program has successfully developed the following services: Greatly expanded charter service, which has increased 166 per cent in the last five years. Special charter service to churches, baseball specials, football specials, race track specials, public hall convention specials, special charter service to department stores, special services to industrial plants.

Since the start of company's courtesy crusade, commendations to operators have increased from 183 in 1948 to 1,208 in 1956, or 560 per cent. Operator complaints declined 47 per cent in this period. At the same time complaints about service were reduced 70 per cent.

May 21, 1959

Case History No. 12

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Modernization Program

This company was among the first transportation companies in the United States to undertake a modernization program after World War II. Under a plan approved by the State Public Service Commission in 1946, the following was scheduled for accomplishment: (1) Service on 15 street car lines would be replaced by modern bus service. (2) More than 50 miles of street would be freed from street car operation and flexible bus operation would be substituted. (3) Fewer street cars would enter the downtown area. (4) Both left-hand and right-hand turns by public transit vehicles downtown would be materially reduced. (5) Outlying portions of the city served by shuttle bus lines would be served instead by through-bus service. (6) Transit lines for many years routed circuitously would be routed more directly. (7) Express service for quicker trips downtown would be instituted on some of the new bus lines.

The improvement program began to materialize in 1947 when on June 22 major changes in transit lines were effected. Beginning in 1947 and through 1957 the company converted a total of 24 lines from rail to bus, or trackless trolley operation.

Line Consolidations

To better serve transit patrons by providing a more direct ride and to attract new riders, between 1947 and 1957 the company consolidated seventeen lines thus providing through-service for the users of these lines, and substantially reducing the necessity of transferring.

Route Extensions

As the population of the city shifted, the transit company extended and adjusted its services whenever such extensions appeared to be economically feasible. Between 1947 and 1958, 39 extensions were effected.

New Routes

In addition to the consolidation of routes, and the extensions effected in the ten-year period, the company established eight entirely new bus lines. Unfortunately not all of these lines proved to be profitable, and it was necessary to discontinue some of them. Others were consolidated with major lines while still others, not only are still operating but have been extended to several additional areas.

Promotional Riding Services:

In the period 1947-1957, the company has experimented with some 16 promotional riding services, such as, limited-stop service; shoppers' special express service; businessmen's express service; baseball and football special express service; service to industrial plants; park-ride service, etc.

### Cooperation with Merchants

To promote its services, the company has continually cooperated with reputable agencies, such as merchants. Various plans have been initiated in an effort to stimulate riding and to keep the company a progressive one.

### Modernization of Facilities

In addition to a continuous modernization of its services, the company during the past ten years has carried out a progressive plan of modernization of its offices and maintenance facilities. Three divisions were extensively remodeled, and the main shops were likewise remodeled and modernized.

In 1947 the general offices were removed from the downtown location to a new location in the company's building on Washington Boulevard. Along with the office modernization program, certain division offices were completely remodeled. The company also constructed two completely new divisions along with the construction and remodeling of one of the line terminals.

### Improvement in Traffic Conditions

The company has cooperated with the city traffic authorities wherever possible in freeing downtown streets from street car operation. As early as 1948 all street car operation on Baltimore Street was replaced with bus operations. The company began as far back as 1947 to modernize its service supervision.

### Radio Communication

In 1947 two-way radio communication between supervisors and a radio room was initiated, and company modernized its supervision. This has been expanded until at the present time service supervisors are completely mobile with vehicles completely equipped with two-way radio communications.

### Additional Routing Plan

In 1957 the company submitted to the city another plan which would provide for revision of certain transit routes. Company hopes that such revision would make possible even more efficient operation. Since the plan has been proposed, company has consolidated five lines into three, and received permission from the State Public Service Commission to consolidate five additional lines into two lines. Company has before the Commission at the present time, a proposal for making additional consolidations, which it hopes it can make effective in the fall of 1959.

### Reserved Transit Lanes

Although as far back as 1952, company proposed the establishment of special transit lanes in this city, it was not until 1958 that with the cooperation of the Department of Transit and Traffic of the city these lanes were established. The program has been expanded since that time and is now in effect on several of company's downtown streets. These special transit lanes can be very helpful, particularly if they are long enough to permit a substantial saving in running time.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Chartered Service

Company's gross for chartered service in 1958 was \$75,000 approximately. For 1957 it was \$94,000 approximately. In 1958 the gross was affected by severe snow storms which occurred in February and March, and the loss of a government contract for a city shuttle service. This was caused by the government department's removal from the city.

For the first four months of 1959, the gross was \$10,561 compared to \$12,150 for the first four months of 1958. Undoubtedly part of this has been caused by the fact that company's operators received substantially more in wages than do the drivers of several local competitors who are not required to bear the high union wages which company is compelled to pay. This of course, makes company's charges for charter service higher than those offered by these nonunion companies.

Diversification of Activities

Company makes reference to an article by its Vice-President in the August 1957 issue of Mass Transportation magazine.

In 1957 company started with five trucks available for daily rental. At the present time it has 121 truck units on long-term lease and 34 trucks available for daily rentals.

Schedule Adjustments

Schedule mileage is adjusted on basis of passenger checks and data processed on Remington Rand Univac machines.

Company felt that until the downward trend in riding reverses itself, it is faced with the problem of operating as efficiently as possible. In order to do this company has been looking more closely at its scheduling procedures. In many cases these procedures have been slow-moving and cumbersome. In the first place there is a tremendous amount of data that must be processed and it must be processed quickly and accurately. Bus companies usually maintain large staffs whose sole function is the preparation of schedules. Much time is taken to calculate the schedule for even a single route, and frequently by the time the job is completed, conditions have changed to the extent that the schedule is obsolete and a new one must be prepared.

Working with technicians from the Univac Service Center, company outlined a program that consists of three main elements: (1) Determination of passenger load and vehicle requirements. (2) Establishment of headways. (3) Run assignments for operators. Univac was then programmed to follow in general the pattern of manual scheduling. The outstanding difference being that Univac does the work in a matter of hours, whereas under the previous system it took weeks. Also, company gets a degree of accuracy that was impossible under manual methods.

By a process of simulation, Univac, in effect goes through the motions of a bus run. It sets tests and retests capacities, and as a

result a pattern is created which provides a logical model for each bus line. A range of limits expressing the capacity of lines, and the points at which decisions must be made are established. With this pattern set up Univac is ready to receive the raw data.

Company started with data on passenger loads obtained from actual traffic counts compiled by checkers. These men who are posted at strategic points along the various routes take a passenger count of each bus after the last passenger has boarded noting the time of arrival and departure, and record this information on a check sheet.

The data for all routes are transcribed to magnetic tape using a Remington Rand Unityper. The unityper is similar to an electric typewriter except that it is equipped with electronic circuits and converts type strokes into pulse patterns on magnetic tape. This tape is then fed into Univac which, using the previously setup constants races through the preliminary calculations. The processing of the running time file which contains the time differentials between the various check points along the routes is handled next. In the last step of the scheduling procedure, Univac combines the vehicle requirements data and the running time file with a factor to assign uniform headway between buses and a test of branches.

At this point Univac delivers the results - accurate, cost-saving schedules - in a matter of minutes. To be exact, the entire processing for a single route takes Univac only twenty minutes and under the old system it took several weeks to do it. This of course, enables company to reschedule any or all of its routes completely at any time. It is now in a position to react almost immediately to any external factor that effects its operations. Further it has achieved a greater degree of accuracy and uniformity.

A good example of this is the elimination of the erratic influences that used to crop out in the previous schedules. This happened when a manually-prepared schedule would pass through several different people for verification and possible modification. Each person would tend to put his own interpretation on the schedule, and as a result, there was quite a bit of juggling back and forth, so that in some cases, company had doubts as to the authenticity of the schedule. Since the Univac computer system has no built-in prejudices, company got rid of that problem in a hurry.

Another important advantage is, that the new scheduling techniques have enabled company to maintain its high standard of service to the public. In many cases it is now in a better position to give better service, because it can adjust more quickly to riding patterns as they develop. By far the most outstanding benefit it has received from Univac in the operational standpoint has been in terms of actual dollar savings.

Initially the work was done at the Remington Rand Univac Service Center in New York. Very shortly company plans to install its own Univac file-computer, which in addition to scheduling will process its general accounting pay roll, parts inventory and maintenance procedures.

#### Street Supervision

Company has had 100 per cent mobile street supervision since 1952.

### Improved Safety and Accident Control

Prior to 1953 company's internal organization for accident control was rather narrow in scope. Company carefully reviewed its instruction methods and revised follow-up instruction program. A concerted program of grass roots driver meetings was begun. Company found it was comparatively easy in working with small groups to steer the subject around to safety or its related topics. It also presented several nicely dressed up competitive award programs. Safety awards of tickets to the baseball games and the football games proved an effective interest stimulator.

Company developed and built a safety coach in which it incorporated various psycho-physical tests. Coffee and donuts helped company in encouraging the operators to go through the coach and take the tests. Coach is available for schools, church groups and others working with teen-age groups of driving age.

Company then embarked on two carefully planned refresher programs. The first of these was a safety supervision course presented in three two-hour sessions. Its basic objective was to supply supervisory personnel with all possible background training and information on subjects relating to their job so that they might be better equipped to curb the factors which generate accidents and disrupt efficient operation. This course covers claims and legal problems, traffic enforcement, traffic engineering, safety engineering and the relationship of safety to public relations.

The second was a safety refresher course for the operators. This consisted of a series of one-hour meetings during which safety engineers of company's insurer covered with the operator those safety principles to which he had been exposed during his training, and through his experiences in every-day operation. Appropriate souvenirs and prizes were included to encourage attendance as well as a buffet snack at the end of each meeting.

At this point in company's program of organizing to control accidents, it was decided to create a staff safety committee. This committee was proposed in line with the theory that accident prevention is the responsibility of every employee, and that all accident prevention activity should be given the full support of every department and section of the company. Meeting once each month the Staff Safety Committee's objective is to better disseminate preventive information and program activities and to formulate possible methods of attack against the accident problem.

A bogey based on past operating accident experience is established for each line on the system. Any time the frequency for any type of accident reaches or exceeds this bogey figure, the line is designated as a "target" line. Handouts dealing with the type of accident are distributed to the operators of the line in question and posters and other reminder material are extensively used. Depending upon the individual circumstances, additional transportation supervisors and instructors are assigned to the line. Individual interviews and instruction are conducted in privacy so that the operator is not subjected to embarrassment before his fellow workers. Company believes that the results obtained by the "target line committee" have been most gratifying.

Company is convinced by the results to date that it is on the right track. Traffic accidents which averaged 16.8 per 100,000 miles in 1953, in spite of the increased traffic congestion, have dropped to an average of a little more than 11 per 100,000 miles; while total operating accidents which averaged 23.1 per 100,000 miles in 1953 have dropped to an average of 17.5 per 100,000 miles. Company has increased its number of witnesses from a July 1954 low of 1.8 per accident, to an August 1956 high of 4.5 per accident; it has reduced its "no report" accidents from a September 1954 high of 19.4 per cent to an August 1956 low of 8.4 per cent, and the percentage of reports with no witnesses in August 1956 reached an all time low of 18.9 per cent.

It is true that some phases of the program have cost money, but so long as company sees results it prefers that money going to its employees than to be paid out to a claim-conscious public.

#### Reduction in Maintenance Costs

At the end of 1950 company had 1,275 maintenance employees. This grew to 1,326 employees by the end of 1951. As of June 30, 1958 company had 441 maintenance employees, a reduction of about two-thirds.

In early 1952 a new superintendent of equipment was brought in. He found company's maintenance program in a pitiful condition. There was virtually no preventive maintenance work being done, buses were being operated until they broke down and then "breakdown" maintenance was performed. Company's main shop was jammed with vehicles and there was a back log of over 40 buses lying in the storage area awaiting major repair work.

After a period of observation and study, the new superintendent launched a program of improved maintenance methods. This consisted of (1) cleaning up and modernizing the shops, (2) preventive maintenance - proper inspection at 1500 miles, 3,000 miles and 12,000 miles. When efficiency of performance improved these inspections were made at 2,000, 4,000 and 12,000 miles. (3) The elimination of "deadwood" personnel - incumbent class A and B mechanics who, by reason of their qualifications, were no more than helpers. (4) Transfer of small unit overhaul to divisions. The division shops were completely retooled to permit semi-overhaul work, differential replacement, clutch replacement, transmission and turbine replacement.

This latter move cleared the main shops and permitted the cleaning up of the backlog of 40 buses which had laid idle for months.

As these programs resulted in the improved condition of the equipment, greater attention was concentrated on the cleanliness of the vehicles, engine and blower overhauls, cutting down of complaints on smoking and noisy engines.

In the shops pits were rebuilt and relocated, additional doors installed, all designed to permit free flow of equipment with a maximum of efficiency and greater economy. Shops were retooled and work formerly contracted to outside firms was taken over in the shop with a reduction in cost and more efficient performance. Other improved methods were installed, a few of which were: (1) Reconditioning of worn parts by metallizing; (2) The use of Magnaflux to reveal hidden faults in parts such as crankshafts; (3) new methods of cleaning parts resulting in substantial savings in-man hours and costs.

In addition to the 2,000, 4,000 and 12,000-mile inspections, a semi-overhaul of engines (bearings, pistons, rings, head) is made every 100,000 miles, or if miles per quart of lubricating oil is below 125 miles per quart. This semi-overhaul is done in approximately 32 man-hours. At 225,000 miles a complete new or rebuilt transmission and engine is installed. This is done in approximately 48 man-hours.

For more than four years the company has conducted a school in diesel maintenance which has been rated as good as, if not better than, the General Motors school. This school which features on-the-job training, is open to any employee of the company.

The economies attending this program of improved maintenance are reflected by some of the following factors. In 1951 cost-per-mile was 16.50 cents with an (A) mechanic wage rate of \$1.73 per hour. In 1957 the cost-per-mile had been reduced to 12.36 cents with (A) mechanic wage rate of \$2.15 an hour.

Miles per mechanical failure have increased for buses from an average of 1,259 in 1952 to an average of 3,084 for the year 1957, and 2,542 for the first five months of 1958. Miles per quart of lubricating oil has increased for diesel buses from 94.8 in 1952 to 246.4 in the first five months of 1958, and for gasoline buses from 97.6 in 1952 to 245.8 in the first five months of 1958.

These economies and improvements in efficiency of performance have resulted in the following maintenance man-hours per 1,000 miles of operation. February 1952, 58 man-hours; 1958 (five months) 24.7 man-hours.

#### Depreciation Policy

Effective January 1, 1956 the depreciation of buses was changed for corporate purposes from a ten-year to a fifteen-year life basis. The undepreciated book value of the buses at that date is being spread over the remaining life as extended and no adjustments of the depreciation reserves have been made. A change in depreciation practices with respect to railway and trackless trolley operating property and bus bases, etc. had no effect on provisions for income taxes, as depreciation deductions for tax purposes continued as before. For buses however, a reduction of \$22,386 for the year 1958 in the reserve for deferred income taxes was required to restore to income the amount equivalent to increased income taxes, which are discussed in company's 1958 annual report.

The change in company policy for depreciating railway and bus property effective January 1, 1956, has resulted in reducing the annual charge to expense for depreciation by a considerable annual amount. A direct comparison as to what the charges would have been for the years 1957 and 1958 is not determinable without considerable work. Company submits however, the following charges to depreciation that have been made annually for railway and bus property. The year 1949, \$2,514,128; year 1950, \$2,645,331; year 1955, \$2,102,158, year 1958, \$1,466,221. You can readily see that since the change in the company's depreciation policy effective January 1, 1956 there has been a marked decline in the annual charge to expense for this item.

April 21, 1959  
June 30, 1959

Case History No. 13

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Conversion Program

Company converted to all bus operation completing this in June 1954, including modernization of buses, with reduction in number of divisions from eight to three.

Costs involved were \$11,000,000 for 525 new diesel buses, \$2,000,000 for addition to and reconstruction of garages.

The change to buses made service elastic and pliable, with direct terminus and turnaround at industries and offices; curb loading and no midstreet obstruction due to rails, plus elimination of trolley poles and overhead wires. Operating performance was improved by use of a single type vehicle. Economy in operation was helped by elimination of employees in power plants, overhead, track and underground crews.

Flexibility of an all bus operation fits in easily with governmental plans for parking, for highways and freeways, plus shifts of some larger industries and offices to suburbs; plus access to large shopping center developments.

For the future company would like to see two streets set aside for exclusive use of transit. One, north-south, and one, east-west. This would facilitate the traversing of the downtown loop area, easing congestion and saving time.

Park Ride

Company has three lots for park ride and limited express service.

Ride and Shop

We are encouraging ride and shop (validation).

Charter Service

We have a charter bus department and make an effort to mold to special events, sales and direct routes to industry, commerce and shopping centers.

Parking Control

Our cities cooperate in prohibition of parking 7 to 9 A.M. and 4 to 6 P.M.

Public Relations

Company believes the press, the public and governing bodies need to be informed and educated as to transit's problems for transit deserves and needs their understanding and cooperation.

April 9, 1959

Case History No. 14

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Outside Maintenance Work

In two of the cities in this group companies are doing outside maintenance work, but in these cases the work is done by a separate company not related to the transit company, so that any net revenue does not accrue to the transit companies. Volume of this work has not built up enough to have any great effect even if the revenue itself did go to transit; but, company has hopes that volume of work will gradually increase. A third affiliated company is not engaged in this activity primarily because its new shops are so tailored to transit use that there is not space available to take on outside work.

Special Services

In two of the cities company experimented with a "shoppers special" operation: in one city a downtown shuttle has been tried; in another city a "shop and ride plan" and various other experiments have been tried, all of which added up to "just about zero." The only good effect, according to the company is some little public relations value.

Decreased Expenses

Company has made progress in reducing expenses of all categories although there is no one instance which is startling in itself. Management feels that "in this penny pinching business we are in" about half the battle is just a continual pecking away at small details.

In one of the related companies the main plant has an excellent central location and company closed a second division and now operates out of the one location having moved the downtown office to this location. In a second city company has closed two divisions and are seriously considering closing a third.

Re-Scaling the Organization

In one of the cities of this group the organization aside from bus operators has been cut in half and the present organization is doing a more efficient job than the former one. Another city is still "fat" in spots but here again the organization has been reduced by about 800 employees over the past four or five years. This figure includes operators which would naturally be reduced as service requirements have decreased.

Tax Relief

In the last session of the legislature in one of the states in which this group operates fuel tax relief was granted, but due to poor drafting of the bill there is not a very grave question as to whether the law will be effective.

May 27, 1959

Case History No. 15

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Club Flyer Routes

Three club flyer routes continue in operation giving guaranteed seat service in morning and evening rush hours. Patrons pay \$11.00 per month as a standby charge plus 10¢ each time they ride. Approximately 168 subscribers use the three routes. Club flyers are valuable in serving high grade residential areas where all day service is not warranted.

Limited Stop Express Service on Two Routes

Two suburban routes of low population density formerly served by weak unsatisfactory shuttle routes that required a transfer to reach the downtown area have been given limited stop service into the downtown section. These areas are about 13 to 15 route miles from the center of town.

For a distance of three miles on one route, four miles on another route, the trips extended downtown operate limited stop. That is, they make only selected stops about a mile apart. These limited stops are usually important crosstown street intersections, or transfer points, where traffic signals probably would cause a stop anyhow. Between five and ten minutes are saved over local running time, by these limited stop coaches, and passengers are pleased because a fast ride is given to the outer areas. Added mileage caused by the downtown extension (formerly considered duplication of routes) has been recouped by curtailing poorly patronized night and Sunday service in these areas.

Use of Expressways

Only two modified expressways of short extent have been completed here. These segments are close to the downtown business district. Diversion of routes from ordinary arteries to these modified expressways in base periods when headways are wide, would cause poor service along certain principal arterial streets, and would not permit accumulation of satisfactory passenger loads on the diverted trips.

In the rush hours with closer headways and greater loads, these expressway segments can be used. Four routes have definitely scheduled rush-hour trips that operate nonstop over the expressway segments. These trips are staggered between other trips that use the ordinary arteries. By this device, fast service is given downtown passengers at the very peak of the rush hours.

Elimination of Shuttle Routes

As buses came into use here some 25 to 30 years ago, a number of shuttle motor coach routes were started as feeders to rail or streetcar lines. With conversion of the rail line, some to trolley bus and others to motor coach, progressive steps have been taken to eliminate these shuttles and to provide through service into the downtown district. Even where one of the trunk routes was changed to trolley bus (and no trolley

overhead built into the area served by the shuttle) the shuttle has been eliminated. This was accomplished by operating a combination of trolleys and motor buses to alternating terminals on the combined route.

For such shuttle routes have been merged into through downtown routes, generally with a saving in hours operated, and always with the outer passengers receiving a better no transfer ride.

#### Through Routing Across the Downtown Business District

At the threshold of the automobile era, about 1917-18, all routing of trolley cars across the business district was eliminated in this city. All rail routes were placed on five nonoverlapping loops, apparently to reduce mileage, minimize delays and to isolate tie-ups should any electric feeder circuit fail. Over the forty years that followed, one way streets have been introduced, and there has been some shifting of the downtown business area. Now company has returned to a small amount of through routing. Of 43 main routes, 6 single routes have been combined into three through routes that cross the business district. These routes are highly successful and passengers are pleased in riding them. Passengers quickly learn to use the through routes to get across the downtown section, and the through lines give better access to several large downtown stores.

Other transit companies have served through routes either because they waste mileage in on balanced headways, or because one way streets and turn eliminations have made their continuance impossible. Although some slight added cost may have been their result here, these costs have not been unusually large and have been overshadowed by the improvement in service and good will.

#### Cooperation with Downtown Merchants

Company has had two successful fare refund days in cooperation with downtown merchants. These were in connection with area-wide downtown sales, promoted cooperatively by all downtown stores, and were approximately six months apart - thereby preserving the novelty or surprise element.

No stamps or transfer-type tickets were employed, thereby simplifying the process of obtaining the free transit ride. A coupon appeared in the daily newspapers with sufficient promotional copy. If this coupon were clipped, name and address inserted and presented at a redemption-desk in selected stores, it would be validated (rubber stamped) and was thereupon good for a return ride home. No purchase was required. Out of an average fare of 23¢ company contributed 3¢ to assist in the advertising, and the Merchants Association paid company 20¢ for each coupon lifted by transit operators. Company's revenues rose noticeably on the two days on which this promotion was tried.

#### Timetable Posting

At all stops in the downtown area and at certain suburban stops where headways are wide, company has on utility poles, long, narrow, weather-protected card holders, in which easily-read bus departure times are posted and maintained currently.

### Park and Ride

Thirty-seven service stations located along the principal well-served transit arteries carry company's signs featuring park-and-ride service. It is suggested that the motorist park at the oil station and use transit into town and back. No charge is made to the motorist. The stations permit the parking free and company maintains the signs. The station proprietor hopes that from time-to-time the motorist will purchase gas or oil, lubrication, etc. in return for the parking space.

### Direct Service to Sports Events

When the local National League baseball team plays its home games, ten direct-service "arrow express" routes run from suburban areas and suburban parking lots to the baseball park for every night, Saturday and Sunday game. Round-trip fare is 80¢. When baseball interest is high, three or more buses may be needed on some of the routes and 2,000 passengers may use this service to important games.

Five similar "arrow express" routes are operated on Saturdays in the football season to games in the stadium of the local university. Parking space is limited near the field house, but additional spaces are available two miles away at the separate Medical College campus. For important basketball games played in the field house, company has supplied a park and ride service from the medical college at a 20¢ round-trip fare.

### Future Improvement

In the center of the downtown area are two plazas, 100 feet wide curb to curb, known as Fountain Square and Government Square. As part of its off-street parking programs, the city administration is considering an underground garage, under these squares, accommodating from 1,200 to 1,500 automobiles. Several design plans have been prepared. All design plans recommended by the City Manager include an underground bus terminal loop connected at entrance and exit by tunnels one and one-half blocks long which will lead to the distributor and expressway system now under construction.

### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

#### Reduction in Number of Divisions

At one time buses and streetcars of this company were housed in nine operating divisions. Motor buses were housed and maintained separately from streetcars and trolley buses. At first the number of divisions were reduced to five; then in 1956-57 further reduced to only three locations with trolley buses and motor coaches housed in the same depots. Certain brake, electrical and cleaning work is now done by the same force for both trolley and motor buses. The buildings vacated have generally been sold.

Consolidation of Building Space

At company's main repair shop a separate building once housed a parts storeroom, a small print shop, and the fare box repair shop. By cleaning up the basement of the main shop building and by finding some room in a division building, the storeroom, fare box shop and print shop have been removed from the separate building, with certain adjoining land this building will be offered for rent.

Repair Operations

Repair operations have been concentrated at the main repair shop and certain shop procedures have been eliminated.

Schedule Adjustments

Traffic and load counts are taken continuously and service is adjusted to demands revealed by the counts.

Truck and Auto Leasing

A subsidiary is engaged in truck and auto leasing to the general public.

Accident Reduction

All accidents are studied and spotted on a large street map of company's area. This reveals corners and locations where the accident frequency is high. Remedial steps are then taken depending upon what is appropriate: (a) Routes may be shifted from the corner if possible; (b) Hazardous stop locations may be changed or longer "no parking" areas obtained; (c) Operators may be warned of connections.

Public Relations

A schedule leaflet is available to the public for each route operated by company. The public relations department attempts to sell an advertisement by the year, for each schedule sufficient to defray the printing costs.

Tax Relief

In 1957 along with other transit companies in this state, company persuaded the legislature to reduce the annual fee for transit bus licenses from about \$350 per bus to \$10.00 per bus.

April 22, 1959  
June 25, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Improved Routings

In 1954 the downtown portions of four routes were improved and two suburban routes were extended into developing areas. Four relatively short extensions to city routes were made in 1955, and downtown bus routings in a neighboring city which company serves were revised to provide off street turning facilities. Two further extensions were made on suburban routes.

In 1956 the downtown delivery of five city routes was improved and other routes were extended to provide service to a housing project. A suburban route was rerouted to provide service thru a shopping plaza and three suburban routes were extended to serve newly developed territory. The company follows consistently the policy of extending service to meet changing, needs of the community.

Improved Traffic Conditions

Company keeps in constant touch with the Board of Safety and other traffic regulatory agencies in the area that it serves. The company provided the labor for installing the sign prohibiting standing in bus stops to be installed under the supervision of the police department at points designated by the Board of Safety. This work advanced rapidly during 1958, and is continuing.

Improved Vehicles and Facilities

In the last five years, 240 new buses have been acquired for city service. Each order has embodied improvements in design and construction, for the greater convenience, safety and comfort of passengers. The latest order for 60 buses costing \$30,000 each brought the first radical changes in design since metropolitan type buses were introduced. They feature a completely new front end, wider seats and aisles, lower steps and a panoramic windshield, greatly improving visibility. Use of buses 102 inches wide was made possible by act of the State Legislature at its session of 1958.

In 1956, three air conditioned buses were introduced into city service for experimental purposes. In 1958, two new over-the-road cruisers were purchased for charter service. These supplement two charter buses of the deluxe club car type introduced a few years ago.

Company operates its own short wave radio communications system, providing three-way communication between motorized supervisory cars, maintenance vehicles and operating headquarters. These facilities were also installed in automobiles used by several of the company's executives.

In 1955, the installation of locked-type fare boxes was completed, providing for more efficient handling of fares and reducing boarding time.

In 1957, a new garage and shop was built in our adjacent city, replacing an older building appropriated by a State Parks Commission. In the following year a substantial addition was made to company's principal maintenance facilities in the principal city which it serves. All heavy maintenance work for the system is now done at one location producing greater efficiency and economy.

#### Improved Financial Stability

Regular dividends of 15¢ a share per quarter have been paid since August 1955. The company has been brought to sound financial position. When 61,000 shares of the capital stock were placed on the market by private holders in 1958, they were purchased by the company and are held in the treasury.

Vigorous efforts have been made to obtain relief from burdensome and discriminatory taxes. Bills to provide substantial relief were passed by the State Legislature at its 1959 session and are now before the Governor.

#### Improved Public Relations

During the Easter and early Christmas shopping season downtown merchants for several years have joined with the company in promoting a "home free" campaign providing free tokens on the purchase of \$1.95 or more. More than 73,000 tokens purchased by the merchants at full price were distributed during these campaigns in 1958. The number issued in the pre-Christmas promotion was the largest since 1953.

Continued aggressive solicitation of chartered business has produced excellent results. Revenue from such operations including school contracts and summer Sunday bus excursions to points of interest in the western part of the state increased by 12% over 1957.

Consistent use is made of newspaper advertising space, radio spot announcements, and transit advertising. The company received a "first place" award from the local advertisers association in 1958, for its newspaper display advertising.

To encourage high standards of salesmanship and courtesy on the part of its bus operators, company inaugurated in September 1955 a "salesman of the month" campaign. Interest manifested by bus operators and passengers continues at a high level. In this program, awards of Federal savings bonds are made to one operator monthly at each of the company's four operating divisions in recognition of outstanding current general performance. Similar awards are made to their spouses. In many months since the inauguration of this campaign the number of commendations received has equalled or exceeded the number of service criticisms.

For two years past the company has promoted in cooperation with the local Youth Board and the local Federation of Labor, a good citizenship campaign in public and parochial schools. Awards of bonds, plaques and certificates of merit are made on the basis of self evaluation by the students checked against experience.

All bus stops are clearly designated by stop signs of high visibility. Detailed timetables for all routes passing heavy loading points in the downtown area, and at transfer intersections are posted at these stops.

A continuing vigorous safety campaign continues to produce good results. Of the 954 operators in service as of December 31, 1958, more than three out of four went through the entire year without a single chargeable accident. Safety performance of a number of others was equally good, but they were not included because they did not work the required number of hours to qualify for an award. 216 operators have completed ten years or more of service with unblemished safety records, and 450 others have five years or more of safe driving to their credit. The company's safety emblem bestowed in recognition of a year of accident-free performance is worn by a total of 919 operators, or 96.3 per cent of the total work force.

Appropriate awards are made to employees completing 25 years of continuous service and an employee suggestion plan has produced many helpful ideas for improved service, efficiency and economy.

#### TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?"

##### Increased Revenues

Company conducts summer Sunday bus excursions to points of interest in the western part of the state. These have been a popular feature, providing an all-day tour at a fare of \$4.00. Sometimes arrangements are made for a luncheon for those who do not wish to bring picnic lunches, and passengers are given their choice of either plan.

##### Decreased Expenses

Company has substantially improved performance through use of its own short-wave radio station through which motorized supervisors are in constant touch with dispatcher, as are all maintenance vehicles.

Company has made use of automatic washing machines and bus vacuum cleaners.

##### Tax Relief

Tax relief has been granted in the legislative year 1959 as the result of the efforts of the state motor bus association.

##### Operation of Expressway

Applications are pending for city consent to operate over certain streets connecting with that portion of the state thruway lying within the city. Company plans supplemental express bus service between the downtown section and various areas of the city over this facility and over certain other expressways now in the planning or construction stages.

April 15, 1959

June 25, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Passenger Revenue

Passenger revenue is still on the decline although, as experienced by the industry generally, the attrition has not been as great as it has been in the last few years.

Vehicle Fleet

One-half of company's fleet is modern vehicles.

Improved Operating Efficiency

Company has gotten improved efficiency of performance by a general tightening up and by complete conversion to motor bus operation.

Tax Relief

Company has obtained a small direct tax relief from the city - some \$100,000 per year - by cancellation of the gross receipts tax and imposition of a per-vehicle license as a basis for the occupation tax.

Public Relations

Company does very little commercial advertising (newspaper, TV, etc.) because it has not been convinced of a satisfactory program.

Net Income

Net income is slightly increased resulting from the above, but is far from adequate.

July 7, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Reroutings

Four major bus lines have been extended and/or rerouted to provide better and more direct service into the downtown area for many passengers.

New Routes

Six new lines have been inaugurated.

Express Service

Two express lines which operate during rush periods have been inaugurated. Service on these two lines operates from the uptown residential area into the business district for approximately three hours in the morning and three hours in the afternoon.

Improved Traffic Conditions

Three route changes have been made in the central business district to simplify the routing and to better distribute transit lines in this area. In the latter part of 1957 roadways of the main street for a distance of approximately 15 blocks were widened in order to provide proper turning movements and more freedom of movement in the downtown business areas.

Following the suggestion of roadways on the main street, a new traffic system was installed. The primary purposes of this installation were (1) to provide for controlled pedestrian movement along the main street in that area, and (2) to regulate the flow of traffic within the whole 26-block area according to the predominance of movement. This is accomplished by electronic controls located at three key locations within the area.

Improved Vehicles and Facilities

Within the past four years company has purchased 180 51-passenger diesel buses equipped with air suspension facilities, power steering, and improved ventilation.

Company has installed three "cyclone" type cleaners.

For experimental purposes, a new factory air-conditioned coach was purchased, and air-conditioning units were installed in two existing diesel coaches.

Improved Public Relations

When the opportunity is presented, talks are made before civic and other groups in the subject of the transit operation. Copies of a booklet entitled "How Transit Operates" are distributed.

When service on new lines is initiated, personal contacts are made on residents within two blocks of the route and a pamphlet is left with them. Television commercials using slides and radio spot announcements are also employed.

Company holds refresher conferences annually for all operators and supervisory people emphasizing the need for better customer relations, etc.

#### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

##### Maintained Headways

Company has not curtailed service in proportion to the decrease in riding in recent years. It has reduced service at night time and at week ends but has maintained a high volume of service throughout the daytime period. This has cost some money. Company believes it has been quite helpful, however, in maintaining a high volume of riding, which, of course has kept many automobiles out of the downtown area.

##### Increased Revenues

The only increased revenues experienced by the company have been those received from two express lines, and one line which is operating across the new Mississippi River bridge, which operates at a premium over the regular fare.

##### Decreased Expenses

About the only decreased expense company has had, has occurred in its equipment replacement program. For the past three years company has replaced 40-passenger gasoline buses with 51-passenger diesels, which has resulted in considerable platform, fuel and maintenance savings. At present it is contemplated that this program will be continued until all gas buses and trolley coaches are replaced.

April 22, 1959  
June 24, 1959

Case History No. 20

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Increased Revenues

Company has been able to increase net charter coach revenue by approximately 15 per cent by aggressively attempting to sell charter service in the area. Expressed as a percentage of total gross, company's charter service would be below the average in the industry because of the combination of an efficient competition and a law which limits company's coaches to operation within the corporate limits of the city, thus forcing it to forego any charter which would require a coach to operate beyond corporate limits even for a short portion of the trip.

Revised Night and Sunday Schedules

In January 1959 company installed new schedules for Sunday service and night service after 9:00 P.M. which established a basic thirty minute service on all routes and provided for a positive meet and layover of all coaches on all routes in the downtown area for a sufficient length of time to permit persons to walk from any one route entering the downtown to any other route and find a coach waiting. The installation of the system resulted in savings approximating \$200,000 a year and met with public approval.

Supervision

Company restudied its street and mobile unit supervision of operation and as a result of the study reduced drastically the number of point men and increased the number of supervisors in cars with mobile radio with a net saving of \$61,000 a year.

Maintenance Operations

Additional mechanization of maintenance operations, particularly servicing and cleaning, resulted in a net saving of \$68,000 per year.

Tax Relief

A successful effort by all transit operators in this state spearheaded by the company resulted in the elimination of the state fuel taxes at 6-1/2¢ per gallon, which meant to this one company a saving of approximately \$99,000 per year.

Transportation Survey

Three or four years ago company tried to convince the State Highway Department, the county officials, and the city officials that a joint venture should be undertaken for financing of a total transportation survey to produce a master plan of highways and rapid transit so that all forms of transportation, private car, truck and transit would be coordinated under a single master plan. Progress was slow and the transit system in order to participate had to get special enabling legislation which ensued

further delay. Last October agreements of the four agencies resulted in a preliminary survey to determine the scope which a complete survey should cover, the area which would have to be surveyed, the time required for it, the estimated total cost, etc. That preliminary survey costing \$30,000 paid for one-fourth each is now complete and it appears that company will have the support of many citizen groups and city officials in attempting to raise the approximate \$1,000,000 to pay the cost of the final survey. This complete transportation survey, if made, would permit the transit system to consider seriously for the first time, the installation of rapid transit to serve the metropolitan area.

A new organization of downtown groups called the Central Association will not only actively sponsor the above total transportation survey but is moving as rapidly as possible toward the development of a master plan for downtown. Citizens are beginning to see the effects of many years of educational efforts as the central group starts its planning on the basis that mass transit is essential, that it must be helped and fostered in order to preserve the values and usefulness of the central business districts.

#### Subsidy

Transit system is debt free and has been since January 1, 1952. It receives no help from the city government in the way of a subsidy. It appears now that some long standing negotiations may result in the extension of service into areas which will not support transit service on the basis that any losses sustained will be made up by the city. This is an important first step toward the awareness which must be created in the minds of the Mayor and the City Council that transit must have help. Particularly in the case of rapid transit if mass transit is to serve the community as a community should be served in the interest of overall economy.

#### General

Transit system is not happy with its progress but feels it is at least moving at a snail's pace towards some desirable settlements of the problem of competition with the private car and the problem of establishing in the public's mind the essentiality of its services.

May 29, 1959

Case History No. 21

TRANSIT IMPROVEMENTS

Company reports as follows: "...enclosing herewith a copy of the....Report prepared for our company in May 1958 which is a study of Trade, Transit, and Traffic in (this city). This report was submitted to all State and City officials as well as to the local press. It was very well received and editorials and news releases were beneficial to the company.

- (\*) "Most of the recommendations regarding traffic improvements have been put into effect resulting in a more dependable and better service to the public. Other phases of their report are being studied and further changes will be made.

"At present time (the city) is undergoing major changes such as new roads, bridges, throughways, etc. Present and long range planning for major changes in the downtown area are under way by the City Planning Commission, and the transit system is being consulted as to routes, transit lanes, and operations as part of this plan to improve the speed of our vehicles and the convenience of the public so as to encourage more riding. The City Planners realize that the downtown area cannot survive without a good transit system."

- (\*) NOTE: The reporter for the company did not specify which of the recommendations for "traffic improvements" have been put into effect as of this time, and which have not.

The traffic improvements treated of in the report are:

- Traffic Improvements
  - One-Way Street Plan
  - Traffic Signals
  - Curb Parking Controls
  - Transit Lanes
  - Intersection Treatments
  - "All Rolling" Regulations
  - Special Pavement Markings
  - Street Resurfacing
  - Proper Signing
  - Curb Radii
  - Speed Limits
  - Enforcement
  - Staggered Hours

April 15, 1959

Case History No. 22

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Equipment Conversion

In July 1954 the city government authorized company to complete the change-over from rail to motor and trolley coach operations and allowed approximately two years for this conversion. Company immediately made studies to determine the number of buses that would be required to replace the balance of its streetcars. At an early date orders were placed for this equipment with the understanding that delivery would be made in time for company to make the change-over in January 1956.

Major Rerouting

The equipment conversion program permitted company to do a major rerouting job throughout the city. It was able to better space and straighten out many of its routes because of the opening up of new streets in some areas, and the widening and resurfacing of other streets. Company's judgement at the time has been confirmed by the fact that very few changes have been necessary since that time, except of course, for some extensions into newly developed areas.

Traffic Planning Committees

Another step was that the mayor appointed what he called a Traffic Planning Committee, of some nine or ten people in June 1955, and instructed them to develop a street and traffic plan for downtown and the perimeter area immediately outside the downtown shopping district. It took this committee nine months to develop a plan.

This plan had to be tied into a freeway street program developed by the State and National governments which required that certain streets be operated as one-way streets to tie into the movement of traffic into and out of the freeway. This included two of three major downtown business streets.

Many of the changes recommended by this committee were made in September 1956.

Parking Restrictions

During the past several years parking has been restricted in the downtown area from 7 to 9 A.M. and 4:30 to 6 P.M. on most of the streets, and many of the major streets leading out from the downtown area. All of these improvements seem to help company's operations with the possible exception of traffic moving east on one of the principal streets where curbs had been laid down for parking garages and where most of the larger hotels are also located.

Study Committee

Early in 1958 the mayor appointed a small committee on which he served himself to make further study of the downtown traffic problems, and the president of the company was made a member of this committee. As a result of its studies

bus lanes were established on two of the principal streets, and a large number of turns in the downtown area were eliminated. This has been a decided improvement and can become even better with a little better enforcement.

There are yet some minor changes to be made in the traffic pattern on streets immediately north and south of streets previously mentioned, after certain extensions, widenings and other improvements are made. Company feels that the fact that the city government is sympathetic to its problems and has included a representative of the company on all these study committees has been indeed very helpful.

#### Master Plan Committee

Some two years ago a Master Plan Committee composed of the city's outstanding business men was appointed to develop an overall plan for the city, and at this time it is studying the problems of the downtown area. The president of the transit company has been called in to work with them on the transit phase of their report.

#### Transit on Expressways

Company is operating some four lines on portions of the expressway, and this operation is non-stop from the point where they enter the expressway to downtown. It has speeded up the service and company feels that perhaps it has increased the riding on those lines.

#### Other Traffic Improvements

Company has had for the past several years city ordinances which prohibited large tractor-trailer-type trucks from entering the central business district and truck routes are very clearly marked. These larger trucks are required to unload at the warehouse and smaller trucks make the downtown deliveries.

#### Air Conditioning

Another improvement has been the air conditioning of a large number of company's buses during the past two years. This program began early in 1957 with some experimental units, and at this time it appears that sometime in May company will have available for service 188 air conditioned vehicles. This will be enough units to handle practically all the base service and approximately 40 per cent of the rush hour service. Up to this time company has spent approximately \$600,000 on this program which has come from company's own financial reserves.

#### Public Relations

During the past few years company has continuously carried on a program of public relations and sales promotion. It has used radio, television and newspapers, in addition to mailing schedules to approximately 135,000 homes. Along with these schedules company sends out "stuffers". Mailing out schedules has proven to be very popular and observations indicate that people rely largely on them for timing their trip.

April 21, 1959

Case History No. 23

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Validation Plan

Company has a validation plan which it calls a "merchants refund plan". Upon request the operator hands out a ticket to the passenger who then presents this ticket to one of the participating merchants listed on the folder. These folders are in the "take one" boxes. The merchant may or may not require a minimum purchase or any purchase. He gives the patron a 22-1/2¢ token which is indistinguishable from any other token. He buys them wherever tokens are sold so that there is no check on the use of the validation plan. The company furnishes a window card for the merchant identifying him as one of the group. The company is not "out" any revenue in this operation.

Shoppers Special Bus

This bus runs during the mid-day off peak period through the downtown area. The service is augmented during the noon hour with a second bus. The fare is 10¢ without transfers. Company feels that it is making out of pocket expenses on the operation and getting some good-will along with it.

Special Services

When horse racing has been held in company's operating territory, it has operated special service at special rates. During the Centennial to be held this year, company plans to operate through service from downtown at a 25¢ fare without transfers. In addition, it has under consideration some intramural service from parking lots to buildings that would be on a chartered basis.

Combined Routes

Company has combined a number of routes into through routes. This has eliminated many downtown turning movements (about 3,500 on a normal weekday) and has also eliminated 25 per cent of the vehicles in the downtown streets without any decrease in service to the public.

Traffic Improvement

During the Christmas season the Police Department was very cooperative in eliminating turns in the core area. It may well be that some more of this same thing will be needed, since it frequently happens that some department stores are completely surrounded on four sides by a lane of automobiles which is going nowhere except around and around the block.

Improved Financial Stability

Through improved efficiency of performance company has attempted like most transit companies, to eliminate unneeded service and personnel in order to have some return. Personnel has been reduced in all departments and

company has reduced and in some cases eliminated night and Sunday service.

#### Public Relations

In connection with "educating the public transit-wise", we have had extensive newspaper display ads, also some small cartoon ads that have been well received, and numerous radio and television spots.

We keep council members and other civic leaders who have connection with transit informed by means of Passenger Transport; and by using certain articles on the subject that come to us from A.T.A. or elsewhere.

Company has cooperated by furnishing data and appearing before a Chamber of Commerce Committee which grew into a city-wide Mass Transportation Committee to study the need for municipal ownership, a Transportation Authority, etc.

#### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

##### Increased Revenues

Company hopes that it has increased its revenue through its advertising, although it is difficult to say that a specific dollar of revenue came from specific dollars spent in some certain advertising. Company knows that its public relations have improved during the past two years, but it has not done anything spectacular. It has just tried to be a "good citizen" and through its advertising program has told the story to the public.

##### Through Routes

Company has inaugurated through routes downtown instead of every line looping. This has eliminated turns and lessens the number of vehicles in the street to give the same service and in this way has contributed to the alleviation of traffic congestion. It has also reduced company's operating expense.

##### City Cooperation

Company is enjoying excellent cooperation from the city government in the handling of day to day operating matters, as well as in the larger area of permits and franchise upon which its very existence is based. All these things contribute to company's feeling that its public relations have improved. It hopes that these things might also have improved the revenue over what it otherwise might have been.

##### Decreased Expenses

Schedule economies have resulted through the combination of loop routes into through routes, which did result in the saving of buses and the vehicle miles and vehicle hours. A by-product of this change that surprised the company was that fuel consumption improved slightly because the mileage eliminated was the slow less efficient mileage in the downtown area.

Company has of course, tried to eliminate unnecessary street supervision, but is anticipating the use of two-way radio which will be still more efficient and require fewer street supervisors.

Company's transportation department has stiffened its discipline on accidents and claims and legal personnel have stiffened their attitude toward claims that amount to harassment. The greatest benefit from this change in attitude is ahead of the company due to the fact that the expensive cases of today are those which happened many months ago.

Throughout the organization the general manager has instilled in the minds of department heads the necessity for eliminating unnecessary personnel. It's always tough to pare the overhead down to meet the reduced volume of passengers but considerable progress has been made in this direction.

Company hasn't purchased any new equipment for some time, due to its shrinking volume of business and its good maintenance program. This saving in depreciation expense plus the economies mentioned elsewhere have resulted in "black" figures for the company recently. The saving in depreciation alone would not have done it.

April 17, 1959  
June 17, 1959

Case History No. 24

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged.

Transit on Expressways:

Company's first limited line, the first transit route to use an expressway, was inaugurated in November 1954. Since that time 15 new express lines have been added to give residents in the suburban area a fast ride to and from town via the expressway system. Buses operate nonstop on the expressways at the same speeds as the automobile. Several "park-ride" stations located at shopping centers on these express lines and near the expressway keep many automobiles from coming downtown and aid in the support of the express lines. Company believes that expressway operation by transit is very important, in the interest of faster speeds for the transit rider and more expressway routes are being planned for the future.

Improved Surface Transit

Since 1954, twenty-two new limited lines have been installed by the company or its subsidiary. There are six new limited lines which do not operate on the expressway, but which provide nonstop or limited stop service on surface streets. Three new lines of this type will be added within the next two weeks. In the main, these limited lines furnish fast express-type service to new suburban residential areas at a premium fare.

There are 100 gas service stations in the metropolitan area participating in a park-ride plan with the transit system, whereby a person may park in the station free and ride the bus or coach to town.

Several servant limited lines designed especially for domestic help have been inaugurated during the past four years. These limited lines operate over the expressway to the suburban sections in the northwest and northeast parts of town where regular bus routes cannot be justified. The service is handled by buses which would otherwise pull into the garage after the morning rush hour.

New Equipment

Over 100 diesel buses have been purchased by the company within the past five years to keep the fleet modern. The latest buses are the "new look" type with attractive interior colors.

Improved Traffic Conditions

Reserved exclusive transit lanes have been put into effect on four different streets in this city. As a result of these transit lanes both transit and automobile speeds have been increased substantially. Transit speeds have been increased up to 30 per cent. The exclusive lanes are in effect from 7:00 A.M. to 9:00 A.M. and from 4:00 P.M. to 6:30 P.M.

In cooperation with the traffic engineer of this city, company has been able to get "no parking" on congested streets downtown and in suburban

areas. This no parking has helped to maintain better rush hour schedules.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Decreased Expenses

Under decreased expenses the number 1 item for this company would be the reduction of injuries and damage expense of about 1¢ per mile as a result of a safety campaign with a great improvement in company's accident rate and a new faster, tougher policy of settling claims.

Maintenance expense has been reduced substantially by improved methods, new vehicles, and garage operation has benefited by an improved method of layout of the cleaning operation with a consequent saving of twelve cleaners without sacrificing any cleaning operations.

Public Relations

Public relations on the whole are excellent.

April 23, 1959  
May 26, 1959

Case History No. 25

TRANSIT "SELF-HELP"

Company reports the following items in response to the question. "What has your company done to help itself?":

Increased Revenues

Revenues from chartered vehicle services were increased from \$106,000 in 1954 to \$154,000 in 1958.

Revenue from car card advertising has increased under the new franchise. The company itself does no advertising.

Decreased Expenses

Schedule economies have been effected through the periodic adjustment of headways and the adopted load standards are strictly enforced.

Street supervision has been reduced.

Passenger accidents per one million passengers carried were reduced from 10.29 in 1954 to 7.32 in 1958. Traffic accidents per 100,000 miles of operation were reduced from 11.74 in 1954 to 6.36 in 1958. These results were accomplished through refresher courses for transit operators held frequently, better maintenance, the use of push-type doors, properly designed and placed grab-rails, etc.

In March 1957 when trolley coach operations were abandoned, company closed one station thereby eliminating shop forces and all other expense incident to electric operation including cost of power, maintenance of overhead lines and substations.

Operating expenses have been reduced from \$6,800,000 in 1954 to \$4,500,000 in 1958. Reduced shop forces, improved shop equipment and techniques are responsible.

Servicing and cleaning activities have been completely revamped and new and modern methods established.

The supervisory staff as well as clerical workers has been greatly reduced. These economies were made possible by the combined operation in one location where shops, garage, and all general offices and departments are located. Personnel reduction has brought about reduced general and administrative expense in all departments.

There has been a complete revamping of the vehicle inspection area and equipment, with an increase in inspection period from 3,000 to 6,000 miles.

Reorganization Program

Through complete reorganization, reassignment of duties, etc. for

increased efficiency and economy, personnel was reduced from 1,032 employees at December 31, 1954 to 556 employees at December 31, 1958. This demonstrates the economies affected through pay roll reduction.

Sale of property has resulted in reduced assessment valuation notwithstanding tax rate increases. Taxes have been reduced from \$373,500 in 1954 to \$292,000 in 1958.

#### Financing Costs

There has been a reduction in bond interest due to reduction in bonds outstanding from \$4,685,900 in 1954 to \$3,737,800 in 1958. Bonds were purchased from proceeds obtained from sale of overhead equipment.

#### Increased Net Income

Net income in 1955, \$44,182; in 1956, \$75,768; in 1957, \$93,442; in 1958, \$72,015.

#### General

Abandonment of trolley coach operation, consolidation of all operations at one location, complete rerouting of lines, revamped schedules, reduction in administrative and working forces, have reduced operating expenses \$2,298,428 in a five-year period. While operating revenues during the same period were reduced by \$1,511,907, no increased fares were effective during five-year period. Company knows no better way to explain or prove the benefits of its "self-help" program.

June 4, 1959

TRANSIT SYSTEM, INC.  
 Statistical Data  
Years 1954-1958

	<u>1958</u>	<u>1957</u>	<u>1956</u>	<u>1955</u>	<u>1954 (Strike)</u>
Net Income (Note 1) . . . . .	\$72,015	\$93,442	\$75,768	\$44,182	\$810,945
Operating Revenues . . . . .	5,115,513	5,857,466	6,488,866	6,953,449	6,627,420
Operating Expenses . . . . .	4,491,295	5,123,733	5,763,834	6,270,725	6,789,723
Taxes other than Federal . . . . .	291,890	315,881	344,730	346,205	373,503
Fixed Charges - Bonds . . . . .	216,247	219,426	226,701	231,268	234,295
Passengers Carried (Initial Fare)	27,193,613	31,282,858	34,773,452	37,667,127	36,866,664
Vehicle-Miles Operated . . . . .	7,447,661	8,801,583	9,983,351	10,805,123	11,024,099
Route Miles . . . . .	187.2	179.4	207.4	206.3	207.3
Vehicles Owned - Total . . . . .	247	252	312	362	390
Buses . . . . .	247	252	192	192	217
Trolley Coaches . . . . .	-	-	120	170	173
Number of Employees - Total . . . . .	556	610	788	944	1,032
Operators . . . . .	392	441	537	583	654
Others . . . . .	164	169	251	361	378
Chartered Service Revenue . . . . .	\$153,592	\$149,139	\$158,429	\$141,348	\$105,796
Improved Safety					
Pass.Accidents per 1,000,000					
carried . . . . .	7.32	10.16	9.21	10.66	10.29
Traffic Accidents per 100,000					
miles operated . . . . .	6.36	7.85	10.27	9.70	11.74
Per Cent Accident Settlements					
to Gross Income . . . . .	2.57%	2.80%	2.43%	2.33%	2.69%

Note 1: Net Income from Transportation Service

6/4/59

Case History No. 27

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Shoppers' Special Service

Company feels that the only thing of interest in this connection would be its shoppers' special service, which it started in November 1958. This is a loop service in the downtown area. It operates on a ten-minute headway over two parallel one-way streets for a distance of approximately three-quarters of a mile in each direction. These parallel streets are separated by a distance of one city block. Regular cash fare is 20¢, shoppers' special fare is 10¢ cash, no transfers issued or accepted.

This service has been very popular with the persons using it. However, not enough of them use it to the extent that it will pay its own way. It is slowly building up, but management thinks it will hardly reach a level of self-sustaining service. Some of the merchants have offered to subsidize the service in the event company finds it necessary to discontinue it. Management feels that this might happen in the future.

Validation Plan

Company has been discussing a transit validation plan with a group of local merchants. However, it has not yet been able to formalize a workable plan.

April 15, 1959

Case History No. 28

TRANSIT "SEIF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Reduction in Costs

Company has developed good business procedures to increase profits. It has built up an excellent management team who first eliminated some 15 varieties, sizes and makes of buses by selling the entire fleet and then purchasing brand new buses from one manufacturer and in two sizes. This brought about a reduction by 50 per cent of maintenance cost and due to the fact that the new buses were built to company's own safety recommendations there was a reduced cost in accidents. Company actually reduced the number of buses in use due to their greater size but increased the total seating capacity.

Routes and Schedules

Company's second step was to revise route structure and schedules so that there was an actual saving of a million miles a year.

Fares

The above procedures plus an increase in fares together with a 5¢ transfer charge all added materially in making company's lines profitable.

General

Company management does not think there is any magic to be used in the bus business any more than there is in any other business. In fact, there is no short cut in management acumen. The management ability of any business is in direct proportion to the success of any business enterprise.

May 26, 1959

Case History No. 29

TRANSIT IMPROVEMENTS

Company reports the following transit improvement program or activities in which it has recently engaged:

Shoppers' Special

For a number of years company has operated a Shoppers' Special with air-conditioned buses on a five-cent fare. On this fare these projects just about pay for their out-of-pocket cost; however, they have been excellent public relations projects.

Transit Lanes

Company does have some transit lanes downtown on which parking is prohibited; however, automobiles are permitted to make right-hand turns at certain intersections, and thus reduces their effectiveness.

Through-Routings

Many of company's downtown turns have been eliminated by through-routings.

Transit Expressways

Company has experimented some with express bus lines using the expressway..... On September 4, 1957 an express service during the a.m. and p.m. rush hours was begun to serve the residential section in northwest (city) generally referred to as the Dellview Area.

The service was planned to give a more direct route and a faster ride from this area to downtown, and replaced a similar rush-hour-only service that had been operated as the extended end of one branch of a two-end line.

The Dellview Route was planned to take advantage of the 2.2 miles of newly developed northwest (city) expressway which offered the possibility of operating on the expressway at 40 to 45 miles per hour with limited stops.

The previous route was a devious, winding route that had a route mileage of 7.9 miles from Dellview to downtown. The new express route covers a distance of 7.1 miles, as follows:

- 3.5-mile portion of route making local stops;
- 0.8-mile portion from local portion to expressway entrance; stopping at express stops only in this area;
- 2.8-mile portion operated over expressway to downtown, with buses making only one stop on the expressway portion of the route, and making all regular stops in the downtown area.

The schedule running time on the original route varied from about 38 to 40 minutes on the inbound trips during the a.m. rush hours. This was cut to an average of 28 minutes on the new Dellview Express, an indicated saving of 10 to 12 minutes in actual running time.

In introducing this service, complimentary tickets were distributed to the people living in the vicinity of the express route. These tickets were good for one free ride in all zones on the express buses with a one-month time limit on the use of tickets.

Actual service operated on this route consists of two buses running approximately every 30 minutes in a.m. and p.m. rush hours. Line operated in three zones with no increase or premium fares being charged for this service. (The regular fare at the time of the experiment was 15¢ for the first, or central, zone, plus 5¢ additional for each successive zone boundary crossed by the route.)

#### Major Line Extensions

New line established between downtown and an important Air Force Base, to include a former feeder line and give direct service. This line is routed through the heavily-populated west side of the city.

A main line extended a distance of 1-1/2 miles to eliminate a former "feeder" shuttle line, thus giving direct service to town from a heavily populated section on east side of city.

Line extended 0.6 mile to serve a special housing project on the west side of the city.

Line extended 0.8 mile to a newly completed suburban shopping center, located in the heavily populated west side of the city.

A new line established to replace the service formerly given by a branch line. (This is the line described above under "Transit on Expressways.")

One new feeder line was established in November 1957, and discontinued about a year later due to lack of patronage.

Line extended 0.95 mile to serve a 500-home housing unit. The city paved one of the streets on the route to make this extension possible.

Line serving one of the universities extended 0.65 mile to better serve the area.

Shoppers' special line extended 0.6 mile to include a new commercial bank building on its route.

April 15, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

General

This company recently changed the status from that of a private company to that of a city-operated transit system. The following items are activities that have been carried out by the transit system, since it took over operation of the previous operation under city ownership, May 1, 1959:

Shoppers' Express

A deluxe air-conditioned shoppers' express service which grossed a satisfying \$6.60 per hour its first four days of operation was inaugurated Monday, June 29, by the city's transit system. The service which operates from the Dellview area was merchandised as an "experiment in custom bus service."

Leaving the Dellview area every hour on the hour beginning at 10:00 o'clock A.M. the bus operates locally in the area served and then comes to town via the expressway in 26 minutes. Buses leave the downtown area on the half-hour.

Many extra features of the new and unusual service make the express trip attractive for the patrons, including a new gold and white exterior, attractive two-tone comfortable seats, radio and air conditioning. Kicking off the service, the transit system had free gifts for the women shoppers and balloons for the kids, in addition to an attractive hostess who welcomed shoppers aboard and helped make the trip more enjoyable.

In announcing the service the general manager of the system said "every effort is being extended to make this service as attractive as possible, and we are pleased by the results." System officials, board members and the press inaugurated the first trip as patrons expressed pleasure over the service. Prior to the day of inauguration, uniformed supervisors of the transit system distributed more than 3,600 schedule cards in the area, as news media, cooperated greatly in helping promote this different type of service.

Minimum Standards for Extending Bus Service

In order to take a businesslike approach to the problem of bus extension into new areas, the transit system developed a set of minimum standards for use in determining whether or not bus service is justified and has also completed a survey of home counts of the unserved areas of the city. So far, a number of requests have been turned down because they did not meet the standards, and two extensions have been made which met the minimum standards. This fair and businesslike policy of considering extension requests has been favorably received.

Outside Maintenance

About June 1, 1959 the transit system started doing outside maintenance for the city and originally took on the job of handling and maintaining 30 trucks for the city, and establishing a preventive maintenance

program for the city on these 30 trucks. Sixty additional units were taken over for part of the maintenance and in June company overhauled a large caterpillar tractor for the city. Starting August 1, system expects to take over part of the maintenance of the city police cars. It is estimated that during the first year it will gross approximately \$175,000 from this outside maintenance, and that it will increase after that. Present rates for this work are \$4.40 per hour for labor, and parts are charged at system's cost, plus 10 per cent. This arrangement makes it possible for the city to get improved maintenance for their vehicles and produces needed revenue for the transit system as well as making for fuller use of transit shop facilities.

#### Chartered Bus Business

System has continued to develop its chartered bus business and expects to continue to increase its chartered sightseeing and contract revenue. It recently signed a contract with a nearby military fort for \$125,000 of contract and charter bus service for the new fiscal year. In addition to its regular grey line sightseeing tours, it has developed special week end sightseeing tours for personnel at the nearby air force base, and these have been quite successful. In addition to its regular buses, system has available special deluxe air-conditioned buses with radios and loud-speakers for chartered use, as well as the open air part-cruiser which is much in demand and helps to highlight system's charter business.

#### Median Strip

System just recently requested reservation of a median strip on a proposed expressway in the northern portion of the city. This median strip would be reserved for future high-speed transit service. This request has been receiving favorable consideration from the city and from the State Highway Department.

July 8, 1959

Case History No. 30

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

New Equipment

In the fall of 1958 company purchased 100 new buses which represents about one-half its entire fleet. The expenditure for these coaches was approximately \$2,400,000 which indicates that some extras were included. Actually the company spent \$1,500 per coach above the base price on extras just to give it a "dressed-up" appearance. The vehicles were equipped with melamine paneling, bright-colored interiors, a new exterior color scheme, picture windows (the sliding type), and new type aluminum exterior advertising racks. The colors were arrived at after considerable discussion with the manufacturer's color experts, and the advertising racks eliminate the prevalent ugliness associated with exterior advertising.

Discontinuance of Trolley Coach Operation

The new fleet of buses made it possible to discontinue all trolley coach operation in the latter part of 1958. The change-over from trolley coach to motor coach operation, caused the removal of all the overhead wires, and thereby improved the appearance of the city, especially in the downtown business district. The change to entire motor coach fleet caused a reduction in the total number of units required to fill schedules. This change-over also made it possible to improve operating conditions and effect economies by rerouting, through-routing, and service extensions.

Rerouting

The majority of the bus lines were rerouted during the latter part of 1958. In this way company was able to eliminate duplications and overlapping services, and in turn to gain a mileage reduction.

Through-Routing

Flexibility in operation gained by the motor coach over the trolley coach, resulted in the through-routing of practically all of company's lines in the central business district thereby eliminating thousands of turning movements daily.

Increased Schedule Speed

The improved maneuverability of the motor coach over the trolley coach plus the elimination of many turns and the consolidation of routes caused an increase in system's schedule speed from 11.48 to 11.80 miles per hour.

Service Extensions

The increased flexibility of the motor coach and the advantages gained with through-routing permitted seven extensions of routes into new territory. These seven extensions have proven to be profitable.

### Elimination of Feeder Lines

The company policy over the past five years has been directed toward the elimination of feeder lines. The substitution of motor coach for trolley coach made it possible to convert remaining feeder lines into main lines serving downtown directly with the exception of one line. This one remaining line will be converted as soon as suitable grades can be prepared on new streets.

### Bus Lanes

Late in November 1958, the city established bus lanes on three principal streets in the downtown area. Bus lanes have been discussed over a long period of time, but company was unable to obtain them because trolley coach routes did not permit the consolidation of routes onto main thoroughfares, and it lacked sufficient volume of bus traffic on any single street to justify bus lanes under traffic engineering criteria. These bus lanes have been most successful. They are operating during the rush hours of 7:00 to 9:00 A.M. and 4:00 to 6:00 P.M. six days per week. A Towing Ordinance has been well enforced. Company has practically all of its downtown operations on the three streets with bus lanes, and thereby has gained a marked improvement in speed for all downtown operations. The increased speed approximates 20 per cent in the P.M. rush period and 15 per cent on an average basis. The bus lanes have been well received both by the motorists and the transit passengers.

### Remodeling Company Plant

The company plant was spread over 3-1/2 square city blocks under combined motor coach and trolley coach operation. Company is now spending approximately \$75,000 to remodel its plant and consolidate the entire operation into two square city blocks. It will effect a saving in manpower and be able to have cleaner and better maintained coaches. This project should be finished by June 1, 1959.

### Shoppers' Special Bus

About December 1, 1958 company started a shoppers' special bus which connects a small shopping district, a medical center, the central business, and the administrative offices of the city and county. It is designed to encourage the short rider. Shoppers' bus revenues are approximating out-of-pocket cost of operation.

During the Christmas shopping season, and during certain "sales days" the merchants maintain a parking lot about three blocks from the end of the shoppers' special line, and during these periods company extends the line into the parking lot. This extension is subsidized by the merchants and it has been mutually profitable to the merchants and the transit company.

### Advertising

The company started an advertising campaign with the arrival of the new buses in September, and has continued same to run at least through the next three months. The budget for advertising has been modest but continuous. Company has used three media: The newspaper was used to launch the campaign with the new buses and followed by radio and exterior advertising on its buses.

## Results

All of the things enumerated above have improved company's public relations remarkably in the last six months. Company seems to have gained the confidence of governmental bodies, the riding public, and its own employees. Most important the riding has, as of April 15, 1959 been stabilized to a point where company is experiencing no decline under the previous year.

## TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

### Remodeling Company Plant

The remodeling of the shops and garages was completed early in June 1959. Lesser maintenance requirements on the newer coaches plus the saving in manpower through the shop remodeling and consolidation, made it possible to reduce maintenance manpower by 7 per cent in June. The release of plant space allowed company to rent a portion of the vacated space at a fair rental.

In addition, company gained a marked improvement in the appearance of its coaches, both exterior and interior. This improvement resulted from the ability to wash all coaches daily using detergents when necessary and the use of a cyclone cleaner vs hand sweeping.

By concentrating the space used by each of its departments and making use of certain waste space, company will move the entire transportation department into its main office building. Thereafter, all departments of the company and all employees of the departments will be housed within one city block instead of three blocks as heretofore.

### Reduction in Accidents

Passenger accidents have remained about constant but the change from trolley coach to all motor coach, plus an intensive accident reduction campaign, has resulted in a marked reduction in collision-type accidents.

For the year ending June 30, 1958, company had 613 collision-type accidents, whereas, by June 30, 1959 the number had been reduced to 524 accidents - a reduction of 14-1/2 per cent. This reduction occurred with only a 4-per-cent reduction in miles.

### General

As pointed out in the previous letter on transit improvements, company riding had stabilized in April and as of the later date, company was still experiencing practically no decline in business under the previous year.

April 14, 1959

July 1, 1959

## TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

### Service Improvements

During the past five years the following service improvements were completed:

1. Inaugurated Express Bus Service
2. Free parking lots at end of lines
3. Converted two trolley coach lines to motor bus service
4. Changed routing on several lines to improve movement of vehicles
5. Extended service on five lines in distances ranging from 1.03 miles to 8.38 miles

### Equipment

During the past five years company has purchased 48 45-passenger GMC buses and 48 51-passenger GMC buses to replace old trolley coaches and small old motor buses. The new equipment was used in connection with the conversion of two trolley coach lines to motor bus operation, express bus service, and to replace obsolete buses.

### Transit Survey

An appraisal of transit service in this city was completed during 1957 by a nationally known firm of transportation engineers to set up a guide for present and future operations of mass transportation in this city. The appraisal included the following items:

1. The problem of operating a transit system in this city
2. How good is the present transit service
3. Express service program
4. Freeway express service
5. Freeway parking shuttle plan
6. Extensions and modification of service

### Transit Franchise

Effective July 1, 1956 the company was granted a ten year transit franchise to construct, maintain and operate a mass transportation system in this city. Under the transit franchise, the company is entitled to earn an adequate return on its rate base.

### Traffic Signals

The city has installed a radar-controlled traffic light system to increase the speed of traffic on the main streets in the city. The traffic light installation is a part of the master plan set up for the civil defense program.

One-Way Streets and Off-Street Parking

Periodically over the past five years the city has changed a number of streets from two-way traffic to one-way traffic in order to help relieve the automobile congestion in the downtown area. Also, the city has eliminated on-street parking during the rush-hour period on some of the main streets. These two items have tended to increase the speed of transit service.

Public Relations

The company maintains a continual public relations program through the medium of television, newspapers and direct mailings. New transit schedules were distributed to houses which were located within walking distance to the transit service.

Future Expressway System

The expressway system now under construction and scheduled to be completed by 1965, will consist of an inner belt surrounding the central business district, and four radiating freeways to outer parts of the urban area. The inner belt will serve a dual purpose. It will provide a bypass route for through and local traffic, not destined for the congested central business district and will also serve as an interceptor and distributor for the feeder streets carrying traffic to the central business district. The four freeways will connect the inner belt by interchanges and extend out in the four directions through the highly populated residential areas of the city.

April 23, 1959

Case History No. 32

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Transit On Expressways

Company has one route on Highway 395 expressway, for about seven years. However, this route operates only over about a mile and a half of the expressway. Company did establish a new route, "Route H" which also operates over Highway 395 expressway for a distance of about 2-1/2 miles between two residential districts. There is only one transit turn-out on Highway 94 across from a high school in the east bound direction. West bound coaches operate on the service road to the north of this freeway at this point to load and unload.

A Mayor's Transit Fact Finding Committee recommended last year that certain express experiments be conducted in this city which would be underwritten by the city during the developmental stages. Company is waiting until after election to pursue this and may wind up with hoax and promises only.

The extremely low population density in this city greatly reduced the opportunity to successfully operate both express and local service. Local service is, of course, essential. Express service which would rob the locals of customers would leave headways too far part to attract riders. Most of company's longer routes have speeds up from 14 to 20 miles per hour anyway, because of the long stretches of open roadway.

Park-Ride Services

Company tried park-ride services at its principal park in 1956, and this proved to be a flop. Company has urged park-ride services for the future to the north, east and south of downtown when the Beltline Freeway is completed in about four years.

Special Events Services

Company has established a number of special events services. Direct to the baseball park service was established in 1958. Direct service to the new Astronautics Plant at shift change was established in 1958 on three routes. Special sightseeing service was established during the summer fiesta in open air coaches, with driver-barker during 1956 and 1957.

Shopping Center Route

Company plans to establish a new route in the eastern part of the city crosstown on College Avenue to service the new college shopping center when it opens in about a year. This route will cross four others so that people will have the opportunity of transferring to it, so as to proceed to the new shopping center.

### Charter Services

Charter service represents only 3-1/2 per cent of company's revenues but charter business has been increased about 1,000 per cent in the past five years. Revenues in 1954 were \$26,000, in 1958 \$188,000. In the past four years company has added five new GMC highway travelers, and one GMC PD-4103. It has also reconditioned two C-44 ACF Brill coaches as open-air charter coaches.

Some of the highlights of company's charter experience are as follows: Net before taxes on charter revenue is about 20 per cent. Company believes that the most basic element in developing a good charter business is to provide the best equipment in the area. In each instance it provides every extra possible. Radio, the best "Mike" possible, portable mike for outside use, bar (optional) card tables, and the last two coaches have lavatories. The last two were purchased for \$41,000 each. The excellence of this equipment brings a great deal of short haul charter business, for which company uses transit-type coaches and on which it makes considerable net. Rates must be competitive with other carriers in the vicinity. Company strives to get a large volume of local business. It can provide more equipment at any one time, and can get it quicker than any of its competitors, since it has a greater number of drivers and coaches available.

Company finds that personal contacts sell charter service. It has a master list of church groups and service clubs in the area. It also has attractive brochures which it sends out by mail. Each year company sends a Christmas card thank you letter to each of its clients. Conventions furnish company with a great deal of business and it works closely with the Convention Bureau, sending information to the proper persons about the availability and type of service while each convention is in the planning stage.

Company has developed considerable business to major league baseball games, pro football games, etc. It was successful in getting the School Board to ask for bids on field trips. It handles all charter trips from all schools in company's school district. A number of operators have developed business for the company.

Company provides extra services by arranging for dinners for clubs and obtaining tickets to shows and events. Chartered service is advertised on the inside and outside of regular transit coaches, in certain publications and programs (as opposed to daily newspapers) where company thinks it will do most good. Company also uses a variety of inexpensive "give aways" such as coin purses, wallet card holders, pocket memo pads, pencil, comb, nail file etc. Newspapers are watched for events which might lead to business. Company has developed some business during jury trials by taking jurors to scenes of crimes and accidents.

### Improved Traffic Conditions

Company has obtained increases in the lengths of its transit stops in the downtown area.

In 1956 traffic was prohibited from parking on principal downtown transit routes during the P.M. peak. The streets involved were Broadway for 8 blocks, Fifth Avenue for 4 blocks and 4th Avenue for 4 blocks. Company has pressed for extensions of these parking prohibitions along additional streets and for a greater period of time, but has gotten nowhere to date.

### Improved Vehicles and Facilities

This company is responsible for the initial push that was given the search for a new bus design. Company was the first group to push for a "new look." It has purchased 50 new GMC 48-passenger buses in the past three years, at a cost of \$1,350,000. Company's Board has approved the purchase of 30 of the "new look" GMC coaches at a cost of \$900,000 and it expects to receive these toward the end of 1959 or early 1960.

Company is about two-thirds of the way along in a reconditioning and painting program for 60 of its 45-passenger GMC coaches. The main direction is improvement of the interior design including seats, floors and painting, all in accordance with the specifications developed by a local airplane designer.

### Improved Financial Stability

Company's only claim to fame is that it has earned money each year since beginning operations on San Diego - not as much as it should earn, but at least some earnings.

### Improved Public Relations

Company has done a great deal of public speaking at service clubs and over television to try to indoctrinate the general public with the essentiality of transit and the assistance transit needs in speeding up its service through congested areas.

Company has just completed a very effective training program with its drivers' "Customer Relations Round-Table." This has consisted of three meetings of one-half hour each in which the drivers discussed the best way of handling customers for their own as well as the customers benefit. The teaching technique here was the main reason for its success. Company did not use the lecture method, but rather directed questions at the drivers to bring out their ideas about customer relations.

Company prepares public timetables which include route maps for each route on the systems, and endeavors to get wide distribution. It also has a large three-color route map of the system which is made available through motels, hotels, service organizations and mail. Company uses the welcome wagon service to distribute schedules to newcomers in the city.

### TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

#### Increased Revenues

In the opinion of management, one of the most significant ideas it has hit upon revenue-wise has been the assignment of new equipment, which has the company's "aircraft design interiors."

Sometime ago company hired an airplane designer with a local plane plant to help with the interior design of its new buses. The first order of business was to decide upon a basic philosophy as to what the designer

was to do. Company decided (1) to aim the interior designing to its women riders who represent about two-thirds of the riders over the day, and perhaps as much as 85 per cent of the riders during the base period; (2) use materials that would maintain their original appearance the longest with the least maintenance.

When it came time to assign some 30 of these coaches, the public relations department wanted to place one on each of 30 routes, so that no one would get irritated at the company. The traffic department wanted to saturate a couple of routes during the P.M. peaks so that it could save one or two coaches. This would have meant operating certain new equipment in the peak periods only. The safety department recommended against putting these larger coaches on certain routes because of more difficult turns. The maintenance department recommended that company place them on routes enabling it to develop maximum miles and maximum maintenance savings. The transportation department recommended that the new vehicles be spread between company's two divisions so that drivers of both divisions would be happy.

Management's decision as to assignment went back to its number one philosophy of design -- aim at the women. The percentage of women riders is highest in the base; this is also the time when a comfortable seat means the most, since most all people are seated and attractive interior design can be seen without the obstruction of standees. Accordingly, company has saturated the base period of its most heavily traveled routes with these vehicles. This of course, meant that new coaches would operate during the morning and afternoon peaks, as well as during the base. What was most important; it meant that on each of the routes covered, any woman stepping onto any coach during the base period would board a new coach.

When company got 20 more new coaches it followed the same procedure, but with one added touch. The first day that the coaches were operated in service, company gave out a baby orchid to each woman passenger who boarded one of the coaches between the hours of 9:00 A.M. and 2:30 P.M. Word got around real fast in neighborhoods along these routes that every coach during the base period was a new coach.

Study of the last two routes on which the last 20 coaches were placed, develops information of considerable interest. It shows that company's riding along these routes increased compared to all other routes, by 3.624% even though there was a mileage reduction on these routes of 2.63% compared with 1.33% on all other lines, or twice the percentage service reduction. This is a significant increase in revenue. Prior studies have indicated that the added revenue per coach alone equals the annual depreciation. In addition, savings in maintenance again equal the annual depreciation cost. In other words company believes that these new coaches have added 3.6% net revenue. It is confident that the "new look" GMC coaches will do even better.

Company considers this something basic - no frills, no borderline-type service, such as park-ride, charter downtown special, etc. It involves company's basic service to the public -- which reaps 95 per cent of gross revenue.

April 21, 1959  
June 25, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Two-Way Radios on Buses:

Company believes that most important improvement it has made within recent years is the use of two-way radio on buses. This allows telephone service between dispatchers and drivers. Problems encountered during the operation of the vehicles can be handled immediately enabling company to improve service to the public. The results have been evidenced by a closer adherence to schedules and the avoidance of large "gaps." Headways and public relations with passengers have been considerably enhanced when they seek information.

Passengers desiring to make late night connections with other routes are able to do so by relaying the information through a dispatcher to a connecting bus. Passengers who lost articles on buses calling in to the company are given immediate knowledge as to whether their lost article has been found. Lost children are readily accounted for.

The company has benefited to the extent that bus operators are able to check passengers leaving buses at events so that the supervisors are not required to do this corner duty. Blockades have caused rerouting of buses without delays or the need for street supervisors. Late buses or crippled buses are easily filled in by the use of other buses that are out of service. Obviously, the company saves on manpower and operational costs.

Exclusive Bus Lanes:

The first exclusive bus lane was adopted in May 1957. The city realized the benefit to traffic in general to such an extent that it extended the length of the exclusive lane on its own initiative by more than doubling it. Movement of general traffic has been enhanced and these lanes have enabled the company to prevent many costly delays during rush-hours. An actual speeding up of rush-hour transit service has resulted.

"Spacing" of Bus Routes:

Company's bus routes use one street passing through the center of the city. Formerly each of these routes operated on its own headway so that passengers awaiting experienced buses either running together or with considerable "gaps" between them. Spacing of buses within this area will eliminate to a considerable extent buses running together and in particular will prevent "gaps" in service.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

### Expansion of Chartered Bus Service

The most noticeable step company has taken to increase net revenue is the expansion of its charter bus service. Revenue from this source has been increased in the past three years from an annual amount of approximately \$55,000 to a present annual amount of slightly over \$200,000. This has been accomplished to a great extent by the active solicitation of chartered buses from various organizations and convention groups, along with the selling of contract charter service to school districts and industry. Present rate of chartered revenue increase is about 50 per cent over the preceding twelve months.

### Maintenance Work and Truck Rental

Company is presently preparing to enter outside maintenance work and truck rental. Experience is not sufficient for comment at this time, although company anticipates good results from this new venture.

### Decreased Expenses

Company maintains a continuing schedule evaluation and changes schedules to meet current passenger riding. In the past three years by utilizing exclusive bus lanes company has increased scheduled speeds. This has allowed it to operate most efficiently. Service has not only been improved through these lanes, but costs of service have been cut by maintaining the same headways through the use of fewer buses.

Along with the continual evaluation of service company has had a continuing evaluation of personnel and has made economies in office and maintenance division. Company attempts to maintain and in some cases reduce personnel to the same percentage reduction as reduction of passengers. This procedure has been used in the reduction of street supervision, while that supervision itself has been improved through the use of two-way radio system.

### Tax Relief

Company along with other companies in the state was finally successful in getting relief from a 2% tax of gross revenues. Such relief becoming effective in January, 1960. They also shared in an exemption from the increase in taxes on gasoline and diesel fuel enacted by the 1959 Legislature.

In the field of city taxes, company received some relief in the franchise tax on its vehicles. It hopes that, with the elimination of the 2% on gross revenue recently enacted by the state, that it may also get exemption from the 1% of gross revenue levied by the city.

### Public Relations

Company is presently enjoying excellent public relations with both the riding public and the city officials. While a revenue increase cannot be directly attributed to this, it has had a very definite effect on company's ability to obtain traffic improvements from the city and to receive other special considerations in its bus operations.

April 13, 1959

June 12, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Transit on Expressways

On October 1, 1958 company inaugurated "green flag" express A.M. and P.M. rush-hour service from a suburban area to downtown, by making use of a recently opened turnpike. Considerable traveling time is saved by this premium service for which an additional charge of 5¢ is made above the fare on the regular buses of this route. Traffic congestion is also avoided by use of the expressway.

Improved Headways

Passenger traffic checks are made constantly, and headways are changed frequently to meet requirements both as to passenger loads and revenue per mile.

New Routes - Route Extensions

One line was extended beyond the city limits into a large shopping center where a transit waiting shed is located. Connections are made at this point with buses of another company which operates into the county. Separate fares are charged on these lines.

Another line was extended beyond the city limits into a second shopping center. An extra 5¢ zone fare is collected on this extension.

A third line was divided into two legs to serve two new housing developments containing 447 units each.

Park-Ride Services

Arrangements have been made with the operators of 25 service stations to provide free parking to bus riders. Company furnishes park and ride swinging signs made in its own shops to these service stations. Nothing is paid to the operators thereof. Company also has a 30-car parking space on its own property for such free-park ride service.

Special Events Services

Company has recently started special events services from west end area direct to the convention hall.

Charter Bus Services

Company's charter service activities, with a charter salesman in charge, have increased over the past few years from \$6,000 to \$32,000 annually. Company endeavors to increase the volume of charter business and is promoting it to ads in school papers, city and telephone directories and program advertising. Company also carries 21 x 44 inch and 30 x 144 inch outside bus displays which carry charter sales messages.

### Improved Traffic Conditions

Company has a number of transit streets on which parking is prohibited from 7:00 to 9:00 A.M. and from 4:00 to 6:00 P.M. in prevailing directions. This prohibition increases schedule speed; consequently, company performs rush-hour services with a savings in buses and operators.

### Improved Financial Stability

The State General Assembly during its 1958 session passed the following tax relief measures affecting urban and suburban bus companies:

1. The two per cent suburban bus road tax was eliminated on the county portion of four of company's lines.
2. The 0.2% valuation tax on all gross revenue was eliminated effective January 1, 1959.
3. Annual state bus license was reduced from 70¢ to 30¢ per hundred weight effective March, 1959. Considerable savings have resulted from these changes.

### Improved Public Relations

Company has been conducting a 13-week advertising program, covering newspaper, radio and television advertising. The present 1959 spring program consists entirely of daily spot announcements alternating weekly on four local radio stations.

### Safety

Company continues to improve its accident records, especially so in the field of employee safety, as it has not had an employee lost-time accident in the transportation department since December 6, 1954 and in the mechanical department since September 12, 1957. The record in the transportation department of one of the cities in which company operates is "over 4 million man-hours to date without a lost-time accident" this sets a national record.

### TRANSIT "SELF-HELP"

Company reports the following items in response to the question. "What has your company done to help itself?":

#### Increased Revenues

Business today is competing for the consumer dollar and much advertising is directed towards the prospective purchaser to buy now and pay later. In an attempt to develop the sales of rides on credit, several years ago company made arrangements with the larger downtown stores for them to sell books of tickets, 45 rides per book for \$6.30. This represents a rate of 14¢ per ticket and a reduction of 1¢ for adult fare. These participating merchants will charge the cost of the book of tickets to their customers' accounts. For this service company pays the merchants a 2% commission on sales and they are then responsible for any loss sustained through noncollection of an account. Such books are advertised as "super 45's," and company carries outside and inside cards on its equipment advertising the stores where they can be purchased.

Diversification of Activities

In November 1958 company began the operation of three truck maintenance companies, one in each of the cities served. For the twelve-months' period ending March 31, 1960, company estimates that its annual gross business will approximate \$250,000. It is meeting this budget on a monthly basis and believe that this work which utilizes its existing facilities and the abilities of its shop employees will ultimately grow into a very profitable operation.

Company also operates and maintains under contract 17 buses of the Elizabeth River Tunnel Commission, a political subdivision of the state. These buses operate on a bridge and through a tunnel connection in two of the cities served by the company. The buses are owned by the Commission and are operated, maintained and serviced by the company's division. The only function of the Commission is to remove the cash vaults from the buses each evening on their last trips through the toll gate.

Clerical Economies

Several years ago after a thorough study of its system of accounting, company purchased four National Cash Register accounting machines and mechanized its system of accounts. This complete change in methods together with other adjustments in clerical force has resulted in an annual savings of approximately \$31,600.

April 23, 1959

June 19, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Increased Revenues - Regular Service

In April of 1958 when transit fares were raised from 20 to 25¢, eight downtown merchants joined in a validation program. They bought strips of ten tickets from the company at \$2.30 per strip and sold them to their customers on completion of a purchase of merchandise for \$2.00 per strip. The return of tickets from this source amounts to 20 to 25 per day.

In January 1958 one department store purchased tokens and presented one to each customer who made a purchase of \$2.00 or more. Company has no daily record of the number of passengers who received tokens through such purchases, but the plan is fairly popular.

Increased Revenues - Special Services

Special service is operated from four sections of the city to the amusement bowl at least twice a year - for the soap box derby and the opening home university football game. Due to the publicity given in the local newspaper this special service is well patronized, and more people each year are taking advantage of the convenience of direct trips.

Increased Revenues - Chartered Service

Beginning in the Spring of 1959, a three-hour tour of historical points of interest in and around the city was developed with the aid of the County Historical Society. The approval of the Board of Education was secured to permit teachers primarily in the fourth grade to take their pupils on this tour as a field trip, each pupil paying his own fee. Before the end of the school year 45 trips of this nature were made at \$30.00 per trip. Some 2,500 school children were involved. In addition to the income, the project stimulated interest in adult tours and guaranteed school participation next year.

Charter business from this city to a major league baseball stadium in a distant city, in the same state has been an important source of revenue. This season, with the home team in first place in the American League up to the present time (July 4) extra effort has been put forth to stimulate this business. Six thousand "Charter a Bus" folders, which include the baseball schedule were distributed by bus operators and direct mail. Letters were written to all 1958 customers for this service. Letters were also mailed to 200 persons on a special mailing list compiled for the purpose. Advertising has been placed on the sport page of the daily newspaper. During the month of June company's charter revenue was 33 per cent over the same month last year.

Increased Speed and Convenience of Service

In February 1958 company inaugurated line-ups in the downtown section at hourly intervals beginning at 7:20 P.M. on weekday and all day Sunday, for the convenience of transfer passengers. Particularly for employees riding to and

from the night shifts at the factories. Much favorable comment was received because of the saving in time required for transferring. Company reasoned that if night lineups made an improvement in service, it could further improve service by establishing lineups in the early morning hours when more passengers would be affected. In April 1959, it started lineups in the downtown section at 5:10 A.M., 5:45 A.M., 6:20 A.M. and 6:50 A.M.

Considerable economy in operating cost was made by reducing service on several lines to conform with lineup times, and although the interval between buses was lengthened, passengers were assured of direct connections. Company surveys and public reaction indicate that there has been an overall improvement in service during the early morning period.

#### Improved Transit Vehicles

Twenty-eight new fare boxes were installed in June 1958 replacing earlier locked boxes. In June 1959 twenty-five additional boxes were installed. The new boxes make it easier for the operator to inspect each fare as it is deposited by the passenger, and call their attention to a shortage.

Fifteen new 45-passenger GMC diesel buses were placed in service early in June. They included two buses equipped with public address systems for use on charter trips, especially for historical tours. The new diesel buses replace trolley buses and permitted economies in scheduling and rerouting.

#### Improved Public Relations

The general manager of the company serves on the following committees; Traffic and Transportation Committee of the Chamber of Commerce, Traffic Flow and Control Committee of the Chamber of Commerce, Downtown Committee, Mayor's Citizens Committee.

The benefits obtained for transit from this public participation has been installation of curb lanes for buses through the downtown section between the hours of 3:00 P.M. and 6:00 P.M. Elimination of parking in congested areas, and restriction of right and left turns at intersections where transit vehicles were delayed have resulted in more efficient operation.

Teachers from public and parochial schools were indoctrinated with transit problems in day-long sessions at company headquarters. During 1958 there were 2,900 copies of various reprints on transit problems mailed to 250 individuals and organizations. Each month colorful posters on employee bulletin boards report revenue passenger record as compared with the previous year in urging greater efficiency and courtesy. No direct results can be assessed from this type of activity. The company is confident that it helps improve the climate in which it operates and facilitates acceptance of service reductions and fare increases by the public generally.

#### Advertising

Most advertising space is purchased to promote charter service with newspapers, car cards, direct mail and selected special publications used. System maps are distributed free of charge on the vehicles, by mail on request, and at the supervisor's booth in a midtown location. Printed timetables, each bearing a map of the line with time points, are distributed on the vehicles at heavy loading stops, and at the supervisor's booth. A series of three colorful bulletins, 875 of each were posted at

principal industrial plants. The posters urged employees to make use of public transportation. No specific result can be credited to these activities, but on the face of them they should help maintain patronage.

#### Diversification of Activities

Truck maintenance and repair work has been actively solicited through the distribution of advertising leaflets, advertising in the telephone directory and on exterior car cards, bulletins and lectures to employees urging them to solicit such work, and through direct solicitation by the superintendent of equipment. Revenue obtained from outside maintenance has not been substantial; however, it does relieve cost on bus maintenance accounts and reflects on company's net revenue. In time company hopes, with continued promotion to increase the volume of business.

#### Schedule Economies

Economies have been made by substituting diesel buses for trolley buses. In some instances routes have been changed to avoid duplication of service. In general, company attempts to tailor its mileage to meet riding requirements.

#### Supervision

Over the past few years company has reduced its supervision.

#### Improved Safety; Reduced Claims

Employees are indoctrinated through movies, posters and material mailed to their homes. Operators are encouraged to report locations where accident hazards are high. Every operator involved in an accident is interviewed by transportation and claim department executives. Operators are regarded by serving of coffee and sandwiches when special safety records are set.

In 1958 as compared with 1957, chargeable accidents were reduced by 28 and total accidents by 189. The estimated amount to settle outstanding claims was reduced by more than \$16,000.

#### Efficiency and Performance

Every activity in maintenance, repair, servicing and cleaning is carefully scrutinized. The employees at the end of 1958 were 358 as compared with 385 at the end of 1957.

#### Supervisory and Clerical Economies

Beginning early in 1954 a program of installing machine accounting was begun. The number of employees in the auditing department has been reduced from 26 to 12.

#### General and Administrative Expense

A merger of maintenance, stores and line departments resulted in a reduction of two persons. Two persons were eliminated in the transportation

department.

#### Equipment Conversion

Trolley bus service was eliminated early in June of 1959. By this conversion company expects to achieve lower fuel cost, elimination of the overhead line department, and reduced maintenance through a standardized fleet.

#### Reassignment of Duties

With the decline in revenue the jobs of one clerk and another employee used part time in the money room, were eliminated.

The job of the safety supervisor was discontinued, and his duties assigned to the superintendent of transportation and his assistant. The monthly salary of two and one-half employees was saved.

#### Relief from Taxes

Company joined with other companies in its state in petitioning the Legislature for tax relief. As of April 1, 1957 the annual license fee per transit vehicle was reduced from an average of \$360.00 to \$10.00.

#### Depreciation Expense

The addition of fifteen new diesel buses to company's fleet has resulted in lower depreciation because of the elimination of the depreciation on overhead and trolley buses.

#### Increased Net Income

It is difficult to assess the exact results as far as net income, as company faces a continuous decline in riding coupled with ever increasing costs. Company knows that every change that results in cost reduction in operating expenses, taxes, and depreciation assists it in providing service to its patrons, and maintains net revenue. In short, company has to run very hard to hold its own.

One real method of helping to do better, has been achieved through regular staff meetings. This is based on the premise that company's collective brain power is better than that of the "top brass" alone. Recent accomplishments in "keeping the ship afloat" are due to the combined planning and efforts of the staffs of both of the cities in which this group operates.

July 13, 1959

Case History No. 37

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Express Service

Between 1956 and 1958, company installed three express bus lines. Two of these lines originate in territory already served by other lines. One of the express lines operates in an area not otherwise served. Premium fares are charged. Within our city this consists of the regular fare, plus 5¢. Results, while not spectacular, were favorable enough to keep these lines in operation.

Company also installed experimental express trips with a rate of regular fare plus 5¢ during morning and evening rush hours on two regular city lines. For a number of reasons this plan has failed to produce additional revenue, and company will remove the express trips as soon as it is feasible.

Suburban Bus Line Acquired

In order to consolidate bus service in this area, this company purchased another line in February 1957. It already had a wholly owned subsidiary. Buses on the recently acquired line, as well as the former subsidiary, are all operated from the main company garage in the central city. This recent purchase will enable company to consolidate all bus service south and west of the city under one system, eliminate any local competition, and help solve transit problems arising from annexations to the city. Transfer privileges to parent company buses are granted passengers on the two subsidiaries.

Ride 'N Shop Fare Validation Plan

On August 15, 1958, the Downtown Associates, with the cooperation of the company, put in effect a fare validation plan termed Ride 'N Shop. Thirty-seven business establishments in the downtown area participated. The plan worked as follows: all inbound passengers on company buses and subsidiaries were given, on request, a twin coupon up to 9:00 P.M. This coupon bore a number to indicate the day of the month, the month was not shown. On the reverse side of each half were listed the participating firms. Each firm set its own minimum purchase. By visiting two stores and presenting one-half of the double coupon at each a passenger could get two tokens. The coupon was valid only on the day shown. Tokens were purchased from company at 5¢ discount, and sold by Downtown Associates at cost plus 5 per cent to the firm. In this way, Downtown Associates acquired funds for advertising and administration.

Results have been disappointing due to the fact that no large stores joined the movement, that participating stores did not always give full cooperation and because Downtown Associates has failed to push the plan to any great extent.

Special Shoppers Services

Special days fall into two main classes. On shopping days held usually on one day in spring and fall, Downtown Associates charters for a lump sum, all downtown-bound bus trips for a limited period such as from 9:30 to 11:30 A.M.

The fare box is covered and passengers are carried free inbound. The charge is based on normal riding for the period at the token rate plus the cost of any extra service. On days promoted by a single store, the store furnishes coupons for distribution by bus operators to adult passengers riding during certain downtown hours. The coupons are redeemable for one token at the store on the special day only with no purchase being required. Company records show that one-half of those receiving coupons redeem them at the store.

Both of these types of promotion have produced favorable results. Both stores and company promote the events through newspaper ads, and when possible car cards. The increased riding more than pays for cost of company's promotional work.

#### Charter Bus Services

Car cards, newspaper ads, television and personal calls have all been used to promote this high earnings-per-ride bus service. As a result, revenue from charters increased 27 per cent during the past five years, in the face of declining revenue from regular service. Promotion is tied into seasonal events such as baseball and football seasons, horse racing, the various tournaments, etc. Chartered buses are used extensively by the schools for special affairs. Steady sources of revenue are trips to nearby, and somewhat distant large cities, for athletic and theatrical events. Two 41-passenger coaches, especially equipped for longer charter trips were acquired in June 1957 at a cost of \$46,578. The response to these has been very favorable.

#### Improved Traffic Conditions

On December 1, 1955, in order to simplify downtown operation, and speed bus movements in the downtown section, company installed its "neutral zone." Under this plan, no fares are collected within the twenty-four block area which comprises most of the downtown business section. Passengers whose entire ride is within this area may ride free and all may leave or board by either door. About 300,000 folders were distributed on the buses and through the stores explaining the plan.

An immediate result was a reduction in loading time in the area of 50 per cent. All of this saving could not be translated into schedule speed because of the difficulty of pulling away from the curb. Company efforts called attention to the seriousness of the traffic situation to the Downtown Associates and it urged City Council to remove some of the parking in order to facilitate all vehicle movements.

Another favorable result was improved public and civic relations. Once passengers became acquainted with the workings of the plan, they were enthusiastic. This novel plan attracted worldwide attention. Requests for information have been received from several European cities, from South America, South Africa and New Zealand. Aside from a few penny transfers company does not feel it is losing any fares.

As mentioned previously, one of the favorable results of the neutral zone plan was it prompted the Downtown Associates to urge the City Council to revise parking regulations on downtown streets and main arteries entering the core section. In the face of some opposition from certain small downtown

merchants, regulations restricting parking were put into effect for a 30 day trial period on December 5, 1955. These set up a total parking ban in the 16 block area comprising the heart of downtown from 7:00 A.M. to 6:00 P.M. with rush hour restrictions on traffic arteries from 7:30 to 9:00 A.M. and 4 o'clock to 6 o'clock P.M. About 352 meters were removed in the downtown section. Since that time because of pressure put on City Council by merchants etc. on-street parking has been restored here and there, but company is still getting benefits through better traffic conditions from the original council action. Within a year parking was forbidden during the morning rush on the inbound side of one of the principal streets, and during the evening rush on the out-bound side. Four of company's bus lines use this important thoroughfare.

Company has found that constant vigilance is needed to prevent individual merchants or special groups from nibbling away at restricted parking zones.

#### Improved Vehicles and Facilities

In 1953 company purchased 17 45-passenger diesel hydraulic buses at a cost of \$325,760. In January 1957, 10 41-passenger diesels and in June 1957 two 41-passenger special coaches for charter operation were purchased. The 1957 purchases total \$256,839. Company plans to purchase fifteen 45-passenger diesels in 1959 to replace worn out equipment.

Within the last few years company has installed an automatic bus washer and two "cyclone" bus cleaners, the entire fleet is now cleaned inside each day and exteriors are washed every other day. Company feels clean vehicles are one of the most important factors in attracting and holding customers.

A new single-story office building was completed in June 1957 on the same property as company shop and garage structures at a cost of \$113,114. This structure, 80 X 111 Ft. with a 10 X 60 ft. light well was constructed of cement block with face brick front. Fluorescent lighting and combination heating and air conditioning make this building modern in every respect. Previous to this time company has always operated from rental property located in the downtown section, and a substantial saving has resulted from ownership of its own building. Greater operating efficiency always resulted from having management in closer contact with operating departments.

In 1957 the steam heating system in company's garage, shop and other buildings was replaced by gas heating equipment with propane gas standby equipment at a cost of \$52,236. The use of gas is much cleaner, cheaper and more efficient.

#### Improved Financial Stability

Effective the second quarter of 1957 the state by legislative action reduced the cost of bus license plates from an average of \$304.00 per year per bus to \$10.00. This has resulted in substantial improvement in company's financial structure.

At the present time through the efforts of the State Transit Association, of which this company is a member, a measure has been introduced in the legislature calling for a reduction in the bus seat tax from \$4.00 per passenger to \$1.00 per passenger. This bill has been referred to a committee for study. Also

under consideration is a House bill which would exempt the state's transit companies from a 5¢ gallon state motor fuel tax.

#### Improved Public Relations

Downtown merchants and city officials are concerned mostly with the problem of finding parking places for those who drive automobiles. At the same time they take public transit for granted, assuming that buses will continue to bring in a high percentage of shoppers, and other downtown visitors without any effort on their part. To call attention to the rights of bus passengers company has during the past three years, carried on at intervals a "fare share of the street" publicity campaign through the mediums of newspaper ads and bus posters. Company's efforts were well received by all concerned but no great effort in treatment by city officials was noted.

Company carries on a continuous educational campaign through newspaper ads and posters in and on buses emphasizing the importance of transit, ways by which passengers can help speed service, such as signaling the operator in time and having correct fare ready, etc. In 1958 company ran a series of ads covering all of its bus lines. Places of interest on each line were discussed and a simple drawing of the line included.

For four or more years company has been mailing out publicity releases such as those provided by ATA, to a selected list of business executives, city officials, newspaper, radio and television executives and key civic persons. Included also, were all members of the Traffic Committee of the city's area Chamber of Commerce. Favorable results from this project are more evident than those from company's other publicity efforts. Thinking of Chamber of Commerce members, executives of larger stores, and newspaper writers appears to be influenced to some degree by the facts we have sent out on public transit.

#### Safety and Accident Control Program

On May 1, 1948 the company inaugurated a safety program with the understanding that it was not a typical "no accident" campaign, to be forgotten after a few months, but that it was to become a definite part of management. Results? In 1958 the number of accidents were 71 per cent below the 1948 total. How was this achieved? The original safety program was built up as follows: (a) An incentive plan giving "prizes for carefulness" was installed. Operators were awarded points which could be "cashed" for all sorts of prizes. (b) A 30-day training period was prescribed for all new operators. (c) A complete safety record was kept for each operator. (d) Available safety devices were installed on buses such as directional signals, low air warnings, etc. (e) Safety promotional literature, such as letters and posters was distributed. (f) Safety classes featuring films and lectures were held for all operators. (g) Brake reaction test were given to all operators. (h) Applicants were screened by using ATA tests.

Last year company's program was intensified by a study of all accidents occurring in 1957 in order to determine the principal causes of accidents, and to find out where the operator was at fault. Armed with these data, two safety inspectors rode on the buses with every operator; they took notes of unsafe practices and made on-the-spot corrections.

An immediate result was a 30 per cent reduction in 1958 accident frequency

below 1957. Chargeable accidents dropped 82 per cent and "no accident" days more than doubled. Translated into savings this resulted in a reduction of 16-1/2% in claims department expense. Percentage of gross revenue fell from 5.4 to 4.6.

In recognition for this performance, this company has been awarded a special citation by the American Transit Association "For Outstanding Improvement During the Year in Traffic and Passenger Safety Among Transit Companies Serving Urban Populations of 250,000 to 500,000".

Company is not however, slowing down in its campaign against accident costs. Noting that certain personal injury claims were unusually high because of a lack of information on conditions at the time of the accident, company has begun a course of lectures in order to acquaint all supervisory employees with this problem and to outline and install a program correcting it.

This course includes a thorough study of how and why accidents happen, why it is important to investigate them immediately and thoroughly, how to investigate, how to question witnesses, what clues to look for, how and what to measure in order to make proper diagrams, how and what to photograph, and finally, how to make a complete report.

April 23, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

New Equipment

Company has purchased 25 yellow school buses and 30 GMC buses at a cost of \$780,000. Company does a very large charter school business for the city, and inasmuch as it can buy three of the yellow school buses for the price of one GMC diesel, it has largely been purchasing buses of that type in recent months.

Maintenance Facilities

Company also gave up three old garages that were scattered in various parts of the city, and built new storage units at a cost of \$215,000 in a central location, which will house approximately 112 buses. In this move company renovated an area of the existing garage to provide new general offices at a cost of \$70,000, which it is estimated has paid for itself in a three year period in savings.

Transit Lanes

For some years, company has had the curb lane in this city on the main street, which has been most helpful.

April 9, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Consolidation of Transit Companies:

One of the most effective transit improvements in this community was the consolidation of three separate transit companies into one. This made possible a rerouting plan which provided more direct routes to the center of the city. Average system miles per hour has increased from 10.57 in 1953 to 11.00 in 1958. With only one major company in the city it has been possible to institute stop and shop transfers, suburban bus shelters, benches, time tables. Company has thoroughly overhauled its operator hiring procedure and believes it is obtaining a better caliber of man with less turnover of employment.

Public Relations:

Company now has in progress a \$15,000 public relations program covering radio, take ones, and leaflets to special groups.

Downtown Shelters:

Company is endeavoring to get city to build downtown shelters at heavy loading points.

Exclusive Curb Lanes:

Company has partial system of exclusive curb lanes and is working to obtain them throughout two main streets in the downtown area.

New Equipment:

Company is spending \$75,000 to replace older equipment with newer.

Employee Suggestions:

Currently company is conducting a suggestion contest with its employees to get the benefit of their constructive ideas.

Future Plans:

Company plans individual schedule holders on posts for various heavy loading points about the city to assist passengers in avoiding unnecessary waiting. Company hopes to further speed up operations. It is constantly pulling a little time out of its schedules here and there.

Company is striving for better municipal cooperation, hoping to get occasional commendation rather than condemnation from city officials. Company constantly seeks police department cooperation to have officers expedite transit vehicle movements.

By all of these combined efforts company hopes to gradually educate the public at large as to the importance and convenience of transit.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Fares:

Company issues a stop-over transfer for 2¢ which enables riders to stop, do an errand and then board another vehicle going in the same direction. It is cutting service as little as possible and attempting to maintain its 15¢ cash fare as long as it can.

Equipment:

Company is not converting to diesel buses believing its trolley coaches equally if not more acceptable to the riding public. But it is replacing older equipment with newer and using a variety of paint jobs to get attention. Company restricts outside advertising to the two rear corners of its vehicles, believing that this upgrades the service and makes it more acceptable to the public.

Passenger Convenience:

Company is running an intensive program to make operators more considerate of their passengers. This seems to be paying off. As indicated elsewhere, waiting benches and shelters have been placed at numerous heavy loading spots around the city. By cutting layovers and speeding schedules wherever possible, average operating speed is gradually improving, which ultimately results in faster service to the passenger.

Results:

Company does not see where the measures it has put in effect is causing it to gain much, if anything, on its transit neighbors in the area. With the general improvement in business the monthly percentages have all improved about equally throughout the area.

April 14, 1959  
June 1, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Tax Relief

Company worked hard on the State Legislators and were successful in getting about 40 per cent of the tax relief it had asked for. Management doubts very much that any action would have been taken had it not been for the fact that just prior to the opening of the Legislative session company filed a petition with the Public Utilities Commission to completely abandon two of its properties. No decision has been handed down on the abandonment. Company will, however, continue to press for abandonment as the tax relief amounts to only about half the operating loss on these properties.

Accident Prevention

Company has placed greater emphasis on accident prevention starting in June 1958, and this is beginning to pay dividends. The first five months of 1959 show an improvement of approximately 30 per cent in claims paid and outstanding and a reduction of 48 per cent in accident frequency.

June 23, 1959

Case History No. 43

TRANSIT "SELF-HELP"

See report on Case History No. 36.

Company says "We tried to make this report (No. 36) complete and included as much detail as we thought you might need. In fact, so much effort went into the preparation of the (No. 36) report that we just did not get around to one on No. 43. ....However, the (No. 43) program has been parallel to the (No. 36) program, even to the point of substituting diesel buses for trolley buses. As a result, except for ( ) obvious (geographic descriptions) which apply to (No. 36) alone, a report from (No. 43) would differ only in minor details from the one (submitted for No. 36)."

July 15, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

Perimeter-Parking Plan

An effort has been made to work out with the merchants, a perimeter-parking plan, but company is unable, up to the present to report any success. It is endeavoring through the use of Billy Spear's clip sheets and constant contact to stimulate interest in this area. The operation is not a transit operation in the strictest sense, as a large percentage of company's business is interurban. This factor may have some bearing on its problems in trying to stimulate the merchants.

Simplified Downtown Routing - Traffic Improvements

A simplified downtown routing, and rigid enforcement of parking and traffic regulations by police have received some attention following a report on traffic conditions of the city made by a leading traffic engineer.

Tax Relief

Company is endeavoring to obtain tax relief at the local as well as the state level.

May 7, 1959

## TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

### Reserved Transit Lanes

At the peak of the rush-hour each morning, bus after bus loaded with office workers, store clerks and shoppers, barrels into the congested heart of this city, unloads its passengers quickly and highballs out again.

This operation, routine in this city, would seem strange in most American cities, where buses in rush hours usually are forced to creep along through traffic-clogged streets. In this city buses have their own lanes which are barred to other traffic during morning and evening peak hours.

### Bus Shelters

Rain or shine this city's riders who get on or off in the town's centrally-located Memorial Square are protected from the weather. The city itself has put up five spacious shelters, roofed with green plastic as a convenience for the bus company's passengers.

### Tax Relief

In many other respects transit operations in this city are unusual. In an era when the very continuance of urban bus and street car systems is threatened and financial difficulties are forcing company after company to cut service, this city's system is flourishing and is trying out innovations to make bus riding more convenient and comfortable. The local government likewise has been quick to alter old-fashioned patterns of municipal taxation, and regulation to meet the "transit crisis," with the result that this city is beginning to attain national attention.

### Baby Strollers

On its own the bus system is going to unusual lengths to establish a reputation for neighborly friendliness. It provides free strollers for mothers with babies to use on downtown shopping trips. A phone call to the company will reserve a stroller, and the mother can pick it up when she alights from the bus downtown. In the summer the line gives free rides to kids on their way to swimming lessons and on three Sundays a year - Easter, Palm Sunday and Mothers' Day - church goers get a free lift.

### Public Relations

Old ladies now ride the buses with assurance. Drivers are instructed never to start up until all elderly folk are firmly in their seats, even if it means the loss of a minute or two on a tight schedule, yet the service is faster than ever. Like a successful politician, the bus company's program to win friends and influence people covers nearly every segment of the population. Even motorists, the traditional enemy of bus drivers everywhere get a break. Company drivers are trained to forego the usual tank-like approach of these buses to city traffic.

### Accident Experience

The company's accident toll has been more than cut in half in the past decade.

### Financial Stability

This company is consistently in the black financially, and it has managed to get along without a fare increase since 1956 in the face of steady increases in equipment and labor costs. Besides it has purchased \$2 million dollars worth of new red and yellow buses to provide its customers with smoother rides.

The majority of the 1,300 transit systems in the United States either are losing money or doing little better than breaking even. In some cities the situation has become so desperate that the faltering private companies are being taken over by the municipalities - about 30 such take-overs have occurred since World War II. Yet, this has proved no solution since the same basic problems that plagued their private predecessors continue to confront the publicly-owned systems.

### Effects of the Private Automobile

Transit's ills stem mainly from the loss of its customers to the private automobile. Other influences too, have been at work - the five day week, the rise of suburban shopping centers, and TV-inspired stay-at-home recreational patterns. Revenue passengers on the nation's local bus, trolley and subway systems, as a result dwindled from 13.8 billion in 1950 to only 8.3 billion last year. This city, a medium size city of 375,000 including suburbs, was no exception. In three of the five years from 1948 through 1952 it operated in the red.

### City Cooperation

Finally in 1952 the company's affairs had reached such desperate straits that it announced it was going out of business. At that time the mayor got together in a series of urgent meetings with local business leaders and the general counsel for the bus company, now its president, in a last-ditch effort to save the service. The result was not only a complete revamping of the company, but a basic revision of the city's system of regulation.

### New Regulatory Body

A new city agency, called the Transit Authority, was set up in an effort to take the question of routes and fares out of politics as much as possible. Almost immediately the bus line was permitted to eliminate some of the unprofitable routes. The city also built the system a new terminal and granted it some tax conceptions. The bus company in turn launched a vigorous cost-cutting drive within its own organization, and almost as important it began a campaign which is still continuing to convert its corporate image into a more benign form, and to eliminate the "public be damned" aura that seems to surround so many transit companies, at least in the public's mind. Within twelve months the company was making a profit and it has stayed clear of red ink ever since.

### Scheduling Service

The company started its campaign to win friends by providing post cards for riders to use to fire gripes at the transit system; 10,000 complaints poured in.

A frequently-mentioned irritation; lack of a schedule that an adult of normal intelligence could decipher, the company promptly switched to easy-to-read, pocket-size schedules.

Since then the company has tried to tailor service in every possible way to fit its riders' needs. Just a couple of months ago it introduced special Sunday schedules, carefully arranged to deposit church-goers at church doors within ten minutes before the start of the morning service, and to pick them up within ten minutes after the close. The company checked with churches along its routes before drawing up the timetables. One church changed the time of its service so it would fit into the bus schedule better.

### Stop and Shop

Another new wrinkle - "stop and shop" - began last year. At no extra cost passengers boarding a bus downtown may obtain special tickets that permit layovers for shopping at outlying neighborhood stores after which they may board another bus for the rest of the trip home.

### Club Coach Service

Club coach service, an innovation several other cities are trying, was introduced here in 1954. These extra-fare buses pick up regular suburban customers at their doors in the morning and whisk them downtown with no stops. Riders are similarly returned to their doorsteps in the evening. Club coach service was slow to catch on, but is now a solid money-maker.

### Employee Relations

Realizing that a cheery "good morning" may have a lot to do with retaining a rider's patronage, one of the first things the company did in the new approach, was to hold a series of meetings with small groups of drivers. The company president tried to point out that fewer passengers meant fewer jobs for them and that the only way to keep passengers was to make the ride so pleasant, that they would not want to leave.

### Change in Trend

These good will efforts haven't prevented a continued loss of passengers. In this respect this city is no different than most other urban lines. Its revenue passengers have been decreasing since 1946, but company officials believe their efforts have slowed the drift away to competing forms of transportation, and there are signs that the trend may have been arrested.

### Importance of Transit Recognized

One of the most important changes has been the exclusive lanes for buses described heretofore. This system is becoming increasingly popular

in congested cities and is now in effect in such cities as Chicago, Baltimore, Cincinnati and Dallas. In support of this municipal concession, transit men argue that a bus hauling several dozen passengers deserves street space proportionate to the number of people carried. They claim a 50-passenger bus can carry as many people as normally ride in about 35 private automobiles.

The system was put in effect here in 1956 with special lanes given over to the buses downtown between 7:00 and 9:00 A.M. and 4:00 and 6:00 P.M. Faster-moving buses, of course, save money for the company since fewer drivers and vehicles are needed. One route, for example, formerly required 19 buses to operate at six minute intervals during rush periods. Now 17 buses maintain the same schedule.

#### Increased Dependability

This company has achieved a sharp reduction in bus breakdown. It was running about twenty delays a day in 1953; now it averages less than twenty a month.

#### Improved Equipment

Purchase of new diesel buses of course was a big help. Their arrival was the occasion for a community-wide celebration. A rigid program of preventive maintenance on the old buses has paid off too. Bumper to bumper checkups every three thousand miles have replaced the old hit or miss system, with the result that shop hours per 1,000 miles of service have dropped from 37 in 1953 to 21 at present. Estimated annual savings to the bus company in labor and parts costs; over \$350,000.

#### Accident Reduction

Accident reduction is an obsession with this company. Officials and driver supervisors make a point of tossing in a comment on safety every time they chat with a driver. One supervisor notes, for example, that by constantly reminding drivers to use their directional lights, company has all but eliminated the most common bus accident - being clipped on the left side when pulling out from the curb.

The campaign has paid off. In the face of much heavier traffic the company's buses now average one accident per 22,000 miles compared with one per 7,500 miles ten years ago. Claim payments last year totaled \$109,000 down from \$145,000 in 1953 despite a steady rise in the size of awards in accident cases and repair costs.

#### Supervisory and Clerical

The cost-cutting fervor swept into the company's offices where the clerical force has been cut by a third in five years. A typical move: A full-time switchboard operator was dropped, and four clerical workers from the accounting department now take turns handling the chore.

#### Revised Form of Regulation

Company has a great advantage here in its unique system of municipal regulation. The special bus lanes for instance, had to be authorized by the city. The mayor trumpeted the idea that the transit company's problems

were a municipal problem. He opposed public ownership of transit in this city, but stressed the need for the city and the bus company to work together to solve their common problem.

The first step was to transfer the job of regulating the transit system from the 21-man city council to a streamlined 5-member transit authority, whose members were appointed by the mayor and who serve without pay. It was an impossible situation when the council was regulating bus service because the councilmen were naturally under tremendous political pressures, and they were always adding stops or changing routes so the bus would go by some constituent's front door. At the same time they were adding stops and lengthening routes political pressures forced them to oppose fare increases.

#### Schedule Economies

Working with the new regulatory authority the bus was able to redraw its schedules and routes so that the mileage its buses travel on a weekday was cut to 17,000 miles from 23,000. The authority also permitted the company to curtail night runs on many of which the driver made his lonely rounds in almost complete solitude.

The authority has the power to eliminate the transit company's profits, if profits exceed a fixed limit based on the company's assets and volume of business in any one year, the excess is put into a fare regulator fund which is used to make up the difference when earnings fall, thus easing the pressure for fare increases in bad times.

#### Tax Relief

The city also has given the bus company a break on its taxes. For many years the company has paid a 3 per cent gross receipts tax which went for the operation of parks. Three years ago this tax was redirected to the transit authority to be used for the benefit of bus riders and the company. Using these tax funds, the authority constructed an efficient 1.2 million dollar office and garage building to replace the dilapidated quarters the bus company had been occupying. The \$60,000 rental that the company pays the authority now has completely replaced the tax which had amounted to about \$90,000 a year. Relieved of the burden of financing these badly needed facilities the company was able to go out and buy a fleet of modern new buses.

April 21, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Increased Revenues:

Group of companies has attempted to increase revenues by greater use of advertising on the outside of vehicles, pointing up the lack of "fuss," parking, driver fatigue and savings; by the sale of bus tickets at downtown department stores where the stores have allowed purchase of tickets to be charged to their store account; some stores have given trading stamps for the purchase of bus tickets, helping company and themselves by bringing people into the store.

Outside Maintenance Work:

By performing maintenance work in company garages for others it has increased revenues and at the same time created greater efficiency through fuller work-force utilization and absorption of some over head charges.

Claims Costs

Claims costs have been kept in line in spite of increased demands through extensive use of driver safety training programs, safety bulletins and cash safety awards.

Tax Relief

Attempts to secure tax relief at both the local and state levels have been only partially successful at the local level in the elimination "privilege fees." Success at the state level has thus far been delayed by reason of state financial problems.

Results

Company finds it most difficult to place a dollar value on various methods of "self-help" used. It does feel however, that valuable benefits have accrued by using such methods and that other operators might also profit thereby.

June 9, 1959

TRANSIT IMPROVEMENTS

Company reports that it has some things in the mill but none of them have jelled, such as validation plans, bus lanes, and improved public relations.

TRANSIT "SELF-HELP"

Company reports that it has done pretty much the same things that have been tried by all, including the following: 1. Handing out time tables house-to-house; 2. Placing time table holders in stores; 3. Consolidation of facilities wherever possible and practicable; 4. Stepping up charter coach solicitation; 5. Outside maintenance work in company shops.

April 16, 1959

June 12, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

General

The city acquired the local transit system from a former private owner in September of 1955. Since that time, the "Authority" has purchased and placed in operation new rolling equipment costing approximately \$70,000; built new general offices at a cost of \$57,000; rehabilitated maintenance facilities to the tune of about \$20,000; rehabilitated buses taken over from the predecessor owner and retained in service at a cost of \$55,000; and has extended service into areas not previously served by the private owner. In fact, route miles have increased approximately 15 per cent since the Transit Authority took over. Future extensions are planned for this growing city in the very near future.

Charter and Other Special Services

The Authority instituted a sightseeing tour service in 1956. The first of its kind in this city. While it was not exactly productive, nevertheless it served a useful purpose public relations-wise. In 1956 the Authority also initiated an aggressive campaign to increase charter revenue. To assist in this program two highway cruisers were purchased to augment the Authority's fleet of transit coaches. In 1958 the Authority entered into an agreement with the Board of Education for carry school children. Apparently, the school district recognized the fact that the Authority could handle the school load cheaper than they; consequently, the district disposed of some 14 school buses, the business being taken over by the Transit Authority.

In the past three years special bus revenue - charter and school contract service - has increased from \$6,000 to \$124,000 a year. This has offset a loss in revenue from a decline in adult riding, and enabled the Authority to continue its low fare of 15¢, 4/55¢ since March 1956, the date of the last increase in adult fare. The school fare is 20 tokens for \$2.00.

Expressway Operation

The Authority reached an agreement with the State Highway Division, for construction of suitable bus turnouts and passenger interchanges on a freeway now under construction and due for completion some time next year. The Authority has also made known its desires to discuss adequate facilities on other freeways which may be planned in the future.

Express Services

The Transit Authority inaugurated express service on three lines, and while on a minimum basis, it is growing in a manner to indicate the need for expanding this type of service sometime in the immediate future.

Reorganization of Transit Operation

Since taking over the operation has been completely reorganized; all schedules have been revised; supervision increased; lines extended;

new routes established; express service inaugurated; charter service increased; sightseeing service established; and contracts entered into with the school district for the transportation of school children. Public relations as well as labor relations have improved tremendously.

#### City Cooperation

The city has cooperated by a constant and continued program of improving bus loading zones, by replacing curbs, paving platforms, and in some cases tearing up and replacing gutters with reenforced concrete. They have also cooperated by relocating bus stops and increasing their length when so requested by the Transit Authority. In some areas they have eliminated parking at the request of the Authority.

#### Traffic Regulations

In cooperation with the city traffic engineer and other city officials, parking is slowly but progressively being eliminated in the downtown area. While this progress is probably not as fast as it should be, nevertheless the Authority is making some ground in this connection.

The Authority has made known to city officials its intension to eventually seek restricted lanes for buses during certain periods of the day; however, it is felt advisable to first get rid of parking on the right side of one-way streets during the rush hours, before advancing into the controversial matter of exclusive bus lanes.

#### Financial Status

The Transit Authority has been operated on a self-sustaining basis including payment of the principal and interest on its bonded indebtedness.

#### Public Relations

The improvement of public relations is a result of improvements which have been made in service, plus a betterment in labor relations, and the cooperation received from daily newspapers which give the Authority a fair shake. Authority uses mailing lists for placing transit's story before the city's leaders, and is sure that this has done a lot of good.

April 16, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

General

On a property where riding and revenues have not yet reached the bottom of a long decline, it is a little difficult to evaluate specific methods and results thereof in attempt to make enough to stay in business and to furnish an adequate transportation system in the community. Company knows that it is not as bad off than it would have been had it not put into effect many of the changes reported. Management is still convinced that transit in a community of approximately 150,000 people can be made to pay. Company has made some money - never enough - but paid regular dividends to its share holders over its eleven years of existence as a separate company. It plans to find ways and means to continue doing this.

Reroutings and Line Extensions

Company has done some rerouting and extension of motor bus lines into fairly heavily built up adjacent areas on an experimental basis. Some of these have built up enough to warrant continuance, others have been discontinued. Any revenues obtained are new business.

Vehicle Replacements

Company announced a few months ago plans for gradual replacement of trolley coach lines with motor buses, so that it may reroute some, and particularly extend others to areas which it cannot reach with trolley coaches. To complete this phase more quickly, company has purchased 29 used twin coaches from another city, so that it can make the change-over more quickly than could be done with brand new equipment at present day prices. None of these vehicles are on the street at this writing, but the first substitutions will be made within the next few weeks.

School Bus Service

Company has worked out with school authorities a basis of guaranteed revenue service to a certain group of schools. This has been on an experimental basis for two years and will be extended this year. Under this plan, the schools guarantee company \$7.00 per hour for all bus hours on these off-line routes. Schools print and sell special weekly tickets good only on those buses and sold at a cost of \$1.00 per child and not more than \$2.00 per family. Approximately 9 per cent of the passes are thus given to the third (or additional) members of the same family. Cash fares collected on these specials are credited against the guaranty and then schools make up the difference on monthly billing. The direct payment by schools amounts to 25 per cent of the total payments to company for the service.

Fort Wayne community schools now include three of the four townships adjacent to the city proper. With the help of the city schools company has arranged service for the kindergarten pupils of these townships to their schools on the basis of about \$7.00 per hour. Various organizations, such as Lions Club, P.T.A. Associations and others collect from the parents with

the children using each route and remit to company weekly. This service also is growing.

Schools have worked closely with the company in changing hours of certain schools, in order that buses may make more than one trip while out, thus, increasing company's productive time and decreasing their cost. This increased school business is one reason company has had to add to motor bus fleet this fall, and doing it with low priced vehicles seem to be the answer.

Company has always maintained to the schools that it should be able to furnish services of these kinds to them more cheaply with buses that otherwise do other work, than they could furnish their own service with owned vehicles used a few hours a day.

### Charter Business

Company is gradually building up its charter business locally. Although the community is too small for much sightseeing, company has been increasing its charter from industrial and mercantile firms, and for convention usage.

Company has also started charter service from the city area to any place in the state and expects to build this up in the coming year. It is at some disadvantage with only city type buses and cannot well maintain that these are as comfortable as reclining seats used in the intercity buses. It is also competing in this area with the only nonunion intercity bus operation in Indiana, but in spite of these things management can see additional revenues ahead.

### New Transfer Privilege

A few months ago company revamped its transfer system to provide "stop and shop" transfer privileges both in the downtown area and in the neighborhood shopping areas on various lines. This is one that company cannot put a finger on to determine what it has produced, but there have been favorable comments and usage of it.

### Park and Shop

For about two years company has been maintaining that downtown merchants must in the long run pay transit fares as well as parking fees if they are to continue to have a transit system. Company also pointed out that only downtown has complete transit coverage, and the outlying new shopping centers have practically none.

Last week the downtown merchants association started a new "freeway" plan. It appears to the company that this plan has more potential for success than any others used so far to date over the country. All of the major stores in the downtown area except one big store are in the plan, together with five banks and one or two professional men. The largest department store dropped out of the former "co-park" plan more than a year ago when they took up S & H Green Stamps. Now this company does not validate for either transit or parking.

Under the former co-park plan, each merchant paid for stamps used on the basis of 5¢ parking value for each \$2.00 purchase. Some stores boosted the stamps and some did not. Under the freeway plan all

participants will pay for both parking and transit validations on the basis of proportion of their individual sales to the total of the group. The banks are in on a preliminary basis of 10 per cent of the cost of the whole plan. It is anticipated that if the volume of freeway validation doubles what co-park did for the last year, then the cost to the merchants will be approximately 1/4 of 1 per cent of sales.

The first ten days of this trial have been most interesting. Transit coupons have been used in increasing numbers. As a matter of fact, company has already had to tighten up on this so that the cost to the merchants would not run over company's estimate of 20 to 25 per cent of the whole plan. In using this percentage company doubled the transit portion of the Tucson, Arizona plan in effect for several years, which is about the only city-wide plan it could give any background on. It is not the intention of the merchants to pay transit fares or parking for those who work in the downtown area because they consider such people as a captive buying audience -- which may or may not be entirely true. It is the objective to attract the housewife to the downtown area for shopping. Company feels this is bound to help its riding in the long run. It may be possible that company would have further data on this in the near future.

#### Green Stamps

When the largest department store was planning a move to a brand new beautiful store building a block off the street on which most of the transit lines operate, they suggested the possibility of giving green stamps with the sale of tokens in their store by cash or credit. This plan was inaugurated on September 15, 1958. The exact same plan was later adopted by transit companies and stores in Grand Rapids and Dallas. Sales of company's token in this manner have amounted to about \$20,000 per month and this has been consistent since last September. Company cannot say that it has been reflected in improved riding, but it has certainly aided in speeding up service at heavy loading corners in the downtown district, because operators do not have the token sales and change matters to handle for as many riders. There is also a beneficial effect in having that large store know that many of their customers are regular transit users.

#### Public Relations

Company has long worked as a whole organization on public relations, but here again is something that it cannot put a dollar value on. Several company members spend much time working with city officials, Chamber of Commerce people, labor organizations and State Public Service Commission to keep them always abreast of transit problems, so that company may have their sympathetic consideration when it needs specific help. Company has been able to go to the Commission for needed fare increases, get prompt action and approval usually within ten days, with the city administration, Chamber of Commerce and labor groups supporting rather than opposing. This has actually meant dollars in company's pocket when a fare increase was necessary in avoiding long delays. In the last fare case in October 1957, support of the groups mentioned above, and prompt action were forthcoming, while another city of the same size in the state appearing at the same time were opposed by the city, the Chamber and the labor organization, and had to fight for months to get something accomplished.

### Advertising Sales

Company could not advocate generally that every property handle its own transit advertising sales. This company can do this because of its local setup. As a result it generally nets 70 to 75 per cent of revenue instead of the 50 to 55 per cent that accrues where an outside advertising company sells the service. A couple of years ago a midwestern transit operator made a survey of a dozen properties in this area and furnished the results to the companies in the area. This particular company had a greater advertising revenue per bus than any other city, although it is the smallest company of the group.

### Outside Maintenance Work

Maintenance work for others on a commercial garage basis was first undertaken early in 1957. This has been building up steadily and furnished an appreciable proportion of net revenue last year. It seems quite possible that company might, in the long run, make more money on this than on operating the transit system. The net results could be to better insure continuance of transit service in the community.

### Schedule Adjustments

Company has an interesting variation of service adjustments that has proved successful. There was a system transfer at 12:15 A.M. with 14 vehicles, and this did little else than take care of second shift workers from a big industrial plant in this location. Rather than cut this off completely, company worked out three special routes with different neighborhoods and accommodated all of the workers then riding. It even picked up a few. The other eleven buses were brought in to the garage at 11:00. This saving in the course of a year amounted to a sizeable sum and yet no one was inconvenienced except the very few who might have been riding from the center of town and there were not enough at that time to justify any mass transportation.

### Savings in Information Service

For years company has maintained a mass mailing list with its own plates totaling about 12,000 names. Each time a new printed schedule of the lines came out, company mailed to that entire list. With the increased postage rates and also the increased return cost of undeliverable mail, as schedule changes stretched out in time, company decided to experiment with eliminating the mailing list. It advertised in the buses and small ads in the newspapers whenever a new schedule was put into effect. Company furnished schedules on every bus and placed them with downtown supervisors. It also offered to mail schedules to anyone calling in or writing. There were no repercussions in the abolishment of the entire mailing list, and company decreased direct cost by several hundred dollars each time schedules came out. In addition to saving of office personnel time, in preparing the schedules for mailing, correcting plates, etc.

### Dispatching

Company has always had dispatchers on duty on Sunday with a constantly decreasing number of vehicles on the road. Two weeks ago it eliminated the Sunday dispatching and substituted a local college

student sitting at the telephone to answer schedule information queries and notify men of runs assigned for them next day when they called in. Saving has been about \$30.00 per day. Company anticipated the possibility of some union protest because extra operators were used as part time dispatchers on Sunday, but none materialized. Since 30 per cent of company's employees are share holders in the company, they seem to realize that management must cut expenses wherever possible.

#### Review of Office Procedures

Company has recently reviewed all reports and office procedures, and statistical compilations, with the result that it has cut off one employee in the accounting department with a consequent saving of about \$4,000 per year.

#### Organizational Changes

At the end of last year company eliminated one department head completely; and split his work among three others. He was given a job as one of two cashiers with a second man returned to his former job of bus operator. Now company is going to cut the cashier office to one man. It hopes to have this accomplished within the next two months which will save another \$5,000 per year. To do this it will be necessary to have bag turn-in by all operators. This has been experimented with during periods of one cashier's illness and company anticipates no trouble in a permanent plan.

#### Tax Relief

Tax relief has taken an unfortunate turn in this state. Through the State City Bus Operators Association company worked hard for a year to line up legislators on company needs and company finally succeeded in getting a bill for elimination of all state fuel taxes in the city and five miles beyond through the last legislature. The attorney general's opinion was that company had amended only one bill when it should have amended two, and it would thus be unconstitutional because gasoline would be exempt from fuel tax but not diesel and propane. The Governor signed the bill anyway in spite of the attorney general's opinion because he said in a statement that he knew the transit companies needed this relief and it was a decision for the courts to decide. Company feels that the intent of the legislators was quite clear and will file a suit for declaratory judgment in one of the county courts within the next few days. It still has a fighting chance to get this but this is about all that can be said for fuel tax relief at this time.

In the city a street use franchise fee is paid based upon percentage of revenues with a minimum of \$13,000 per year. Two years ago the city agreed to amend the franchise so that all cost of sanding and salting streets in snow and ice conditions would be paid by the city to the company out of the receipts of this franchise tax. Company now intends to approach the city for elimination of the franchise tax as well as continuing the payment for the snow and ice work. It is possible that something might be accomplished on this by the end of 1959.

June 24, 1959

TRANSIT "SELF-HELP"

Company reports the following items in response to the question, "What has your company done to help itself?":

Increased Revenues

Obviously there are only a limited number of ways in which net income can be increased. Most of the industry in the opinion of this company seems to have gotten into a rut and followed the lines of least resistance by going after an increase in fare, which in company's opinion increased the gross revenues only temporarily. Immediately this is done, another round of wage increases ensues.

Company has received a fare increase effective in September 1958. Fare is now four tokens for 50¢; cash fare 15¢; no change in the school fare. Starting just before this increase company took its men, three or four at a time, sat down with them and discussed company operations generally, stressing the extreme importance of courtesy and helpfulness on the part of each individual. This procedure was not a "flash in the pan." but was followed up by getting the opinion of our operators as to public reactions to the extra interest and courtesy shown by our personnel. Coincidental with the last fare increase came a slight increase in passengers. This increase has continued to the present time.

Reduced Inspection Costs

An analysis was made of company's mechanical inspection system to determine whether or not it could be stretched out to a greater number of miles between inspection of vehicles. Crankcase oil was analyzed and based upon the findings, the inspection period was increased by 66-2/3 per cent. No unfavorable results have been noted. A saving in the mechanical department manpower of 20 per cent was effected.

Schedule Economy

In a company of this size headways have been increased over the years to make them fit the riding so that company feels it is ill advised to widen them any further less it chase away what little riding there is left.

Claims Costs

Company's safety record speaks well for itself. It has over the last twelve years paid out in claims approximately 4/10 of 1% of its gross revenue. This according to the company is about 1/10th of the average outlay over the country.

Machine Accounting

In its auditing department company has a National Cash Register Company bookkeeping machine by use of which it does all bookkeeping with two women and one man.

Supervision and Dispatching

Company's supervisory force consists of two men, one A.M. and one P.M. supervisor. It uses combination cashiers and dispatchers having three of these with their hours overlapping so that the rush hours can be cared for without trouble. Company has one relief man who gives supervisors each a day off a week as well as the combination cashiers and dispatchers.

Tax Relief

Company has been fighting to get tax relief for the last three years but it appears to be no nearer tangible relief than it has ever been.

Depreciation Policy

Company has always felt that a rapid depreciation schedule lends itself well to keeping a property in efficient operating condition. Therefore, it has maintained its depreciation schedules as high and as rapid as possible. However, with the present government policy of higher taxes, company has asked the city to buy it out; and at the moment, it appears that city will take company over sometime during the next six months.

May 25, 1959

TRANSIT IMPROVEMENTS

Company reports the following transit improvement programs or activities in which it has recently engaged:

New Equipment

Since beginning operations in this city, company has purchased 63 new General Motors buses at a cost of approximately \$1,260,000 financing same through General Motors. This eliminated two models of buses and leaves the company now operating only two models - General Motors and Mack C-41.

School Transportation

Through an arrangement mutually worked out between the city and the present company's predecessor, company receives a subsidy of \$55,000 to \$60,000 a year from the city, and this policy was continued when new company took over. In other words, for tickets that the city purchases and distributes to children, whose transportation they must provide, the city pays the company a full fare.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Increased Revenues

Two special bus services were in existence in 1953 when this company took over operations from its predecessor. Today company has eleven special service accounts that have created a substantial increase in gross revenue. These special services include amusements as well as educational programs. Whenever company becomes aware of some special want and feels that there may be good remuneration, it immediately applies to the Department of Public Utilities for a special service certificate.

Company has strengthened the charter service each year through the excellent cooperation of all its employees. Everyone sells charter. The result is an increase of 127 per cent in regular charter business from January 1953 thru December 1958, and company is ahead of last year's figures for the first six months of 1959.

When this company took over it immediately set up a sales department, purchased 25 new buses and went after the charter business with the result indicated in the preceding account.

Company has recently acquired the rights to operate I.C.C. by purchasing a small local company who had these rights. Company can now expand its charter service to any state in the Union, also Canada and it expects to increase its revenues from this source.

Improved Traffic Conditions

Company has worked diligently to increase its speed, and its efforts have finally convinced the local Traffic Committee and City Council.

They are about to grant the company special bus lanes during the rush hours in the downtown area. The expected result is an improvement in service and possibly increased revenue.

#### Maintenance Economies

When this company took over from its predecessor there were several different types and makes of buses on the property. Today there are two kinds. GMC diesel buses and Mack gasoline buses. Company is headed toward full diesel operation. The result of this standardization of the fleet has been a reduction in maintenance cost per mile.

#### Decreased Administrative Expenses

Company has inaugurated a program of not replacing office personnel who retire. This is accomplished by improving methods constantly, and through the use of National Cash Register bookkeeping machines. Company also constantly reviews its various forms and thus effects economies periodically. It has recently consolidated its cashiering function and reduced expenses as a result.

#### Depreciation

Company has adopted the "some-of-the-digits" method of depreciation on all new buses purchased. This has resulted in a tax saving by increasing the depreciation during the first few years.

#### General

In summary, company feels that the most important thing it has done to help itself, is to make practically every member of its organization sales conscious. Employees are always watching for opportunities to sell their personal groups in civic clubs, etc. the idea that it is better to use charter transportation for ball games, outings, etc.

July 13, 1959

Case History No. "a"

TRANSIT IMPROVEMENTS

Company reports the following transit improvement activities in which it has recently engaged:

New Equipment

In this city company purchased 30 General Motors buses at a cost of some \$600,000, and financed this purchase from its own depreciation reserves which it had accumulated.

TRANSIT "SELF-HELP"

Company reports the following items in response to the question "What has your company done to help itself?":

Increased Revenues

Company made a study of the closing time of stores and shops and adjusted schedules to make better connections and to furnish more satisfactory service. Result - favorable as less waiting for buses and more convenience to customers was obtained without any additional expense.

The sales department made personal contacts with clubs, schools, etc. suggesting places and events for outings and special events. Result - increased charter revenue. Company has done a fair job of convincing customers as to the advantage of keeping the party together rather than trying to transport them by automobile.

A large metropolitan operator in this area has opened a new rapid transit line in this company's territory which will cut in to a considerable volume of regular riding. To combat this loss company has advertised in newspapers and via pamphlets distributed by operators and inspectors to inform the public that it is establishing feeder lines to this new rapid transit operation. Company expects favorable results.

April 9, 1959

July 13, 1959



**APPENDIX "A"**

# American Transit Association

355 LEXINGTON AVENUE · NEW YORK 17 · N · Y ·

FOR INTEROFFICE CIRCULATION
FORWARD TO

W. E. P. DUNCAN  
President  
JOHN E. McCARTHY  
Vice-President  
GEORGE W. ANDERSON  
Executive Vice-President  
ARTHUR W. BAKER  
General Secretary



April 6, 1959

-COPY-

I have been asked by Past President Donald C. Hyde and Executive Vice-President George W. Anderson to participate in a panel discussion on TRANSIT IMPROVEMENTS at the Annual Convention of the American Society of Civil Engineers in Cleveland on May seventh.

As I understand this panel, representatives of the Chicago Transit Authority, the Cleveland Transit System and the Toronto Transit Commission will also participate. I am to outline the picture of "trends in public transit improvements" generally throughout the industry at the outset, and that representatives of the three cities mentioned will give the details of improved transit services and facilities in their own particular cases.

Your assistance in helping me to develop a fresh, up-to-date picture of recent and contemplated transit improvements would be greatly appreciated.

Won't you please select two or three of the more important improvements to transit services or facilities which (A) have been completed within the last five years, (B) are now in progress, or (C) are part of an approved future program in your city, and tell me as much as you conveniently can about them? I will base my opening panel remarks on a digest of such information as may be furnished by a selected group of transit properties.

Annex I, attached, is a suggested outline for your report on such transit improvements in your city as you may elect to tell me about.

Annex II, attached, is a listing of suggested types of transit improvements, some of which you may wish to cover in your report on "transit improvements in your city." Please look this list over carefully before deciding that you have "nothing to report".

I would like to make the opening panel presentation as complete, factual and representative of our industry as possible, and can do this only with your assistance. Please send me whatever information you can by April 24 so that I may have time to organize the material received into an appropriate summary of industry trends.

*Devoted to the Operation and Development of the Transit Industry*

Thanking you for your assistance, I am

Sincerely,

W. S. Rainville, Jr.  
Director of Research

cc-D. C. Hyde  
G. W. Anderson  
A. W. Baker

enc.

ANNEX I - SUGGESTED OUTLINE FOR REPORT ON TRANSIT IMPROVEMENTS IN YOUR CITY

Please report transit improvements according to three time phases: A. Improvements completed within the past five years; B. Improvements now in progress; C. Approved future program of improvements.

Please give as much detail as you CONVENIENTLY can regarding the individual transit improvements which you wish to report, including:

1. Your name for or designation of the project;
2. The total dollar cost of the improvement project, if completed (A); its estimated total cost if work is now in progress (B), or if part of a planned future program (C).
3. How was the project financed? By whom? (In what proportions, if more than one source?)
4. General description of the project: Location (bounding streets, etc.), length, etc., nature of areas served, what is involved (details), etc.
5. How the project will improve SERVICE TO THE PUBLIC: Improved headway, more direct routing, faster ride (time saving), improved equipment, other (discuss).
6. How the project will improve THE OPERATING PERFORMANCE OF PROPERTY: Operating economy, improvement in net income, other (discuss); is project self-liquidating?
7. How the project fits in with STREET, HIGHWAY AND PARKING plans for the general metropolitan area: Is it part of a "balanced" approach to urban transportation improvement? Have transit officials enjoyed cooperation of transportation, traffic planning and administrative officials in the area? Other aspects?
8. How the project fits in with the MASTER PLAN for the metropolitan area: Relation to urban growth and development; relation to urban renewal plans and projects; relation to present and projected future land uses; other (discuss).
9. Do you have improvements you would like to make, but are deterred from making for any reason? (Please describe desired improvement project, reasons for not being able to undertake it, etc).
10. Please offer any other comments or suggestions which you feel would be helpful in presenting the picture of "transit improvements in YOUR city."

WSR 4/1/59

ANNEX II - SUGGESTED TYPES OF TRANSIT IMPROVEMENTS WHICH YOU MAY  
WISH TO COVER IN YOUR REPORT ON  
"TRANSIT IMPROVEMENTS IN YOUR CITY"

RAPID TRANSIT IMPROVEMENTS

1. New subway, elevated, lines in private R/W, lines over railroad R/W, or combinations thereof.
2. Extensions of subway, elevated, lines in private R/W, lines over railroad R/W, etc.
3. Modernization of existing facilities (details).
4. More convenient access (better location of loading, longer platforms, escalators, etc).
5. Parking lots to encourage park-ride.
6. Other improvements (Please describe).

TRANSIT ON EXPRESSWAYS

1. Rail express trains, express-local combinations, etc.
2. Buses in exclusive transit lanes - express/local, etc.
3. Buses in regular expressway lanes, with turnouts, loading platforms, etc.
4. Express bus services, nonstop on expressways.
5. Complementing local and feeder services.
6. Convenient access to transit stations and loading platforms.
7. Parking lots to encourage park-ride.
8. Other improvements (Please describe).

IMPROVED TRANSIT ON SURFACE STREETS

1. Improved headways
2. Improved travel time
3. New Routes
4. Route extensions
5. Express services - rush; all day.
6. Limited services - rush; all day.
7. Express/local combinations
8. Park-ride services
9. Courtesy parking services
10. Ride & Shop, services (validation, etc.)
11. Club bus services
12. Special shoppers' services (including "expresses")
13. Special events services
14. Direct routes to industrial or commercial centers
15. Direct routes to shopping centers
16. Charter bus services
17. Other surface transit improvements (please describe)

IMPROVED TRAFFIC CONDITIONS

1. Simplified downtown routings
2. Reduction in number of transit stops
3. Stricter regulation of commercial vehicle loading
4. Prohibition of parking on transit thoroughfares during peak hours in prevailing direction
5. Rigid enforcement of traffic and parking regulations by police
6. Prohibition of parking at critical outlying locations
7. Banning large tractor-trailer combinations from central congested areas during peak hours
8. Elimination of metered parking on transit thoroughfares
9. Development of low-cost parking facilities in connection with transit
10. Reserved ("exclusive") transit lanes
11. Reserved ("exclusive") transit streets
12. Improved traffic signal timing on transit streets
13. Staggered working, shopping and school hours
14. Other traffic improvements (please describe)

IMPROVED VEHICLES AND FACILITIES

1. Improved rapid transit cars and components thereof (please describe)
2. Improved motor buses and components thereof (please describe)
3. Improved buildings, maintenance facilities, etc.
4. Other physical improvements to plant and equipment (please describe)

IMPROVED FINANCIAL STABILITY

1. Improved efficiency of performance
2. Assistance through tax relief
3. Assistance through subsidy of unremunerative services insisted upon by regulatory authority or the public
4. Refinancing
5. Other (please describe)

IMPROVED PUBLIC RELATIONS

1. Selling other groups with a stake in the problem on the importance of transit
2. Educating the general public "transit-wise"
3. Selling operating personnel on their interest in better relations with the public
4. Making it "easy to use" transit
5. Other (please describe)

OTHER IMPROVEMENTS (Please describe)

1. Physical
2. Operational (including safety)
3. Regulatory
4. Financial
5. Other

WSR 4/1/59

**APPENDIX "B"**

# American Transit Association

355 LEXINGTON AVENUE • NEW YORK 17 • N • Y •

FOR INTEROFFICE CIRCULATION
FORWARD TO

W. E. P. DUNCAN  
President  
JOHN E. McCARTHY  
Vice-President  
GEORGE W. ANDERSON  
Executive Vice-President  
ARTHUR W. BAKER  
General Secretary



COPY

I have been asked by the Program Committee for the 1959 annual ATA convention to present a report during the first general session at Minneapolis on "what transit companies are doing to themselves." This is to be one of three talks designed to develop the session theme "Planning for the Future of the Transit Industry."

In April of this year I sought your assistance in connection with a paper before the ASCE on "trends in public transit improvements," and you

graciously replied in your letter of \_\_\_\_\_, giving me your views and experiences in a very helpful manner. This encourages me to seek your assistance again at this time. (NOTE: You need not repeat what you gave me before, but your thoughts on this new assignment would be highly valued. Please see items I - IV of attached Annex "A.")

did not respond to my request at that time. This, however, does not discourage me from asking you again THIS time, as I need your help in discharging this assignment. Please see attached Annex "A," items I-IV.

The decision to ask for your help again is prompted by the fact that the "improvements" paper was aimed at the civil engineers and the general public, whereas the new "self-help" report is aimed at benefiting your fellow transit operator by passing along your experiences to him. Accordingly, won't you please tell me in as thorough a manner as you conveniently can

- what steps you have taken, and
  - what results you have obtained
- (a) in increasing your net income;
- (b) by increasing your passenger and other revenues;
- (c) by decreasing your
  - operating expenses,
  - taxes, and
  - fixed charges,

along with such "advice" as you may wish to offer as the result of your experiences.

*Devoted to the Operation and Development of the Transit Industry*

I believe the "obvious" steps of (1) fare increases and (2) cutting down or eliminating services should be omitted from this presentation. The persons responsible for suggesting this topic for the program are, I believe, seeking "other" and "novel" ways and means which have been successfully utilized by our members - and which can be shared with the entire membership - for improving the revenue position, decreasing outgo, and raising the "net" while still providing as convenient a level of service as possible to the public. (Please see Annex "A," attached.)

Please send me whatever information you can by July 8th so that I may have time to organize the material received into an appropriate up-to-date summary report by the deadline date for turning in convention papers.

Thanking you for your assistance, I am,

Sincerely,

W. S. Rainville, Jr.  
Director of Research

enc.

cc-E.P. McCallum  
J.C. Baine  
G.W. Anderson  
A.W. Baker

ANNEX "A"

"WHAT TRANSIT COMPANIES ARE DOING TO HELP THEMSELVES"

I. INCREASED REVENUES

(Please give methods and results.)

- A. From regular transit services
- B. From special transit services
- C. From chartered vehicle services
- D. From increased speed and convenience of services
- E. From improved transit vehicles
- F. From improved public relations
- G. From advertising
- H. From diversification of activities:
  - 1. Trucks and auto rental
  - 2. Truck and auto leasing
  - 3. Maintenance work for others
  - 4. P & S services for others
  - 5. Accounting services for others
  - 6. Other services for "outsiders"
  - 7. Other diversified activities

II. DECREASED EXPENSES

(Please give methods and results.)

- A. Operation and maintenance - savings through improved efficiency of performance.
  - 1. Schedule economies (due to systematic adjustment of headways, speeds, etc. -)
  - 2. More efficient street supervision
  - 3. Improved safety; reduced claims
  - 4. Other operating economies
  - 5. Economies in maintenance and repair
  - 6. Economies in servicing and cleaning
  - 7. Supervisory and clerical economies
  - 8. Reduced general and administrative expenses
  - 9. Other economies in operation or maintenance  
(Please describe)
  - 10. (Major programs of reorganization, reassignment of duties, etc., for increased efficiency and economy?)
- B. Savings in taxes
  - 1. Tax relief
  - 2. Other (Please describe)

C. Savings in depreciation expense

1. Revised depreciation policies, etc.
2. Other (please describe)

D. Savings in interest or other financing costs

1. Favorable refinancing
2. Other (please describe)

E. Other (please describe)

III. INCREASED NET INCOME

A. Resulting from I and II above

B. Other (please describe)

IV. OTHER (NON-FINANCIAL) BENEFITS TO OWNERSHIP AND MANAGEMENT RESULTING FROM COMPANY'S PROGRAMS OF "SELF-HELP"

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- A. Methods        )  
                  ) (detail)  
B. Results        )

W.S. Rainville, Jr.  
5/20/59

