

J. W. BARRINGER
Personal File

REPORT ON OPERATING ECONOMIES

CHICAGO, MILWAUKEE, ST. PAUL AND PACIFIC RAILROAD

April 7, 1933.

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Consulting Engineers

120 Wall Street, New York.

April 7, 1933.

Mr. H. A. Scandrett, President,
Chicago, Milwaukee, St. Paul
and Pacific Railroad Company,
Chicago, Illinois.

Dear Mr. Scandrett:-

Pursuant to your instructions we have made studies of your organization, of the methods employed in carrying out the work in the individual departments and of the efficiency of operation in those departments, - all with a view of improving operating results. We submit herewith a brief outline of our activities and of our findings.

We undertook this assignment late in October, 1932, and were steadily engaged until the end of March, 1933. We were given full authority to develop the inquiry along our own lines and were not limited by specific instructions from the officers of the company.

We first made a study of operating expenses of the company over a period of years and of reductions accomplished to meet the decline in traffic, and compared these figures with those of other railroads operating in the western part of the United States. Particular consideration was given to transportation, traffic and general expenses because of the fact that relative reductions in maintenance expenses are not only determined by efficiency but by differences in policy. Our studies showed that in the larger groups of transportation expenses the Milwaukee's performance compared well with that of neighboring lines. In view of the fact that preliminary tests indicated that there were opportunities for further savings in general, administrative and traffic expenses, and because the concentration of those departments in Chicago, Milwaukee and Seattle made a detailed review of their functions more easily possible, it was agreed that our first task would be a study of

the activities of those departments.

For a period of two months a concentrated effort was made along the lines above specified and the payrolls and activities of the following departments were given close scrutiny:

FINANCIAL, ACCOUNTING AND REAL ESTATE DEPARTMENTS

Freight Auditor
Auditor of Overcharge Claims
Ticket Auditor
Auditor of Station Accounts
Auditor of Expenditure
Car Accountant
Auditor of Investment and Joint Facility Accounts
Chief Statistician
Comptroller and Assistants
District Accountants
Dining and Sleeping Car Accountant
Central Typing and Computing Bureaus
Central Mailing Bureau
Treasurer
Paymaster
Real Estate Agent

TRAFFIC DEPARTMENT

Freight Traffic Manager
Passenger Traffic Manager
General Freight Agents
General Passenger Agents
Outside Agencies - Freight and Passenger
Agricultural Development Department

Following the detailed studies of the accounting and traffic departments, our work proceeded with analyses of the payrolls, both in the general offices and on the line, of the transportation, engineering, locomotive and car departments. Payrolls were analyzed in the following offices:

TRANSPORTATION DEPARTMENT

General Manager and Assistant General Manager
General Superintendent of Transportation
Manager Mail and Express Traffic
Manager Refrigerator Service and Claim Prevention
Superintendent Dining and Sleeping Cars

ENGINEERING DEPARTMENT

Chief Engineer
Engineer Maintenance of Way

MECHANICAL DEPARTMENT

Superintendent Motive Power
Superintendent Car Department
Mechanical Engineer

Note:

Studies of above departments included supervisory and clerical forces on the line.

In addition to the study of the supervisory and clerical payrolls of the various departments, detailed investigations were made of the costs of operating stations, yards, towers and crossings. An inspection was made of all the important terminals of the Lines East. The offices of most of the division superintendents were visited to determine the effectiveness of the measures employed on those divisions to control operating costs.

The only phase of operating activity that was not given detailed scrutiny was the organization of train service. It was found, however, that very few extra trains were being run and that the fixed schedules of freight trains were largely controlled by the requirements of shippers and consignees and the service provided by competing lines. Our preliminary studies also showed that the Milwaukee Railroad compared favorably with other railroads in reduction of freight train expenses.

Toward the end of our engagement, the payrolls and activities of the purchasing, stores and legal departments, including freight claims, were scrutinized and our representative, accompanied by the General Counsel, visited the offices of various Counsel on the line; he also made a trip to Seattle where the activities of all departments were given some study.

In accordance with your original instructions, particular attention was given to the methods employed in the various departments in organizing and carrying out the duties assigned to them. These studies showed that your organization was fully alive to progressive ideas which, from our experience, we know have been adopted by other carriers. We found that these ideas had been used wherever applicable to Milwaukee's conditions.

Our studies in the accounting department disclose that through the use of centralized time keeping, the consolidation of division accounting into district bureaus, the handling of freight accounts of the large stations in the office of the Auditor of Station Accounts, the employment of central typing and computing bureaus, the use of modern accounting machines and excellent systems of routing the primary data through the various bureaus, the heads of this department have built up a strong, well disciplined and efficient organization.

In the operating department, the officers have kept pace with modern ideas of efficient operation through the elimination of intermediate classification yards, the use of long engine runs, the institution of fast freight schedules with a minimum of intermediate stops; through the reduction in passenger trains, the earnings of which were shown to be inadequate, the establishment of definite make-up and work of all scheduled freight trains, consolidation of operating divisions and the use of constant day-by-day checking of the volume of business with such important factors as number of switch engine shifts, train loads, overtime, et cetera.

Likewise, the maintenance departments have adopted efficient methods of controlling expenses. The use of modern machines in maintenance of way work, such as welding equipment for building up worn joints and frogs, tamping machines and the like have extended the life of track material. Maintenance of bridges and buildings has been carefully scheduled and all expenditures budgeted, thus being fully under control to meet variations in traffic. Car and locomotive repair points have been consolidated where possible and the more modern equipment has been utilized to the fullest extent, while older units, requiring heavier repairs, have been stored during the period of declining business.

The operating efficiency of the railroad has been greatly aided by the unusual degree of cooperation which exists between the operating and accounting departments. This has made possible the concentration of accounting and statistical work in the accounting department and the full use of those data by the operating officers.

In our studies of the efficiency of the various departments, we found that

reductions had been made throughout the last three years by the elimination of positions, resulting in large decreases in payroll expenses. We also found that continuous pressure was being exerted by the officers to effect further eliminations of personnel and, during the course of our investigation, many changes were made without specific suggestions on our part.

Particular attention was given to the methods employed in the various departments by which the control of payroll and other expenditures was maintained. We wish at this point to express our commendation especially of the control of payrolls in station, yard and train service by the operating department. The general managers and assistant general manager maintain a constant contact with the volume of business of all of the divisions and as a result of their activities and those of the superintendents, the payroll costs in stations, yards, towers and crossings have been kept well in line with the volume of traffic handled. In other departments, also, the machinery is available for close checking of the volume of work and the number of individuals; and the statements included in this report demonstrate the success of these efforts in effecting economies.

The policy followed by our staff in analyzing departmental efficiency was, first, to determine the actual payroll reductions during the period of declining traffic; second, to measure these accomplishments by various tests; third, to bring out in sharp relief the instances in which apparently greater savings could be made; and, fourth, where necessary, to cooperate in establishing methods which would bring about the desired result.

In carrying out the work in accordance with the policies above described, it is obvious that the specific accomplishments of our own efforts cannot be measured. The department heads were watching expenses closely throughout this period and, as previously stated, successful efforts were being made to effect economies. This policy would have been continued whether or not this firm had been employed to assist in efforts towards reductions. This is evidenced by the substantial savings made about the first of the year in both the accounting and operating departments,

as a consequence of the continuing decline in traffic and revenues. It is likewise clear that the combined efforts of department heads and our staff resulted in a marked acceleration in the number and amount of payroll reductions during recent months.

The statement below contains a summary of the supervisory, office and clerical forces in the various general office departments, except engineering and mechanical, as of January 15, 1930, 1931 and 1932, October 15, 1932, and March 15, 1933. The last two dates are included for the reason that they embrace the period of our study and since, in that period, we had the opportunity to make complete analyses and observations of the accomplishments of the various departments in effecting reductions.

| | Execu- tive* | Traffic | Finance & Accts. ** | Oper- ating | Legal | Purchas- ing & Stores | Total |
|---------------|-----------------|---------|------------------------|----------------|-------|-----------------------------|-------|
| Jan. 15, 1930 | 280 | 731 | 1,400 | 448 | 183 | 483 | 3,525 |
| Jan. 15, 1931 | 267 | 718 | 1,232 | 439 | 173 | 409 | 3,238 |
| Jan. 15, 1932 | 255 | 664 | 1,114 | 394 | 135 | 298 | 2,860 |
| Oct. 15, 1932 | 251 | 636 | 994 | 389 | 134 | 271 | 2,675 |
| Mar. 15, 1933 | 237 | 573 | 844 | 346 | 125 | 271 | 2,396 |

* Includes department heads

** Excludes District Accounts
and Auditor of Station Accounts

The group, entitled "Executive", includes the officials and heads of all important departments, while the figures under the individual departments represent the clerical and inspection forces. These figures show that in the case of most of the departments a steady reduction was in progress throughout the period of the depression. The fact that greater efforts were made during the last five months is shown by the number of eliminations per month of 56 compared with 24, 32 and 21 in 1930, 1931 and the first nine months of 1932.

There is given below a statement showing the grand total of the general office departments, as above shown; the clerical forces employed at division offices, stations and yards; the engineering department supervisory and clerical forces, includ-

ing signal and telegraph departments; the mechanical department supervisory and clerical forces; and the grand total, including all official and clerical forces and inspectors.

| | General Office Departments | Division Operating* | Engineering Signal & Telegraph | Mechanical | Grand Total** |
|---------------|----------------------------------|------------------------|--------------------------------------|------------|------------------|
| Jan. 15, 1930 | 3,525 | 2,701 | 406 | 497 | 7,391 |
| Jan. 15, 1931 | 3,238 | 2,272 | 349 | 398 | 6,496 |
| Jan. 15, 1932 | 2,860 | 1,799 | 258 | 314 | 5,423 |
| Oct. 15, 1932 | 2,675 | 1,583 | 263 | 275 | 5,114 |
| Mar. 15, 1933 | 2,396 | 1,379 | 233 | 241 | 4,540 |

* Reductions somewhat overstated because of transfers to accounting department

** Detail figures do not foot to total because of transfer of employes from operating to accounting departments. Grand total represents actual figures for all departments.

From this statement it will be noted that the total reduction from January 15, 1930, to March 15, 1933, in supervisory and clerical forces of the engineering, signal and telegraph departments was 42.6 per cent; mechanical department, 51 1/2 per cent; transportation department on divisions 48.9 per cent.

Reference has already been made to the excellent system of control covering station and yard forces. As an indication of the effectiveness of this method of control, it is only necessary to show the number of individuals on the payroll in the larger transportation groups other than those previously listed. Complete detail is not available as of March 15th for the rank and file of all forces. The number of individuals on the payroll as of February 15, 1933, compared with those as of January 15, 1930, is shown below, together with the percentages of reduction. These percentages should be compared with a reduction in the volume of traffic and gross revenues

of approximately 50 per cent.

| | Jan. 15, 1930 | Feb. 15, 1933 | Percentage of Decrease |
|--|------------------|------------------|---------------------------|
| Maintenance of way* | 6,631 | 3,376 | 49.1 |
| Maintenance of equipment* | 12,703 | 6,113 | 51.9 |
| Transportation** | 5,430 | 3,528 | 35.0 |
| Train, engine and yard crews | 10,216 | 7,209 | 29.4 |
| Supervisory, clerical and inspection forces | <u>7,336</u> | <u>4,638</u> | <u>36.8</u> |
| Grand total | <u>42,316</u> | <u>24,864</u> | <u>41.2</u> |

* Excluding inspectors

** Excluding train, engine and yard crews

Note:

An exhibit attached hereto shows further details of payroll changes which are summarized in the preceding three tables.

All departments are continuing active efforts to reduce payrolls. As of the time of the completion of our investigation, additional eliminations were authorized to take effect at varying periods between March 15th and May 1st, 1933, aggregating 59 employes and \$134,000 annually. In addition, certain departments, notably the traffic department, are actively canvassing their forces anew and advise that they anticipate considerable additional savings, although the specific number of employes to be dropped and the amount of savings to be accomplished are not yet known.

Excluding fluctuating forces, such as train and engine crews, maintenance of way, mechanical, station and warehouse labor, the reduction in personnel between October 15, 1932, and March 15, 1933, was 835 in what are ordinarily considered fixed positions. Based on a weighted average rate of the various groups involved, this approximates a saving of \$1,300,000 annually; including changes made since March 15th, the total becomes approximately \$1,434,000.

In addition to the payroll reductions referred to above, there will be decreases in personal expense accounts resulting from elimination of positions; rentals have been lowered through closing offices in outside quarters, by vacating offices in the Union Station at Chicago and Seattle and by renewals of a number of leases at lower rates. In the case of certain outside agencies in the traffic department some offices were closed entirely. In the law department considerable savings in expenses were brought about through reduction in retainers.

While it was not within the scope of our undertaking to investigate the efficiency of any individual, it is a pleasure to state that we were favorably impressed with the department heads and other supervisory personnel throughout the organization. The general officers were entirely in accord with the undertaking; they cooperated to the fullest extent not only by furnishing all information requested but by assigning assistants to work with us in accomplishing the desired result. We can also state that with the continuation of the efforts made, the President and the Board of Directors can be assured that the organization is functioning with efficiency and would, in our judgment, stand the test of a thorough investigation by any impartial person or body.

While the scope of our inquiry had to do primarily with methods and operating efficiency, nevertheless some investigations were made in other fields where a saving in operating expenses was possible. The time did not permit of exhaustive inquiry along these lines. As to possibilities of abandonment of branch lines, we found that studies had been made of the earning power of many of these branches and that others were in process. We also made an independent survey of the revenues of a number of lines and called attention to the low earnings of 19, on two of which abandonment applications have already been made. Of the balance, four were required to reach territories with large potential traffic, four were lines for which previous studies had justified retention, three are now being analyzed in detail by the offi-

cers; in the case of two, the lines have been partly abandoned and consideration will be given to the balance as rapidly as the compilations can be completed.

Some study also was given to the possibility of economies through cooperative arrangements with other railroads, looking to joint operation at terminals, pooling of train service, elimination of duplicate passenger trains, and the like. There is no doubt that considerable saving along this line can be accomplished if the railroads involved in the individual operations can agree. Our examination of the files, as well as discussions with the officers, show clearly that the Milwaukee management has been active in attempting to institute such economies. We are of opinion that efforts should be continued along these lines for the amount of saving possible through cooperation is undoubtedly substantial. While pending legislation has resulted in the slowing down of these activities on the part of certain roads, the eventual result may be to expedite them.

We desire to express our thanks to the officers and employes of the company who have aided us so materially. Without this support and cooperation our work would have been difficult and the results unsatisfactory. To mention the names of all who contributed to whatever success we have had in this undertaking is unnecessary but we desire to pay tribute to Mr. O. P. Barry, Assistant Comptroller, whose untimely death caused us profound sorrow. He was specifically assigned to assist us and through his unfailing cooperation we were able to accomplish much that would otherwise have been difficult.

Respectfully submitted,

COVERDALE & COLPITTS

Consulting Engineers.

NUMBER OF OFFICIALS AND SUPERVISORY, CLERICAL AND INSPECTING
EMPLOYEES IN VARIOUS DEPARTMENTS AT THE DATES SHOWN

| | 1930 Jan.15 | 1931 Jan.15 | 1932 Jan.15 | 1932 Oct.15 | 1933 Mar.15 | After Mar.15 |
|---|----------------|----------------|----------------|----------------|----------------|-----------------|
| <u>EXECUTIVE</u> | | | | | | |
| President | 7 | 6 | 4 | 4 | 4 | 4 |
| Assistant to President | 3 | 3 | 6 | 6 | 6 | 6 |
| Vice-President - Lines West | 9 | 7 | 6 | 5 | 5 | 5 |
| Secretary | 3 | 2 | 2 | 2 | 2 | 2 |
| Pass Bureau | 5 | 5 | 3 | 3 | 3 | 3 |
| Officers Payroll | 253 | 244 | 234 | 231 | 217 | 216 |
| Sub-total | 280 | 267 | 255 | 251 | 237 | 236 |
| <u>FINANCIAL, ACCOUNTING AND REAL ESTATE</u> | | | | | | |
| Vice President | 3 | 4 | 4 | 4 | 4 | 4 |
| Treasurer | 18 | 18 | 17 | 17 | 17 | 17 |
| Receivership Claims | 2 | 2 | 2 | 2 | 0 | 0 |
| Real Estate Agent | 33 | 28 | 28 | 25 | 21 | 21 |
| New York Financial Office | 10 | 11 | 9 | 9 | 9 | 9 |
| Comptroller | 31 | 29 | 25 | 25 | 25 | 24 |
| Ass't. Comptroller and Auditor of Station Accounts | 83 | 80 | 98 | 107 | 97 | 97 |
| Auditor of Expenditure | 123 | 104 | 105 | 100 | 87 | 86 |
| District Accountants | 129 | 107 | 76 | 193 | 181 | 180 |
| Dining and Sleeping Car Acc't. | 10 | 13 | 11 | 9 | 8 | 8 |
| Chief Statistician | 19 | 19 | 18 | 21 | 19 | 18 |
| Credit Officer | 2 | 2 | 2 | 2 | 0 | 0 |
| Freight Auditor | 359 | 320 | 274 | 228 | 201 | 201 |
| Auditor Overcharge Claims | 75 | 69 | 58 | 55 | 51 | 51 |
| Ticket Auditor | 93 | 84 | 73 | 65 | 53 | 53 |
| Central Typing Bureau | 64 | 62 | 53 | 48 | 38 | 38 |
| Central Computing Bureau | 140 | 115 | 112 | 105 | 84 | 84 |
| Central Mailing Bureau | 14 | 14 | 14 | 13 | 10 | 10 |
| Car Accountant | 223 | 183 | 162 | 137 | 118 | 118 |
| Paymaster | 7 | 6 | 5 | 5 | 4 | 4 |
| Auditor Seattle | 14 | 12 | 11 | 11 | 9 | 9 |
| Auditor Investment and Joint Facility Accounts | 122 | 99 | 94 | 78 | 56 | 49 |
| Superintendent Building | 38 | 38 | 37 | 35 | 30 | 30 |
| Sub-total | 1,612 | 1,419 | 1,288 | 1,294 | 1,122 | 1,111 |

Note:

The records of the company show that, in 1931 and 1932, the accounting department took on time keepers and station, division and material accounts from the operating and stores payrolls. This centralization of the work resulted in annual savings in excess of \$80,000 and a net reduction of 53 positions although the accounting force was increased by 37 employes in 1931 and 124 in 1932.

| | 1930 Jan.15 | 1931 Jan.15 | 1932 Jan.15 | 1932 Oct.15 | 1933 Mar.15 | After Mar.15 |
|--|----------------|----------------|----------------|----------------|----------------|-----------------|
| <u>TRAFFIC</u> | | | | | | |
| Traffic - Lines East | 615 | 610 | 565 | 540 | 496 | 481 |
| Traffic - Lines West | 116 | 108 | 99 | 96 | 77 | 77 |
| Sub-total | 731 | 718 | 664 | 636 | 573 | 558 |
| <u>OPERATING</u> | | | | | | |
| Vice President | 8 | 5 | 5 | 5 | 5 | 5 |
| Res. Ass't. to Vice President | 1 | 1 | 1 | 1 | 0 | 0 |
| General Manager - Lines East | 22 | 19 | 15 | 16 | 14 | 14 |
| General Manager - Lines West | 20 | 9 | 8 | 9 | 9 | 8 |
| General Supt. Transportation | 31 | 27 | 24 | 24 | 22 | 21 |
| Mgr. Refrig. Service and Claim Prevention | 103 | 93 | 85 | 80 | 71 | 71 |
| Mgr. Mail and Express Traffic | 21 | 22 | 23 | 22 | 20 | 20 |
| Supt. Employment Bureau | 4 | 2 | 2 | 2 | 1 | 1 |
| Police Department | 164 | 176 | 175 | 174 | 161 | 161 |
| Chief Surgeon | 2 | 4 | 3 | 3 | 3 | 3 |
| Safety and Fuel Department | 16 | 30 | 14 | 14 | 7 | 7 |
| Supt. Sleeping and Dining Cars | 44 | 42 | 32 | 32 | 29 | 28 |
| Ass't. Superintendent Trans- portation - Lines West | 12 | 9 | 7 | 7 | 4 | 4 |
| Sub-total | 448 | 439 | 394 | 389 | 346 | 343 |
| <u>LAW</u> | | | | | | |
| General Counsel | 22 | 19 | 18 | 18 | 18 | 16 |
| General Adjuster | 39 | 32 | 28 | 28 | 28 | 27 |
| General Attorney - Lines West | 4 | 4 | 4 | 3 | 3 | 3 |
| Tax Commissioner | 6 | 7 | 6 | 7 | 6 | 6 |
| Freight Claim Agent | 112 | 111 | 79 | 78 | 70 | 70 |
| Sub-total | 183 | 173 | 135 | 134 | 125 | 122 |
| <u>PURCHASING AND STORES</u> | | | | | | |
| Purchasing - Lines East | 38 | 34 | 32 | 32 | 32 | 32 |
| Purchasing - Lines West | 20 | 17 | 16 | 15 | 15 | 15 |
| Tie Inspectors | 21 | 19 | 13 | 7 | 11 | 11 |
| Milwaukee Stores | 219 | 151 | 115 | 109 | 103 | 103 |
| Other Stores | 185 | 188 | 122 | 108 | 110 | 110 |
| Sub-total | 483 | 409 | 298 | 271 | 271 | 271 |
| <u>TRANSPORTATION (Division)</u> | | | | | | |
| General Superintendents | 19 | 10 | 9 | 11 | 11 | 11 |
| Other | 2,682 | 2,262 | 1,790 | 1,572 | 1,368 | 1,364 |
| Sub-total | 2,701 | 2,272 | 1,799 | 1,583 | 1,379 | 1,375 |
| <u>ENGINEERING</u> | | | | | | |
| Chief Engineer | 271 | 225 | 157 | 159 | 137 | 134 |
| Assistant Chief Engineer | 32 | 26 | 20 | 23 | 20 | 8 |
| Maintenance of Way Shops | 24 | 21 | 15 | 23 | 20 | 20 |
| Signal Department | 26 | 23 | 16 | 14 | 14 | 14 |
| Telegraph Department | 53 | 54 | 50 | 44 | 42 | 42 |
| Sub-total | 406 | 349 | 258 | 263 | 233 | 218 |

| | 1930 Jan. 15 | 1931 Jan. 15 | 1932 Jan. 15 | 1932 Oct. 15 | 1933 Mar. 15 | After Mar. 15 |
|----------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|
| <u>MECHANICAL</u> | | | | | | |
| Milwaukee Shops | 253 | 208 | 179 | 160 | 136 | 136 |
| Other Shops | 131 | 112 | 51 | 42 | 38 | 38 |
| Division | <u>113</u> | <u>78</u> | <u>84</u> | <u>73</u> | <u>67</u> | <u>67</u> |
| Sub-total | 497 | 398 | 314 | 275 | 241 | 241 |
| <u>MISCELLANEOUS</u> | | | | | | |
| | 50 | 52 | 18 | 18 | 13 | 13 |
| <u>GRAND TOTAL</u> | | | | | | |
| | 7,391 | 6,496 | 5,423 | 5,114 | 4,540 | 4,488 |

Note:

Increases in earlier periods are generally accounted for by transfers between departments.

This applies particularly to the following:

| | | |
|---|----|-------------|
| Assistant to President | in | 1931 |
| Ass't. Comptroller & Auditor of Station Accounts | in | 1931 & 1932 |
| Auditor of Expenditure | in | 1931 |
| District Accountants | in | 1932 |
| Manager, Mail & Express Traffic | in | 1931 |
| Safety and Fuel Department | in | 1930 |

Seven other positions, not included in above statements, have been eliminated effective after March 15th.