

in Illinois under separate corporations, with the lines leased to the Milwaukee by the Illinois corporations, the lease taking the place of a deed. The act went into force on July 1, 1890.<sup>1</sup> By deeds dated April 8, 1890 the properties of the Chicago, Milwaukee & St. Paul Railway Company of Illinois, the Chicago & Pacific Railway Company, and the Chicago, Evanston & Lake Superior Railway Company were conveyed in fee simple to the Milwaukee. By a deed dated September 1, 1890 the property of the Western Union Railroad Company was also conveyed to the Milwaukee. By deed dated July 1, 1901 the property of the Cooke, Lake & Hollenry Counties Railway Company was likewise conveyed. By deed dated September 18, 1901 the property of the Janesville & Southeastern Railway Company was likewise conveyed. However, the latter corporation was chartered in Wisconsin and built to connect with the Cooke, Lake & Hollenry Counties Railway in Illinois. The Milwaukee owned all the capital stock of these lines and had advanced them funds from time to time to construct their lines. The considerations for the conveyances was simply the cancellation of these debts.<sup>2</sup> The stockholders of the Milwaukee had approved of the transfers on September 25, 1890.<sup>3</sup>

Two extensions of the lines of the old Des Moines, Northern & Western, from Fonda to Spencer, 43.48 miles, and from

1. Chronicle, vol. 68, p. 694. Deeds, p. 418.

2. Deeds, p. 281, 370, 383, 384, 405, 340, and 426.

3. Chronicle, vol. 62, p. 226.

Rochelle City to Storn Lake, 50.50 miles, were begun in 1890 and opened on November 24, 1892. Storn Lake was the southern terminus of the extension then being constructed by the Minneapolis & St. Louis from New Ulm, Minnesota.<sup>1</sup> The cost of the two extensions to June 30, 1900 was \$875,301.88.<sup>2</sup> As with other extensions there was an additional appreciable expense connected with these extensions subsequently in completing them after they were opened. An extension of the Libertyville line to Fox Lake, Illinois, 19.70 miles, was under way in 1897.

18.53 miles of this extension was opened on April 20, 1900. At this time the company decided to extend this Fox Lake line on to Janesville, Wisconsin, for the purpose of providing a direct connection to Chicago for business tributary to the Prairie du Chien and Mineral Point Divisions.<sup>3</sup> During the year ending June 30, 1901 the entire extension to Janesville, 63.90 miles, was completed at a cost to June 30, 1902 of \$1,600,781.87.<sup>4</sup>

Extensions from Rapid to Platte in South Dakota, 80 miles, from Bismarck to Devils Lake in North Dakota, 40.85 miles, and from Fergus to Crystal Falls in Michigan, 8.84 miles, were completed in October, 1900.<sup>5</sup> The costs of these three extensions to June 30, 1901 were \$629,700.88, \$692,181.41, and \$146,806.85 respectively.<sup>6</sup>

1. Ibid., p. 1193.

2. Annual Report, 1900.

3. Ibid.

4. Ibid., 1901.

5. Chronicle, vol. 71, p. 666.

6. Annual Report, 1901.

During the year ending June 30, 1890, the company made a contract with the Escanaba & Lake Superior Railway Company by which it obtained the right for twenty years to use the tracks of the latter from Channing to Escanaba in Michigan in connection with the receiving and forwarding of iron ore from the Milwaukee ore docks at Escanaba which at this time were under construction.<sup>1</sup>

On October 16, 1890 the Milwaukee acquired the Milwaukee & Superior Railway Company at a cost of \$341,174.00.<sup>2</sup>

#### The Milwaukee & Superior Railway Company

The Milwaukee, Menomonee Falls & Western Railroad Company was organized in Wisconsin on October 30, 1885.<sup>3</sup> The road was built from Granville to Sussex, in Wisconsin, 18 miles, in 1886 and opened to this point in May, 1886. On December 11, 1891 the name was changed to the Milwaukee & Superior Railroad Company.<sup>4</sup> The extension from Sussex to North Lake, in Wisconsin, about 8 miles, was opened in September, 1897. The financial structure on June 30, 1890 consisted of \$125,000 capital stock (\$750,000 authorized) and \$148,000 first mortgage bonds issued February 1, 1890, due December 1, 1909, bearing 6% interest per annum.<sup>5</sup> By a deed dated October 16, 1890 the property was conveyed to the Milwaukee for the sum of \$100,000 and assumption

1. Chronicle, vol. 71, p. 494.

2. Ibid., vol. 71, p. 883 and vol. 73, p. 882.

3. Poor's, 1890, p. 1101.

4. Ibid., 1890, p. 385.

5. Ibid., 1890, p. 385.

of the debts of the company including the \$100,000 bonds outstanding.<sup>1</sup> The property account of the Milwaukee was debited \$341,274.83 for the purchase.<sup>2</sup> The bonds were taken up shortly thereafter. On October 19, 1890 the line extended from Granville to North Lake, 20.08 miles, and the rolling stock consisted of 4 locomotives, 2 units of passenger equipment, and 202 units of freight and miscellaneous equipment.<sup>3</sup>

The earnings of the Milwaukee & Superior for several years ending June 30 previous to its purchase by the Milwaukee were as follows:<sup>4</sup>

	1896	1897	1898	1899
Total Earnings	\$31,745	\$32,931	\$37,147	\$35,009
Net Earnings	13,134	14,953	13,279	12,106
Balance for the Year	1,048	7,723	5,310	4,242
*Deficit				

In 1900 the St. Paul made a traffic agreement with the Northern Pacific dated October 1, 1900 by which it could route its freight from the Twin Cities over the lines of the Northern Pacific to Duluth and Superior. Only through business originating outside the extremities of this line and not destined to any place on this line of the Northern Pacific could be hauled over the Northern Pacific tracks between the Twin Cities and the Twin Ports. The contract provided that on and after January 1, 1925 the St. Paul could at its option discontinue the arrangement or renew the arrangement with the additional privilege of routing its

1. Deeds, p. 408.

2. Annual Report, 1901.

3. Poor's, 1900, p. 325.

4. Ibid., 1897, 1898, 1899, and 1900.

freight business destined for points on the line of the Northern Pacific over this line. For the present the Northern Pacific was to physically handle the business. If the arrangement were renewed on and after January 1, 1895 the Milwaukee was to handle its own business, running its own trains over the tracks of the Northern Pacific on this line.<sup>1</sup> The through rates set by the St. Paul were to be divided equally on the basis of a proportion of local freight until January 1, 1895. After that date, if the contract were renewed, another arrangement for the charges was to go into effect.<sup>2</sup>

Prior to the making of this arrangement there were rumors that the St. Paul was contemplating an extension from the Twin Cities north to Lake Superior.

In March, 1901 the entire \$3,000,000 capital stock of the Davenport, Rock Island & Northeastern Railroad Company was purchased by the Milwaukee and the Burlington roads, each acquiring one half of the stock.<sup>3</sup>

#### The Davenport, Rock Island & Northeastern Railroad Company

The Davenport, Rock Island Railway Bridge was organized under the laws of Iowa pursuant to articles dated January 20, 1886 to construct a bridge over the Mississippi River and to own and operate the same as a part of a line of railway. The bridge was never constructed. On January 28, 1895 the name was changed

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1. Chronicle, vol. 71, p. 379. Interview with H.H. Field, chief counsel of the St. Paul, at Chicago.

2. Chronicle, vol. 131, p. 836. See page 400.

3. Chronicle, vol. 72, p. 634 and 675.

to the Davenport Rock Island Bridge, Railway & Terminal Company. The company's plan was to build a line from Davenport, Iowa, west along the Mississippi River to the city cemetery and southerly over a bridge to be built by the company over the river to the Iowa-Illinois line to connect there with a line running to Rock Island, Illinois. Considerable preliminary work was done in the way of surveys and some work on the sub-structures was started in the fall of 1897. On June 10, 1898 the stockholders changed the company's name to the Davenport, Rock Island & Northwestern Railway Company (Iowa corporation). The bridge across the Mississippi was subsequently completed on June 1, 1899 and opened on January 1, 1900. The line over the bridge from Davenport to Rock Island, 4.37 miles, was completed in the fall of 1899 and opened on January 1, 1900.

The Davenport, Clinton & Eastern Railway Company was organized under the laws of Iowa pursuant to articles dated April 3, 1896 to construct a line from Davenport northeasterly to a point at or near Clinton, Iowa, 34.37 miles. In 1896 the construction began and in January, 1900, the line was completed between these two points and opened for traffic on February 8, 1900. The line connected with the line of the Milwaukee near the eastern city limits of Davenport. This line was operated not under its corporate name but until February 27, 1901, as a part of the Davenport, Rock Island & Northwestern without any formal agreement.

The Rock Island & Eastern Illinois Railway Company was organized under the laws of Illinois pursuant to articles dated May 6, 1896 to construct a line from Rock Island to East Moline, Illinois, 5.87 miles. Work was commenced in 1896. On July 20, 1898 the name was changed to the Davenport, Rock Island & Northwestern Railway Company of Illinois. The line was completed by the new company on January 5, 1901. The line was not operated by this corporation, but by the Davenport, Rock Island & Northwestern as part of its lines without any formal agreement until February 27, 1901.

The Moline & Peoria Railway Company was organized under the laws of Illinois pursuant to articles dated September 25, 1900 to construct a line from East Moline to Peoria, Illinois. A line from East Moline to a point near the Rock River, 2.88 miles, was constructed. The line was not operated by this company; but until February 27, 1901, by the Davenport & Rock Island for switching and industrial purposes.

On February 27, 1901 the Milwaukee and the Burlington made an agreement with these four companies, the latter three of which lines were being operated under the name of the first, for the joint use of these four companies' tracks.<sup>1</sup>

The financial structure of the Davenport, Rock Island & Northwestern consisted of \$3,000,000 in stock (\$4,000,000

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1. Davenport, Rock Island & Northwestern Railway (June 30, 1918) a pamphlet Deeds, p. 525.

authorized). There was no bonded indebtedness or floating debt. The group really financing these four companies consisted of several eastern steel capitalists. The actual builder was John W. Gates. He planned to extend the road from Moline to Peoria, about 160 miles, shortly and issue some bonds.<sup>1</sup>

However, in March, 1901 the Milwaukee and the Burlington purchased the entire \$3,000,000 capital stock of the Davenport, Rock Island & Northeastern for cash. The two roads each agreed to pay half the interest and taxes. The revenues of the road were to be deducted from the operating expenses and the deficit was to be paid by the two roads on a wheelage basis. If at any time there was a surplus it was to be divided equally between the two roads. The board was to consist of members, half of whom were to be nominated by the Milwaukee and half by the Burlington.<sup>2</sup>

By three deeds dated June 30, 1901 the proportion of three of the companies were conveyed to the fourth, the Davenport, Rock Island & Northeastern.<sup>3</sup> So now the agreement as to the joint use of the lines was between this company only and the Milwaukee and the Burlington. On June 30, 1901 the line of this company was about fifty miles in extent and the rolling stock consisted of 7 locomotives, 8 units of passenger equipment, and 60 units of freight equipment.<sup>4</sup> The income statements of the

1. Chronicle, Vol. 71, p. 686.

2. Deeds, p. 525.

3. Ibid.

4. Poor's, 1902, p. 571.

line for a number of years subsequent to 1861 show operating deficits.

The construction of a line from a point 3.4 miles west of Preston, Minnesota, to Green Island, Iowa, 11.8 miles, was completed and put into operation in October, 1861. The cost to June 30, 1862, the fiscal year in which it was completed was \$205,000.00.<sup>1</sup> This extension was commenced during the previous fiscal year.

In October, 1862 the Milwaukee entered into a traffic contract with the Union Pacific terminable at once on notice by which the Milwaukee secured the same privileges in connection with running through passenger and freight trains to the coast over the tracks of the latter. Passenger service was established from Omaha to San Francisco on January 5, 1865. In October, 1862 the stockholders of the Milwaukee increased the common stock by \$25,000,000. It was rumored at that time that the Milwaukee threatened to leave this stock, build a line to the coast, and compete with the Union Pacific if the latter would not permit the former through joint use to establish passenger and freight service through to San Francisco.<sup>2</sup>

Early in 1863 the Milwaukee acquired the entire capital stock of the Wisconsin Western Railroad Company at a cost of \$204,525.<sup>3</sup>

1. Annual Report, 1861.

2. Chronicle, vol. 75, p. 248; vol. 76, p. 1301; vol. 76, p. 101; and

vol. 77, p. 349.

3. Ibid., vol. 76, p. 541. Annual Report, 1862.

The Wisconsin Western Railroad Company

The Kickapoo Valley & Northern Railroad Company was chartered on May 25, 1889.<sup>1</sup> A line from Sauzeke to Soldiers Grove in Wisconsin, 34 miles, was opened on May 29, 1892. At the time of the appointment of a receiver on March 6, 1894 the capital structure consisted of \$14,000 capital stock and \$600,000 bonds (\$1,200,000 authorized). No bonds had been sold. They were pledged with the stock as collateral to loans. They were first mortgage 30-year bonds due in April, 1920, bearing interest at 5% per annum, payable in April and October.<sup>2</sup> Extensions from Soldiers Grove to Randolph, Wisconsin, 4.5 miles, was opened in September, 1895; and from Randolph to Lafarge, Wisconsin, 12.8 miles, in October, 1897. Up to February 10, 1899 \$275,000 receiver's certificates were issued to finance these extensions.<sup>3</sup>

The Wisconsin Western Railroad Company was chartered on November 21, 1899. On November 24, 1899 this new company purchased at a foreclosure sale the property of the Kickapoo Valley & Northern, taking possession on November 27, 1899.<sup>4</sup> On June 30, 1899 the capital structure consisted of \$621,400 capital stock (\$400,000 authorized). There were no bonds. The line extended from Sauzeke to Lafarge, about 51 miles, and the rolling stock consisted of 3 locomotives, 3 units of passenger equipment,

1. Poor's, 1894, p. 140.

2. Ibid., 1895, p. 155.

3. Ibid., 1899, p. 380.

4. Ibid., 1893, p. 320.

and 35 units of freight and miscellaneous equipment.<sup>1</sup> Early in 1903 the Milwaukee purchased the above property. The investment account was debited \$104,400 for the purchase of the stock.<sup>2</sup> The road was operated by a separate organization up to July 1, 1907 when its accounts were merged with those of the Milwaukee.<sup>3</sup> At this time the stock was removed from the investment account and the property account was debited \$104,400.<sup>4</sup>

The earnings of this line for several years ending June 30 prior to its acquisition by the Milwaukee were as follows:<sup>5</sup>

	1900	1901	1902
Total Earnings	\$55,707	\$51,814	\$68,231
Balance for the Year	\$5,308	\$207	\$8,217
*Deficit			

To secure a more direct line and one of lower grade between Chicago and Kansas City, the construction of a line from LeMars to a point 1.1 miles south of Thomson in Illinois, 14.07 miles, and from Muscatine to Puttledge in Iowa, 75.00 miles, was begun early in the spring of 1901. This new line together with the joint use of the line of the Davenport, Rock Island & Northwestern, half of the capital stock of which was held by the Milwaukee, from West Moline, Illinois, to Davenport, Iowa, and the

1. Ibid.

2. Annual Report, 1903.

3. Poor's, 1908, p. 395.

4. Annual Report, 1911.

5. Poor's, 1901, 1902, and 1903.

use of the line of the Rock Island & Pacific from Davenport to the cattle in Iowa which had been acquired would shorten the distance between Chicago and Kansas City 31.86 miles. These lines constituted what was known as the Kansas City Cut-Off.<sup>1</sup> This move on the part of the Milwaukee was interpreted by observers as a retaliation against the Burlington which had built a line up the Mississippi River to St. Paul and Minneapolis. The importance of this investment the Milwaukee at the time did not realize for it proved very profitable.<sup>2</sup> The first of these two extensions as actually constructed extended from Ashland to Towner in Illinois, two miles south of Thomson, 15.1 miles. It was completed during the fiscal year ending June 30, 1894, at a cost of \$394,125.15 to that date.<sup>3</sup> The second as actually constructed extended from Mapleton to Rutledge, 76.3 miles. It was completed in September, 1895.<sup>4</sup> The cost to June 30, 1896, the fiscal year of completion, was \$3,029,728.48.

The extension from Eureka, South Dakota to Lisbon, North Dakota, 49 miles, was completed on March 1, 1893.<sup>5</sup> It was opened for traffic on May 11, 1893.<sup>6</sup> The cost to June 30, 1893 was \$425,870.18. The extension from Farmington to Mankato in Minnesota, 54.48 miles, was completed in August, 1893, and another from Bismarck to Faribault in Minnesota, 55.47 miles, was completed in November, 1893. The costs of these two extensions

<sup>1</sup>: Chapman, p. 177.

<sup>2</sup>: Annual Report, 1894.

<sup>3</sup>: Ibid.

<sup>4</sup>: Ibid., 1894.

<sup>5</sup>: Chronicle, vol. 78, p. 1192.

to June 30, 1904 were \$1,187,120.22 and \$724,032.95 respectively. Extensions from Preston to LeMoure in Minnesota, 4.40 miles, and from Woonsocket to Washington Springs in South Dakota, 15.58 miles, were completed during the fall of 1903.<sup>1</sup>

During the year ending June 30, 1904 a portion of the line of the Marionette Tomahawk & Western Railway extending south from Gleason, Wisconsin, together with a spur track extending northerly 5.88 miles, costing together \$150,000, was purchased by the Milwaukee. A connection with the Wisconsin Valley Division was made by the construction of a line from Ogle to Gleason, 11.12 miles, at a cost of \$71,598.41.<sup>2</sup>

During the fiscal year ending June 30, 1905 the extension of the track south east of Gleason, 1.55 miles, and from Ladd to Cherry, in Illinois, 3.41 miles, were completed at a cost of \$40,486.61. On July 1, 1905 an extension of the Arbour Line north easterly for about 21 miles and a line from Chamberlain, South Dakota on the Missouri River easterly for about 75 miles as authorized by the board were under construction.<sup>3</sup> The Milwaukee was now extending its lines beyond the Missouri River. The full extent of this extension will be brought out subsequently.

The costs of the extensions built by the Milwaukee aggregated during this period \$11,486,071.23 and were taken to property as a capital expenditure.

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1. Annual Report, 1904.
  2. Post's, 1905, p. 340.
  3. Annual Report, 1905.

On June 30, 1905 the Milwaukee owned solely 6,666.02 miles of main track and jointly 25.02 miles or a total of 6,691.04 miles. This main track was located in the following states: in Wisconsin, 1,726.42 miles; in Minnesota, 403.40 miles; in Iowa, 1,371.85 miles; in Minnesota, 1,265.57 miles; in North Dakota, 153.31 miles; in South Dakota 1,253.56 miles; in Missouri, 140.37 miles; and in Michigan, 159.12 miles. On June 30, 1906 the main track owned solely and jointly was 6,163.83 miles. On June 30, 1906 the company was operating 6,666.02 miles of track as against 7,626.53 on June 30, 1905. A few hundred miles of the track being operated on June 30, 1906 were still laid with iron rail.<sup>1</sup>

However, extensions and acquisitions were not the only way in which progress was being made. Expansion went on during this period at great strides in other respects.<sup>2</sup>

On July 1, 1900 the second main track was completed from Savanna to Babula Junction, 7.93 miles, with the exception of the track over the bridge at a cost of \$50,175.00. By July 1, 1901 second main track was completed from Marion to Merton in Iowa, 14.54 miles, from Portage to Madison Line Switch in Wisconsin, 1.45 miles, and from Sparta to Viroqua Junction in Wisconsin, 1.51 miles. By July 1, 1902 second main track was completed from Sabula Junction to Green Island in Iowa, 11.70 miles, at a cost

1. Chronicle, vol. 81, p. 849.

2. The sources of the material in the remainder of this section of this chapter are from the company's annual reports from 1898 to 1906 inclusive unless otherwise stated.

on April, 1899, at and from a point 3.4 miles west of Preston, Minnesota to Brownell, Iowa, 0.66 miles, at a cost of \$25,341.36. The construction of second main track from Brookfield to La Crosse in Wisconsin, 168 miles, was authorized in 1892 and completed in September, 1894. The costs of these second track projects for the period aggregating \$2,173,200.36 were debited to property as a capital expenditure.

The work of track elevation at Chicago by July 1, 1899 was completed from Central Park Boulevard to Pacific Junction at a cost of \$242,000.00. The rest of the work on this project from Central Park Boulevard to Mayfield and from Hawthorne Avenue to Wood Street was completed by July 1, 1900. This project was commenced in 1899 as pointed out in the previous chapter. The total cost of the entire project to June 30, 1900 was \$707,523.18. Additional work on this project from Pacific Junction to Cicero was completed in the fall of 1900 at a cost of \$300,310. The systematic reduction of grades was begun on the La Crosse Division and on the Oelceo & Council Bluffs division in Iowa between Preston, Minnesota, and Marion, Iowa, during the year ending June 30, 1899. The two projects were completed by July 1, 1901 at costs of \$1,054,484.54 and \$574,235.54 respectively to that date. Similar work on the latter project from Cicero to Parry, Iowa, was completed by July 1, 1902. At this time the grade was raised from Parry to Preston in Minnesota at a cost of \$168,186.00; and shortly after, from

Wabasha to Lombroto in Minnesota. The work of grade reduction between La Crosse and St. Paul and between Austin and Rosemount in Minnesota was completed by July 1, 1904 at a cost of \$648,022 to that date. On July 1, 1905 the elevation of the tracks used jointly by this company and the Pittsburgh, Cincinnati, Chicago & St. Louis from Western Avenue to Elizabeth Street and the tracks of the Milwaukee from Western Avenue to Grand Avenue, all in Chicago, was under way. During the year ending June 30, 1905 the Milwaukee expended \$268,162.47 on this project. The costs of these projects were not from the renewal and improvement fund.

On July 1, 1909 there were 419.78 miles of main line still laid with iron rail, which was rapidly being replaced with steel.

During this period 408 steel bridges comprising 42,326 feet were built replacing wooden bridges amounting to 36,703 feet, iron bridges amounting 8,957 feet, and embankment structures 888 feet in length. During the previous period this work consisted of iron bridges replacing wooden ones except during the fiscal year of 1898 when 72 steel bridges were built. Throughout this period the new bridge work was of all steel replacing wooden bridges and, beginning with the fiscal year 1901, replacing the iron bridges as well. During this period 16.52 miles of pile and trestle were filled in with earth. During the last three years of this period 1,478 iron culverts were built replacing a like number of wooden ones. It will be remembered

that during the previous period the excess cost of this work over operating cost was allotted to property and the rest to operating expense. During this period the entire cost of this work was charged to operating expenses as incurred from year to year directly in most cases and in the case of some of the bridges, indirectly through the renewal and improvement fund. In addition during this period large sums expended for new paving and spur tracks, ballasting lines not previously ballasted, strengthening bridges, new fences, excess cost of new buildings over the original such as new passenger stations at Sioux City, Libertyville, Albert Lea, etc., additional machinery, and various other sundry items were charged from year to year to operating expenses during this period whereas during the period previous, as was pointed out, such costs were usually allotted to property although even during that period the company was very conservative in this respect. The amounts were greater during the present period and so the board felt justified in doing so after extreme in claiming improvements to operating expenses than during the previous period. However, during the last two years of this period \$64,926.75 expended for ballasting and \$102,485.65 expended for yard tracks were charged to property.

During the year ending June 30, 1961 the construction of one double arm terminal facilities at Farnamka, which were completed at a cost of \$907,866.00 to that date. A year later

these docks were enlarged so as to double their capacity at a cost to June 30, 1903 of \$200,629.75. As mentioned previously, the Milwaukee made an agreement for the joint use of the tracks of the Escanaba & Lake Superior from Channing into Escanaba for handling ore through these facilities. The costs of these grade reduction, track elevation, gauge widening, and ore facility projects were all met from the general and improvement fund.

During the last three years of this period extensive improvements were made to the company's shops at West Milwaukee, Wisconsin, Dubuque, Iowa, Minneapolis, Minnesota, and Bettendorf, Illinois. The largest part of these improvements were made at West Milwaukee. Some of the projects here were a 30-stall engine house, a passenger car repair shop 83 feet by 575 feet, an oil house 50 feet by 105 feet, and a sectional oil station, all completed by July 1, 1905, and in addition a car erection shop 103 feet by 304 feet and an addition to the passenger car paint shop 103 feet by 24 feet under construction on that date and completed by September 30, 1905. A total of \$1,118,094.58 was spent on the shops at these four points during the three years. \$918,834.82 of this was debited to the property account as a capital expenditure; \$125,226.86 expended from the general and improvement fund; and \$23,226.80 charged directly to operating expenses (maintenance of structures and machinery). None of the expenditures on the shops at Minneapolis and Bettendorf were expended from the general and improvement fund.

During the last two years of this period \$100,000.00 were expended on yard and structures at Galena, Illinois.

\$45,781.55 of this was expended from the renewal and improvement fund, and \$500,213.88 were debited to the property account as a capital expenditure. During the years ending June 30, 1903 \$107,972.34 was expended on a new office building in Chicago and debited to property. During the fiscal years 1903 and 1904, \$145,963.88 was expended on the yards at West Davenport, Iowa, and debited to property. During the fiscal year of 1903, \$67,830.88 was expended on the construction of a connection with the Chicago, Rock Island & Pacific at Davenport and debited to property. During this period \$948,701.77 was expended for real estate which included such items as the Fulton and St. Paul Elevators in Chicago purchased from the Chicago Railway & Terminal Elevator Company in February, 1899 for \$200,000 and \$438,000 respectively, and during the fiscal years 1902, 1903, and 1904, \$124,612.88 was expended on improvements on the Davenport, Rock Island & Northwestern which was then owned by the Milwaukee and the Burlington. These items were debited to property.

The unexpended balance in the renewal and improvement fund, through which a part of the above expenditures were financed from the company's earnings, on June 30, 1905 was \$3,000,108.88. A detailed account of these expenditures from the time the fund was started, toward the close of the previous period, down to June 30, 1905 is given in Table V in the Appendix. This

table above exactly what projects were being financed out of the earnings and income of the company through this fund.<sup>1</sup>

During this period the rolling stock purchased or built at the company's shops amounted of 281 locomotives, 209 units of passenger equipment, and 17,830 units of freight and miscellaneous equipment. The total cost of this equipment was \$15,718,548.50. \$9,058,566.84 of this was debited to the property account as a capital expenditure, \$3,470,230.86 was expended from the rolling stock replacement fund, and \$2,800,590.50 was charged directly to operating expenses during the fiscal years 1900 and 1901. In 1900 none of the large amount of new equipment was debited to property. The work of installing automatic couplers and air brakes on the rolling stock continued during this period. This cost was charged to operating expenses. By July 1, 1900 all the freight cars were equipped with automatic couplers; and 74.3% with air brakes. The rolling stock replacement fund on June 30, 1906 amounted to \$219,835.29 for cars.<sup>2</sup> The charges to and expenditures from this fund during this period were as follows:

Balance in Fund on June 30, 1900	\$ 250,000.00
Added to Fund as a Charge to Operating Expenses for Replacement of Rolling Stock	<u>\$ 3,462,364.24</u>
Expended from Fund for Rolling Stock	<u>\$ 3,000,056.24</u>
	<u>\$ 3,429,320.96</u>
Balance in Fund on June 30, 1906	\$ 219,835.29

1. See p. 79.

2. See p. 84.

The rolling stock at the beginning and end of this period was as follows:

	June 30, 1898		June 30, 1905	
	Standard Gauge	Narrow Gauge	Standard Gauge	Narrow Gauge
Locomotives	808	7	1,014	5
Units of Passenger Equipment	775	9	965	6
Units of Freight and Other of Locomotive Equipment	32,950	314	41,034	26

The operations on narrow gauge road were declining during the period. The increase in the equipment during this period was much greater than during the last period. The road was well equipped with rolling stock on June 30, 1905.

By July 1, 1904 the Milwaukee had acquired the title to 1,110.6 acres of coal lands and the mining rights to 1,360.50 acres of coal lands in Monroe and Marion Counties in Iowa and the title to 347.13 acres and the mining rights to 18,437 acres in Bureau, Putnam, and LaSalle Counties in Illinois known as the LaSalle coal district containing the best grade of coal in Illinois. During the fiscal year 1904 the company acquired the title to an additional 70 acres in Iowa and the mining rights to an additional 10,900.50 acres in Illinois in the same counties. These acquisitions were acquired by the Excelerator Coal Company in Iowa and the St. Paul Coal Company in Illinois which were controlled by the Milwaukee. At this time these properties were being developed as rapidly as circumstances allowed to provide a

considerable part of the coal used by the Milwaukee. The line into the coal fields in Illinois which had been under construction by the Rockville & Southern Railway Company was completed during the fiscal year 1894.<sup>1</sup>

The Milwaukee's investments in the stock and bonds of other companies during the previous period were not very appreciable. The investments of this kind only amounted to \$640,583.12 on June 30, 1892. Bearing in mind some of the difficult years of this period this small amount is not surprising. A reflection of the better years of this period can be seen in the growth in investments of this kind during this period until by June 30, 1896 they amounted to \$5,478,094.86.

The changes in the capital accounts (cost of road and equipment and stocks and bonds of other companies) were briefly as follows:

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Cost of Road and Equipment on June 30, 1898	\$214,195,284.68
Bonds and Stocks of other Companies on June 30, 1898	\$140,522.12
Capital Accounts on June 30, 1898	\$115,255,977.51

## Additions:

Improvements and additions	\$27,885,738.18
Purchase of the railroad components	2,807,770.02
Increase in bonds and stocks in other companies from June 30, 1898 to June 30, 1901	1,308,980.18
Purchase of securities from June 30, 1901 to June 30, 1905	3,292,285.45
Miscellaneous	5,000.00
Total Additions	\$36,398,783.50

## Deductions:

Bank Credit	712,700.31
Premium on Common Stock sold	1,512,535.58
Miscellaneous	100,205.61
Total Deductions	\$2,448,441.00

## Net Additions

\$33,950,444.50
\$247,910,431.00
5,850.00

## Unexplained

Capital Accounts on June 30, 1905	\$247,910,431.00
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## Consisting of:

Cost of Road and Equipment	\$100,451,426.52
Bonds and Stocks in other Companies	5,470,094.52

## detailed

A more account of the changes in the capital accounts  
during this period appears in Table VI in the Appendix.

It should be obvious to the reader from the method in  
which many of the foregoing expenditures were financed that this  
period was one of large earnings as compared with the one previous.

Large amounts which went into improvements and additions to the property were treated either directly or indirectly through the renewal and improvement fund as operating expenses from year to year. The exact amount charged as operating expense cannot be accurately ascertained from the company's reports. During the first five years of this period \$6,640,000 was put into the renewal and improvement fund and charged to operating expenses. Nothing was put into this fund during the last two years, but \$1,327,835.51 during those two years went into additions to the property and were charged to operating expenses. During the fiscal years 1890 and 1891, as pointed out previously, \$2,626,300.50 worth of new rolling stock were likewise treated. Several millions for such items as the excess of cost over the renewal cost for new bridges, culverts and stations and for such items as new passenger and spur tracks, ballasting lines not previously ballasted, strengthening bridges, new fences, and additional machinery, were charged to operating expenses. In addition large amounts for heavier rail fastenings and from than the old ones replaced as well as repairs of cars and engines used in construction were likewise treated. Probably considerably over \$15,000,000 was so treated and found its way into improvements directly from operating expenses or indirectly through the renewal and improvement fund during this period. The additions to the rolling stock equipment fund, however, were replacements only. The board of the road followed this policy from year to year as during the previous period as carriages justified. During this

period the policy was carried out on a much larger scale. The Directors were especially liberal in this respect during the fiscal years 1900, 1901, 1902, and 1903. The figure for cost of road and equipment (property) on June 30, 1905 which was \$242,431,438.52 was certainly a conservative one. Expenditures of all funds whether treated as expenses or as capital expenditures and added to cost of road and equipment then present by fiscal years for this period increase from 1899 through these years and then decrease during the latter two years of the report.

To pointed out previously the Company's General Mortgaged 4's, the only bonds issued during the last period, were paying on a 3 1/2% basis during the early years of the present period. The company now decided to sell its General bonds 3 1/2% interest per annum instead of 4% and designated them Series A. It decided that the General 4's or Series A bonds should for the present stop at number 34,000. All the bonds of the series with higher numbers which were in the treasury were reissued. In place of the first 300 so destroyed General 3 1/2% were reissued. This adjustment resulted in a total of \$34,000,000 General 4's issued of which there were \$304,000 in the treasury.

\$435,000 in the insurance fund, and the remainder in the hands of the public about the time the company began floating its General 3 1/2's. The mortgage covered all the property of the Milwaukee except the lines of the old Milwaukee and Northern.

In January, 1899 the company sold \$2,500,000 of these General 3 1/2's from its treasury. The sale was made mainly to cover the recent purchase of the Bee Holmes, Northern & Western.<sup>1</sup> On June 30, 1899 there were 25 mortgages on the company's lines prior to the General Mortgage and aggregated on that date \$95,296,500.<sup>2</sup>

In July, 1900, \$50,000 of the General 4's in the treasury were sold to the insurance department; in October, 1900, \$25,000;<sup>3</sup> and in May, 1901, \$25,000 more.<sup>4</sup>

In November, 1900 the company sold \$4,000,000 more of its General 3 1/2's from its treasury.<sup>5</sup> The proceeds reimbursed the treasury for advances made for new construction and for payments of bonds that had matured in recent years on the Iowa & Minnesota Division, the Prairie du Chien Division, and the Iowa & Dakota Division.<sup>6</sup> On June 30, 1901 there were 25 mortgages on the company's lines prior to the General Mortgage and on that date aggregated \$95,694,500.<sup>7</sup>

On January 5, 1901 the common stock of the Milwaukee advanced from \$125 to \$128 and 750,000 shares changed hands on

1. Ibid., vol. 68, p. 120. Annual Report, 1899.

2. Poor's, 1900, p. 349.

3. From the company's records.

4. Chronicle, Investors' Supplement, vol. 73, p. 37.

5. Chronicle, vol. 71, p. 1118.

6. Poor's, 1902, p. 343.

the New York Stock Exchange. Several rumors were afloat. One was that the road would be leased jointly to the Northern Pacific and Great Northern with a guarantee of 6% and 7% dividends on the stock and that prior to the lease the surplus of the Milwaukee would be distributed among the stockholders. Another was that the Milwaukee and the Erie roads were to be joined in a system from New York to the Pacific under the control of the Hill-Homestead interests.<sup>1</sup> A week later James J. Hill admitted having purchased some of the Milwaukee stock but stated that no control was being sought. However, he hinted about the probability of a traffic arrangement between the Milwaukee and the Great Northern.<sup>2</sup> Then a week later he denied making any purchase of the stock, and stated that the idea of a joint lease of the road had never been considered.<sup>3</sup> Then early in February it was a common report that J. Pierpont Morgan had met the members of the executive committee of the Milwaukee and made a tentative proposition whereby the Northern Pacific and the Great Northern would obtain control of the Milwaukee. The proposition it was reported was declined.<sup>4</sup> A community of interests between the two former roads was of course revealed.

No doubt Mr. Hill wanted to link his lines with the markets of the Middle West, South, and Southwest as well as secure a connection with Chicago thereby linking his line with the

<sup>1</sup>. Chronicle, vol. 72, p. 44.

<sup>2</sup>. Ibid., p. 266.

<sup>3</sup>. Ibid., p. 268.

<sup>4</sup>. Ibid., p. 261.

western trunk lines. The acquisition of either the North Western, the Milwaukee, or the Burlington could accomplish this aim. The Union Pacific wanted a foothold in the north and was after the Burlington. It was said that Mr. Morgan favored the Milwaukee; and Mr. Hill, the Burlington.<sup>1</sup> Shortly after the Northern Pacific and the Great Northern jointly acquired the capital stock of the Burlington.

Early in 1901 the directors authorized the issuance of additional common stock in an amount equal to about 10% of the amount of capital stock then outstanding. This issue was offered at par to the stockholders as of record March 11, the right to subscribe expiring April 12. The subscriptions were payable 25¢ at once and 25¢ each on June 20, July 15, and September 5. The stockholders subscribed to 86,783 shares and \$6,675,000 additional common was issued. The proceeds were used to reimburse the treasury for expenditures aggregating \$4,522,520.25 expended from earnings for the construction of 301 miles of new road in Iowa, Wisconsin, Minnesota, and South Dakota, for the construction of about 18 miles of second track in Iowa and Wisconsin, and for the purchase of real estate in Milwaukee and country points to December 31, 1900; \$2,602,632.00 for the construction of the "Kansas City Cut-off"; and the remainder for other construction and additions to the property and for the acquisition of a half interest in the Davenport, Rock Island & Northwestern Railroad recently purchased jointly with the Burlington.<sup>2</sup>

1. Joseph Gilpin Pyle, "The Life of James J. Hill" (1917) v. 2, p. 112. Frederick H. Cleveland and Fred Wilbur Powell, "Railroad Finance" (1911) p. 311, hereafter referred to as Cleveland and Powell.
2. Chronicle, vol. 73, p. 437 and vol. 73, p. 635. Chronicle, Investors' Supplement, vol. 73, p. 37. Annual Report, 1901.

In August, 1901, \$25,000 and in January, 1902, \$40,000 more General 4's to the treasury were sold to the Insurance department.<sup>1</sup>

In January, 1902, the company sold \$1,362,100 more common stock to its stockholders at par. This issue was the remainder of the increase in the common authorized by the stockholders on January 4, 1901 and September 3, 1901. \$1,024,261 of the proceeds was used to meet expenditures as follows: Funds to Spencer, \$25,400; Rockwell to Storm Lake, \$20,500; Libertyville to Janesville, \$227,923; Bap to Platte, \$41,750; Bowle to Kvarts, \$23,500; Pong to Crystal Falls, \$42,492; second main tracks, \$222,375; Real estate, \$202,523; and equipment purchased during 1900 and 1901, \$620,721. These new lines aggregate about 200 miles in length. The balance of the proceeds were to be applicable to future expenditures for new lines, improvements to the property, the purchase of real estate, and new rolling stock.<sup>2</sup>

On October 4, 1902 the stockholders voted to increase the authorized common stock by \$25,000,000 or from \$52,125,500 to \$77,125,500. The directors at the time gave out no information as to the amount or the time any amounts of this were to be issued. There were rumors in Wall Street at the time that part would be issued in the form of a stock dividend for earnings which

<sup>1</sup>: From the company's records.

<sup>2</sup>: Chronicle, vol. 75, p.376. Chronicle, Investors' Supplement, vol. 75, p. 38. Annual Report, 1902.

had been diverted for capital purposes and the railroad would be leased for an extension to the Pacific Coast. There was a great rise in the price of the Milwaukee stock on the stock exchange at this time. However, none of this stock was issued during this period.<sup>1</sup> Probably the traffic agreement with the Union Pacific for the line being put off such a frequent extension to the coast.<sup>2</sup>

The insurance fund grew during this period until by June 30, 1895 the fund amounted considerably over \$1,000,000. This was invested in various securities amounting \$1,000,000 in par value with interest of \$60,000 annually. \$200,000 of this par value were various kinds of bonds included in the bonded debt of the Milwaukee including \$60,000 General 4's. The rest of the investments consisted of \$10,000 Milwaukee preferred stock and various issues in other railroad companies.<sup>3</sup>

The bond maturations during this time are very interesting. The Iowa & Dakota Division 7's matured July 1, 1899. All but \$20,000 of the \$200,000 out on June 30, 1898 were converted into preferred stock. During this period all but \$200,000 of the \$2,000,000 St. Paul (or River) Division 7's (both dollar and sterling bonds) out on June 30, 1898 were converted into preferred stock. These bonds matured on January 1, 1900. The Chicago &

1. Chronicals, Vol. 75, p. 763.

2. See p. 121.

3. See p. 87.

4. Annual Report, 1905.

5. That is, 1898 to 1906 inclusive.

Milwaukee Division 7's matured on January 1, 1903. All but \$68,000 of the \$8,145,000 out on June 30, 1898 were converted into preferred stock. The Hastings & Dakota Division 7's matured also on January 1, 1903. All but \$8,000 of the \$80,000 out on June 30, 1898 were converted into preferred stock. \$171,000 out of the \$163,000 Consolidated 7's out on June 30, 1898 and due on January 1, 1904 were converted into preferred stock. \$8,280,000 of the \$10,367,000 Consolidated 7's which were coming due on July 1, 1905 were likewise converted. The Iowa & Dakota Division Extension 7's were not due until July 1, 1908. However, by June 30, 1905, \$1,368,000 of the \$3,350,000 out on June 30, 1902 were converted into preferred stock. Also during this period \$1,120,000 Income Sinking Fund Convertible 5's, which were not due until July 1, 1918 and which were convertible into common stock, were converted into that stock during this period. By June 30, 1905 the sinking fund and conversions wiped out the same. Evidently the holders of the Milwaukee convertibles were acting more in line with their interests during this period than during the closing years of the last period when, as was pointed out previously, large portions of several convertible issues which matured during that time were not converted even though the preferred stock into which these issues were convertible was selling considerably above par at the time, as it was during the period under discussion. In other words, all the maturities during this period were convertible issues. Such a situation was not to continue, for on June 30, 1905 there were only \$1,368,000

bonds outstanding which were convertible into preferred stock.

These bonds were \$607,000 Consolidated 7's and \$631,000, Iowa & Dakota Division Extension 7's. The only issue which was convertible into common was already taken up, a long time before the maturity date. These prosperous years made the preferred stock sell higher, the high prices for the stock encouraged conversion, this conversion improved the financial structure, and the ample earnings were to a large extent diverted back into the property as was pointed out previously in this chapter. The stockholder's position certainly was a good one on the Milwaukee during these years. It is interesting to note that of the \$60,387,400 preferred stock outstanding on June 30, 1905 only about 10,000,000 were issued from the beginning of the company's history for other than the exchange of underlying convertible bonds for this stock.<sup>1</sup>

The capital structure at the beginning and end of this period was as follows:<sup>2</sup>

	June 30, 1902	June 30, 1905
Common Stock	\$ 42,000,000	\$ 50,163,000
Preferred Stock	51,818,400	60,387,400
Funded Debt:		
In the Hands of the Public and in the Insurance Fund	250,001,500	142,264,500
In the Treasury or due from the Trustees	<u>8,587,000</u>	<u>8,918,000</u>
Total Funded Debt	\$138,688,500	\$150,272,500

1. Chronicle, Railway & Industrial Section, Vol. 32, p. 37.  
2. Footnote, 1902, p. 288 and 1905. Chronicle, Vol. 32, p. 288.

A summary of the changes in the funded debt over the period which is given in detail in Table VII of the Appendix appears as follows:

Funded Debt, June 30, 1905	\$ 128,582,500
Increased by Generals issued for:	
Purchase of the Dee Holdings, Northern & Western	\$2,387,000
Improvements to the Property	1,848,000
Underlying Bonds redeemed and cancelled	<u>1,728,000</u>
	\$ 2,411,000
	\$ 145,892,500
Decreased by:	
Underlying Bonds redeemed and cancelled	\$1,128,000
Convertible Underwriting Bonds received in ex- change for Preferred Stock and cancelled	17,600,000
Miscellaneous	<u>121,000</u>
	\$0,352,000
Funded Debt, June 30, 1906	\$ 128,172,500

\$6,111,000

The Generals were issued to the treasury for compen-  
sation for expenditures made from the earnings and income of the  
company. The sales of Generals to the public and to the insurance  
fund during this period, as mentioned previously, consisted of  
bonds so issued to the treasury. Of the \$128,172,500 bonds issued  
on June 30, 1905, \$5,912,000 were in the treasury, \$897,000 were  
in the insurance fund and \$115,567,500 were in the hands of the  
public. The bonds in the treasury consisted of 160,000 General 4's,  
\$2,864,000 General 5 1/2's, and \$1,080,000 Milwaukee & Northern  
Consolidated 6's.

The \$17,500,100 increase in the preferred stock consisted of stock exchanged for underlying convertible bonds. Of the \$40,527,400 preferred stock issued to June 30, 1905 \$20,000 was in the Lawrence fund and the rest in the hands of the public.

The \$18,167,300 increase in the common stock consisted of two issues of common stock sold during this period amounting \$11,015,300 and \$1,122,000 common stock exchanged for Income Building Fund Convertible S's. All the \$18,167,300 common stock issued to June 30, 1905 were in the hands of the public. An additional \$25,000,000 were authorized but unissued.

The changes in the capitalization per mile during this period were as follows:

	June 30, 1902	June 30, 1903	June 30, 1905
Stocks	\$ 18,649.84	\$ 18,678.87	\$ 18,656.15
Bonds	22,295.00	28,007.84	17,520.97
Total			
Capitalization	\$34,944.84	\$34,686.71	\$36,177.12
Interest	1,190.18	864.74	850.94

During this time the excess of bonds per mile over stocks payable was decreased considerably. The large conversions of underlying bonds into preferred stock and the financing mostly through common stock rather than bonds during this period were of course the causes. The interest charges per mile increased approximately \$1.40 during this period. The change in the financial structure instead of being mostly the replacement of

higher interest bearing bonds with lower interest bearing bonds so during the previous period was mostly the replacement of high interest bearing bonds with stock upon which there were no fixed charges at all. The favorable comment made in this respect concerning the previous period can be said many times over for this period. There is no doubt but what the Milwaukee had a wonderful financial structure at the close of this period.

After all the changes as regards the physical changes in the property and the financing as related in the previous page, the condensed balance sheet at the close of the period, June 30, 1908 appeared as follows:<sup>1</sup>

(Figures in Thousands)

Assets	Liabilities
Road and Equipment \$242,431	\$ 68,400
Securities 5,479	40,327
Assets in Funds 4,598	115,300
Materials and Supplies 2,745	
Dues and Current Accounts 3,544	7,200
Cash <u>8,495</u>	<u>4,633</u>
Total Assets \$287,870	Total Liabilities \$287,870

The funded debt above is given in detail in Table VIII in the Appendix.

The income account for this period follows:<sup>2</sup>

1. Chronicle, Vol. 81, p. 338.
2. Coverdale's Committee, p. 11.

**Condensed Income Account**  
 (Figures in thousands)  
 Years ended June 30

Item	1962	1960	1961	1963	1964	1965	1966
Average in stock							
Operated	\$ 6,161	\$ 5,508	\$ 5,576	\$ 7,765	\$ 7,707	\$ 7,018	\$ 7,450
Operating Revenue	\$ 60,527	\$ 42,038	\$ 42,560	\$ 45,812	\$ 47,064	\$ 48,166	\$ 48,612
Operating Expenses	32,920	30,850	30,308	30,847	30,800	30,088	30,382
Net Revenue from Partnership Operations	16,597	15,180	15,262	17,324	17,214	18,178	18,230
Taxes	1,268	1,182	1,404	1,400	1,370	1,301	1,352
Partnership Operations Income	\$ 14,329	\$ 15,007	\$ 15,858	\$ 15,924	\$ 16,778	\$ 16,877	\$ 16,877
Non-Operating Income	117	229	357	506	506	496	487
Gross Income	14,446	14,186	16,205	14,357	17,217	17,455	17,364
Deductions from Gross Income	-	648	898	807	643	698	784
Net Income Available for Interest Interest on Funded Debt	\$ 14,408	13,500	14,508	15,550	16,575	16,770	16,460
Dividends on Preferred	6,890	6,253	6,382	6,410	6,101	6,051	6,202
Dividends on Equity	7,378	6,276	6,182	6,340	6,474	6,718	6,473
Dividends on Common	0	0	0	0	0	0	0
Total Dividends	14,268	12,529	12,654	12,750	12,555	12,730	12,675
Balance	\$ 0,180	\$ 108	\$ 730	\$ 0,604	\$ 0,218	\$ 1,200	\$ 705

For the fiscal year 1966 there was a substantial increase in revenues. The freight earnings were approximately \$68,770,000.

1. The sources of the information in this analysis unless otherwise stated are the company's annual reports. Changes showing significant changes from year to year are brought out.

an increase of over \$3,000,000 or about 13% over the previous year. The number of tons of freight carried was 15,630,158 tons, an increase of 1,500,414 tons or about 11%. The traffic in agricultural products was 4,984,094 tons, an increase of 550,100 tons or about 11%. The rest of the traffic increased about 11%. The ton miles were 3,070,579,710, an increase of 449,231,338 or about 17%. The passenger earnings were about \$6,770,000, an increase of over \$780,000 or about 13%. The passenger miles were 269,017,718, an increase of 38,531,668 or about 16%. The increase in earnings were due in part to the very good crops in the company's territory and to good business generally as forecasted in the previous annual report. Operating expenses increased some but not to the same extent as revenues. The company was having a difficult time getting delivery on new ties and rails for the track. The orders of other lines were heavy also.

In 1900 there was another substantial increase in revenues. 17,757,418 tons of freight were carried, an increase of 1,927,263 tons or about 12%. Most of this increase was contributed by traffic in other than agricultural products which was 12,570,293 tons, an increase of 1,724,831 tons or about 15%. The passenger traffic earnings were about \$7,700,000, an increase of nearly \$1,000,000 or about 14%. 6,677,822 passengers were carried, an increase of over 1,000,000 or about 13%. The passenger miles were 328,170,518, an increase of 38,161,344 or about 13%. The revenues were satisfactory but expenses increased considerably by increases in the cost of materials, fuel, supplies of all kinds,

and labor in the maintenance of way account. Consequently there was a decrease in net income. The increases in the costs of the principal materials used during the year were as follows: rails, 7.88 per ton; ties, 8d per tie; coal, 11d per ton; and lumber and timber, \$1.00 per thousand feet. The maintenance of way and structure increased nearly \$2,500,000; cost of conducting transportation, about \$700,000; and additional rolling stock, nearly \$1,500,000. As previously pointed out, this was one of the two years in this period in which a large amount of new rolling stock was being charged as an expense.

The revenues and earnings for 1901 were about the same as for 1900. The traffic statistics are nearly identical for the two years. A decrease in the expense of maintaining way and structure of nearly \$1,000,000 was offset by an increase in conducting transportation of a little over \$1,000,000. For the second time, as pointed out previously, a large amount of new rolling stock was charged to expenses. The company was still experiencing some delay in rail deliveries from the mills. In April 1901 the semi-annual dividend on the common was increased from 2 1/2<sup>1</sup> which had been paid for several years to 3%.

In 1902 there was a substantial increase in revenues. The earnings from freight traffic were approximately \$33,516,000, an increase of over \$2,000,000 or about 7%. 18,825,873 tons were carried, an increase of 1,576,000 tons or about 10%. The

increase was contributed entirely by products other than agricultural such as iron and other ores, lumber, iron and steel, etc. 14,954,531 tons of these products were carried, an increase of 1,662,622 tons or about 15%. The ton miles were 3,690,648,576, an increase of 350,070,757 or 10%. The earnings from passenger traffic were nearly \$8,000,000, an increase of nearly \$1,000,000 or about 12%. 9,158,957 passengers were carried, an increase of 838,730 or about 10%. However, the expenses increased almost to the same extent preventing a larger increase than had actually occurred in the net income. The maintenance of way and structures increased over \$700,000; and conducting transportation, nearly \$1,000,000. So far during this period the company had been crediting the renewal and improvement fund with considerably over \$1,000,000 each year and treating it as an expense. In 1902, \$3,475,000 was so credited. Besides at this time the company was treating as an expense the costs of many other improvements to the property which were not before financed from the renewal and improvement fund. The total of such expenditures including the credits to this fund in 1902 was \$5,705,000.64. In October 1902 a dividend of 4 $\frac{1}{2}$  was paid on the common, 1/25 in this 4 $\frac{1}{2}$  was declared as an extra dividend.<sup>1</sup>

In 1903 the increase in revenue was chiefly due to the increase in traffic in products other than agricultural and in passengers. The traffic in the forest was 16,602,668 tons, an

<sup>1</sup>. Ibid., Vol. 75, p. 32.

tonnage of 1,629,128 tons or about 10%. The earnings from the latter were over \$9,500,000, an increase of over \$900,000 or about 7%. The cost of conducting transportation increased nearly \$2,100,000. Only \$1,105,000 was credited to the Improvement and Renewal fund as against \$2,475,000 the year before. However, excluding this credit, a total of \$2,333,616.92 was expended on improvements to the property and treated as an expense for this year. In April, 1903, a 1/2¢ was paid in semi-annual dividends on the common. 4¢ was paid the previous October in 1902.

In 1904 the revenue did not increase substantially over 1903. The operating statistics are surprisingly similar for the two years indicating stable business conditions. The total expenses for the two years were about the same also. The maintenance of equipment increased over \$750,000; and the cost of conducting transportation, over \$1,750,000. These increases were offset by a decrease in the maintenance of way and structures of over \$3,200,000 due no doubt to the large amount of renewals during the preceding years and to the fact that nothing was credited to the Renewal and Improvement fund, although \$707,574.03 was expended on additions to the property during this year and treated as an expense. The company was now paying down the amounts expended on improving the property and charging treating them as operating expenses. Some of these costs as for example \$156,567.00 for ballasting lines not previously ballasted, and \$340,618.00 for road tracks, etc. were being added to the property account for the first time during this period.

The increase in revenues for 1908 was again due mostly to the increase in traffic in products other than agricultural. The tons of all products carried was 26,303,000 tons, an increase of 2,086,552 tons or about 10%. 16,037,000 tons of products other than agricultural were carried, an increase of 1,872,000 tons or about 12%. Expenses decreased some causing in part the substantial increase in net income. The maintenance of equipment increased over \$600,000. Again nothing was credited to the general and improvement fund. \$610,860.26 however was expended on additions to the property and treated as an expense. For the second time during this period such amounts as \$220,557.10 for ballasting lines not previously ballasted and \$242,471.60 for yard tracks, etc. were not being treated as expenses but added to the property account. It was clear at this time that the directors were not following out their policy, as pointed out previously, at least so consistently, of charging the costs of certain things to expense as they did during the early years of this period. However, as mentioned previously, the policy was only to be followed as justified by the earnings.

Every year during this period there was a decrease in the interest on the funded debt. These decreases no doubt were a material factor in the increases in net income from year to year with one exception during this period. Of course the cause of the decreases in this item was the refunding of convertible issues into preferred stock during this period, as pointed out previously in this chapter. During the closing years of this period the company

was paying 7% per annum on the common. It paid 7% per annum on the preferred throughout this period. Surely such stock and first class ought to finance any expansion. We will find out shortly that it was so used.

During this period the earnings available for interest amounted \$110,246,000. Interest payments totalled \$64,232,000 leaving a balance of \$46,046,000 available for dividends representing \$4,042,000. The surplus remaining for additions, betterments, and other corporate purposes was \$32,004,000.

Over this period the operating results of the Milwaukee compared very favorably with those of its principal competitors, the Burlington and the North Western.<sup>1</sup>

On glancing over the operating statistics to which the writer referred in explaining the growth in the company's business from year to year, one can see that the chief cause of the increase in revenues were the increase in the traffic in products other than agricultural and the increase in the number of passengers carried. Agricultural products seemed to become relatively of less and less significance in the years just by

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1. Coverdale & Colpitts, p. 8.

although to be sure in 1905 these products were a large source of the company's revenue. Were these facts reflective of momentary change or of more permanent changes in the character of the company's business? In this connection some figures from the company's annual reports covering the period from 1891 to 1905 may be enlightening.

The number of passengers carried during the year ending June 30, 1891 was 7,810,288; for the year ending June 30, 1895, 7,085,611; and for the year ending June 30, 1901, 10,364,725. Yet the first of these years the earnings from the passenger traffic was 22.8% of the total earnings; for the second, 17.51%; and for the third, 20.30%. Evidently there was a growth in the passenger business as to number of passengers carried and as to earnings during the period covered by this chapter.

The following figures show the proportion of tons of traffic in certain products and classes of products to the total tons of freight traffic (percentages) for certain fiscal years:

	Agri-cultural Products Wheat Including Wheat	Livestock	Coal	Lumber	Net-changes	Annual-taxes	
1891	6.81	28.98	3.48	10.98	17.55	7.91	7.30
1895	7.08	26.98	3.98	12.14	17.52	6.91	4.95
1898	6.91	31.30	3.98	9.91	9.44	6.34	5.51
1900	7.37	24.98	4.91	11.98	9.58	12.58	
1905	5.14	22.80	4.98	10.94	8.57	16.60	

The slowly changing nature of the company's traffic can be seen clearly. The territory through which the road's lines extended was growing older. The virgin timber was disappearing. The livestock

business no doubt was giving way to more intensive use of the land and moving westward. Agriculture was becoming more diversified. The old time hazard of a single crop like wheat was being eliminated in Iowa and Minnesota and to a certain extent in the Dakotas where in the beginning only wheat was raised. The coal business was increasing to supply the growing industries which were contributing the growing tonnage represented in the last column above. The second to the last column represents increasing miscellaneous traffic that always follows growing wealth in the community. The Milwaukee's business was no longer the business it was in the days of the Grange.

The impressive tone and observations of one writer in 1904 concerning the Milwaukee may be interesting.<sup>1</sup> He observed the fact that the road controlled at that time no subordinate lines. Instead it had absorbed them and made them a part of itself with their identity becoming merged into the strength of the whole system. The management had acquired distinct policies which had become a code. The Milwaukee's men had come from the operator's key through all of the intermediate steps down to the president's table. The administrative ability and strengthening ability of men finally Milwaukee bred had been recognized in the whole American railroad world. The Milwaukee like the Burlington had come to be recognized as a railroad training school of the first order.

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1. Frank H. Spearman, "The Strategy of Great Railroads," p. 177, referred to previously.

The loyalty of the employees was exceptional. In the great railroad strike in 1894 there were whole divisions where the disturbance was never felt. This loyalty no doubt was a company asset. Then this writer refers to the progressive nature of the management. The Milwaukee was one of the first roads to adopt the system of shipping grain in bulk. This practice marked the beginning of the grain elevator. It was the only American railroad which at the time was operating its own cleaning cars. In a like manner the Milwaukee was keeping some of the necessary manufacturing in connection with its business at home by building in its own shops some of its locomotives and cars. This policy resulted in the calling out of new ideas in motive power and rolling stock suited to the road needs. The readiness to experiment was indicated in the struggle extending over sixteen years to perfect the lighting of passenger trains by electricity. The road was not only the first railroad to apply electricity to train lighting but the first to bring it to a successful finish with the result that it at this time was leading all American railroads with some 3,000 electrically lighted cars. It was also the first great western railroad to adopt the vestibule car. The Milwaukee had exploited South Dakota so long and so entirely that it had come to be looked upon by the state administration as a sort of advertising adjunct of its own and was accorded, after a manner, official recognition. These things indicated to this writer the Milwaukee's strong progressive individuality and hatred of outside influence.

A comparison of the Milwaukee with the Northern Pacific and Great Northern with statistics as of June 30, 1905 follows:

	Milwaukee	Northern Pacific	Great Northern
Stock per mile	\$15,500.15	\$20,285.35	\$21,730.84
Funded Debt per mile	17,876.97	34,805.46	* 17,866.08
Interest per mile	865.86	1,307.57	* 844.09
Gross Earnings per mile	7,281.10	9,543.44	7,803.32
Operating Expenses and Taxes per mile	4,874.88	5,545.35	4,811.68
Net Earnings per mile	2,406.32	4,198.10	3,593.60
Operating Expenses and Taxes to Farming	61.74	56.00	60.75
Operating Expenses to Farming	58.00	52.80	48.87
Average Rate per Ton per mile	.9814	.8546	.7926
Freight Earnings per Train Share	58.38	61.30	74.20
Average Distance each Ton Hauled	175.14 miles	354.40 miles	--
Tons of Freight per Loaded Car	13.74 tons	16.10 tons	20.00 tons
Tons of Freight per Train	284.00 tons	368.50 tons	450.75 tons
Average Rate per Passenger per Mile	2.246	2.254	2.264
Freight Earnings to Gross Earnings	78.11%	78.57%	75.85%
Passenger Earnings to Gross Earnings	20.30%	20.34%	18.38%

\*In calculating the bond per mile figure the \$169,500 unchanged guaranteed of stock of the old St. Paul, Minneapolis & Manitoba was first added to the bonded debt. To the interest figure likewise was added \$24,733.80 dividends paid on this stock.

The capitalization per mile of the Milwaukee compares favorably with the other two roads, especially with the Northern

1. The sources of these figures are the same as those at the close of the previous chapter. The \$215,000,000 joint bonds issued by the Northern Pacific and Great Northern have been deducted from the funded debt before the bonded debt per mile figures for these roads were calculated. The interest figure was likewise treated. This correction was made as per advice of the comptroller of the Northern Pacific at that company's offices at St. Paul.

Pacific. The Great Northern had apparently improved its financial structure as respects bonds and interest charges materially since 1898. However, the Milwaukee had a smaller total capitalization per mile. The Milwaukee compares unfavorably with the other two roads, especially the Northern Pacific, as regards gross earnings per mile; favorable with the Northern Pacific and unfavorable with the Great Northern as regards expenses per mile; and unfavorable with both of these roads as regards net earnings per mile. As in 1898 and in 1901 the operating ratio for the Milwaukee compares unfavorably with the other two roads. Probably the Milwaukee was putting relatively more earnings back into the property and treating the expenditures as expense than the other two systems. Unlike in 1891 and in 1898 the Milwaukee seemed to be enjoying better rates than the other two systems. In 1891 and 1901 the two transcontinental systems were hauling each ton a longer distance with more tons per car and more tons per train than the Milwaukee. In other words they were using their equipment much more intensively. This no doubt meant a larger cost of conducting transportation per ton on the Milwaukee and in part explains its higher operating ratio as compared with the other two systems.

## CHAPTER IV.

### THE NEW TRANSCONTINENTAL SYSTEM—1869 TO 1873.

The prosperous years of the previous period and the company's policy of diverting earnings back into the property gave the credit basis for the expansion to the coast. The stock was available as media for expansion and at the beginning in the construction of the coast extension was so used. At the close of this period the completed extension, built under a separate corporate name, was merged with the main line. As the result of this extension new methods of financing were introduced. Also as a result of this extension the capital structure underwent some profound permanent changes. The scale of operating expenses, however, was not to be profoundly affected until a later time, in connection with federal control. Improvements of the company's line and shops continued on the large scale on which they were carried on during the preceding period. At the beginning of this period then we have a prosperous middle western system; at the end, a new transcontinental, the last of the great lines to be built from the Mississippi River to the coast.

To be more in line with the actual state of affairs the writer has chosen, in relating the financial history of the road during this period, to keep the accounts of the Milwaukee and the Puget Sound extension separate until the latter, which was built under a separate corporate title, was merged with the former.

Then the new acquisition and the old road are treated as one system subsequent to the merger. In other words, the extension is treated like the acquisition of other lines by the Milwaukee. The facts relevant to the merger are brought out at the time of the acquisition and then the previous financial history of the new line is given. However, at points in subsequent chapters there will be occasions to refer to the extension, then merged, as a separate unit, especially in connection with the operation of the road for a number of years prior to the receivership to which the facts then pointed out will be relevant. But those facts will be concerning a part of the Milwaukee system and not a separate corporate enterprise.

In April 1, 1898 the Milwaukee obtained by the purchase of stock the control of the Duluth, St. Cloud, Glenco & Mankato Railroad in Minnesota.<sup>1</sup> This company previously planned to build a line from Albert Lea, via Mankato and St. Cloud, to Duluth, 287 miles. The line from Albert Lea to Mankato, 54 miles, was under contract at the close of the year 1905. Plans were at that time under way for the execution of a forfeiture of the entire line securing \$7,500,000 bonds and allowing for an extension to

the international state boundary.<sup>1</sup> Needless to say, no enterprise of such a scale was ever carried through.

In May, 1898 the Milwaukee bought the entire capital stock of the Montana Railroad Company.<sup>2</sup>

#### The Montana Railroad Company.

The Montana Railroad Company was chartered on September 1, 1894 under the law of Montana.<sup>3</sup> At that time it acquired the property of the Midland Railroad Company which consisted of about 12 miles of graded roadbed. The road was opened from Lombard to Leadboro in Montana, 57 miles, on November 20, 1896. An extension from Leadboro to Harlowton in Montana was opened on June 20, 1897. The company at this time made a traffic contract with the Northern Pacific Railway Company for the joint use of the line from Harlowton Junction to Lombard, 91 miles. This contract was to run for 60 years from March 1, 1900. Up to this time the company had issued \$1,500,000 first consolidated Montana bonds dated July 1, 1896.<sup>4</sup> In 1900 the company made a mortgage to secure \$2,000,000 bonds at 5% per annum, payable on January 1 and July 1, and due in 30 years on July 1, 1930. \$800,000 of these were stamped on the face as redeemable at 105 and accrued interest on six months notice. From the proceeds of these bonds, all of which were issued, the \$1,500,000 consolidated bonds were redeemed.

1. Chronicle, vol. 81, p. 1665.

2. Ibit., vol. 82, p. 1212. Covington & Colpitte, p. 9.

3. Poore, 1910, p. 755.

4. Chronicle, vol. 71, p. 1167.

and some improvements were made to the line. By the terms of the mortgage the traffic contract with the Northern Pacific was made prior to the rights of the bondholders. The Northern Pacific held \$1,001,000 of these bonds as security for a debt of several hundreds of thousands.<sup>1</sup> Up to this time the authorized capital stock was \$2,500,000 of which \$1,574,000 were issued. In the summer of 1902 the authorized stock was increased to \$4,000,000. The extension from Harlowton to Lewiston, 65 miles, was opened on November 1, 1903. At the time the road was acquired by the Milwaukee in May, 1906 the financial structure consisted of \$3,500,000 capital stock (the total authorized and issued) and \$2,000,000 first mortgage bonds, the line extended from Lombard to Lewiston, and the rolling stock consisted of 5 locomotives and 5 cars.<sup>2</sup> The road was acquired to form a part of the Pacific coast extension. A contract was let shortly after for the construction of a 120-mile extension from the extension's line at Forsythe to a junction with the new acquisition at Harlowton.<sup>3</sup> The first earnings statement of the road since the completion of the Lewiston extension showed for the year ending June 30, 1906 (about the time the road was acquired by the Milwaukee) total earnings of \$327,784, net earnings of \$136,701, and a surplus for the year of \$40,800.<sup>4</sup> In January, 1910 this property was deeded to the Chicago,

1. Ibid. Chronicle, Investor's Supplement, vol. 73, p. 84.

Poore, 1901, p. 1503.

2. Chronicle, Railway & Industrial Section, vol. 82, p. 92.

Poore, 1907, p. 535.

3. Chronicle, vol. 82, p. 1212.

4. Poore, 1907, p. 535.

Milwaukee & Puget Sound Railway Company, the name under which the Milwaukee was building its extension to the coast.<sup>1</sup>

The extension of the Armour branch northward to Stickney, South Dakota, 20.87 miles, mentioned as under construction on June 30, 1906, was completed and opened in June, 1908.<sup>2</sup> The cost to June 30, 1908, the fiscal year of completion, was \$208,423.01. A line extending from Oglesby to Granville in Illinois was purchased in June, 1906 from the Oglesby & Granville Railway Company. The cost on this line to June 30, 1906 was \$248,000.00.<sup>3</sup> A line from Madison to Bonner in South Dakota, 38 miles, was opened on November 5, 1906.<sup>4</sup> The cost to June 30, 1907 was \$431,175.82.

As pointed out in the previous chapter, an extension from Chamberlain to a point about 75 miles west had been authorized and construction work was in progress on July 1, 1906. During the fiscal year ending June 30, 1908 a further extension of this new line to Rapid City, South Dakota, 110.24 miles, was authorized. This extension was opened on July 29, 1907.<sup>5</sup> The cost to June 30, 1908 was \$4,280,266.57. This was the largest extension undertaken by the road in its own name to date. This extension provided a line from Chicago to the Black Hills country, 342 miles.<sup>6</sup>

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1. Ibid., 1912, p. 705. Annual Report, C.M.& P.S.Ry. Co. (11 months ending June 30, 1910).
  2. Annual Report, 1908.
  3. Ibid.
  4. Ibid., 1907.
  5. Ibid., 1908.
  6. Chronicle, vol. 55, p. 220.

A line from a point near Glenham to Robridge in South Dakota, about 12 miles, was constructed during the year ending June 30, 1906. At Robridge this line connected with the Pacific coast extension, at this time under construction. This line connected the old Milwaukee system with the extension. The line from a point near Glenham to Evans, South Dakota, the connection as planned at first, was abandoned.<sup>1</sup> Up to June 30, 1906 work on the partially completed line of the Duluth, St. Cloud, Glenrose & Mankato Railroad from Albert Lea to St. Clair in Minnesota, 32.37 miles, was practically completed. The cost to June 30, 1906 was \$600,417.01.<sup>2</sup> As previously pointed out the Milwaukee had purchased the capital stock of this road in 1903. During the year ending June 30, 1906 the Milwaukee purchased from the Pittsburgh, Cincinnati, Chicago & St. Louis Railway Company a half interest in certain property between Western Avenue and Canal Street in Chicago, about 2.5 miles. This property had certain main and second tracks thereon, the larger portion of which had previously been elevated, thereby eliminating the grade crossings. The price paid was \$463,125.87.<sup>3</sup>

In July, 1906 the Milwaukee purchased practically all the capital stock of the Tacoma Eastern Railroad Company.<sup>4</sup>

1. Annual Report, 1906.

2. Ibid.

3. Ibid.

4. Chronicle, Vol. 87, p. 95.

The Tacoma Eastern Railroad Company.

The Tacoma Eastern Railroad Company was chartered in 1890 under the Law of Washington.<sup>1</sup> The road was completed 18.5 miles southeast from Tacoma, Washington, early in 1901. The line was extended to Elbe, Washington, 27 miles from Tacoma, and completed to that point in April, 1903. In 1900 a mortgage was executed to secure bonds issuable at \$20,000 per mile to provide for extensions and for an indebtedness of \$50,000 previously incurred.<sup>2</sup> About \$200,000 bonds were issued on this mortgage. These bonds were at 5% per annum, payable in March and November, due on May 1, 1905, and subject to call on any interest date at 100%. Up to 1905 \$250,000 capital stock was issued.<sup>3</sup>

Then early in 1903 there was a reorganization. The road was opened to Eatonville, 32.5 miles from Tacoma, on June 1, 1903; from Eatonville to Elbe, 14.2 miles, on June 1, 1904; from Elbe to Abford in July, 1904; from Park Junction to Mineral on September 18, 1905; from Mineral to Tilton and from Tilton to Creek Junction to Ladd on September 9, 1905; from Tilton to Glenavon on June 23, 1907; and from Babcock Junction to McFenna on February 1, 1908. All these points were in Washington. These extensions were financed from the issuances of both stocks and bonds. Early in 1903 the mortgage was executed to the

1. Poore, 1910, p. 758.

2. Chronicle, vol. 71, p. 343.

3. Chronicle, Investor's Supplement, vol. 72, p. 136.

Illinois Trust and Savings Bank in Chicago as trustee to secure bonds issuable at \$13,000 per mile. The bonds were dated January 1, 1903, at 5% per annum, payable on January 1 and July 1, due on January 1, 1905, and subject to call on any interest date at 110 and interest on and after January 1, 1908.<sup>1</sup> The authorized issue was \$1,400,000.<sup>2</sup> \$884,000 were issued up to the time the control of the road was secured by the Milwaukee. Incidentally, the bonds of 1900 mentioned above were retired with the proceeds of these bonds. Up to 1903 the authorized and issued capital stock was \$250,000. On February 18, 1903 the authorized capital stock was increased from \$250,000 to \$1,500,000. Half of this was to be non-cumulative 6% preferred and half common.<sup>3</sup> All this stock was issued subsequently.

In July, 1903 the Milwaukee acquired all the \$750,000 preferred and \$748,000 of the \$750,000 common.<sup>4</sup> An idea of the physical property acquired can be gained from the fact that the line of this road on June 30, 1903 extended from Frazee to Glenavon, 52.6 miles, and with several branches totalled nearly 100 miles. The rolling stock as of the same date consisted of 12 locomotives, 17 units of passenger equipment, and 420 units of freight and miscellaneous equipment.<sup>5</sup> The road was doing mostly a lumber business. However, the road tapped some bituminous coal properties near Lebford, 65 miles from Frazee.

1. Chronicle, vol. 76, p. 665.

2. Ibid.

3. Poore, 1910, p. 756.

4. Ibid.

Needless to say the property was acquired like the Montana Railroad in connection with the Puget Sound extension. This road was like the Montana Railroad transferred to the Chicago, Milwaukee & Puget Sound Railway Company. It was planned to operate the road as an independent unit for the time being. Later, on December 31, 1916, the road was merged with the Milwaukee. This will be pointed out subsequently.

The earnings for several years ending June 30 prior to the acquisition of the company's stock by the Milwaukee were as follows:<sup>1</sup>

	1906	1907	1908	1909
Gross Earnings	\$673,621	\$609,520	\$616,767	\$645,308
Net Earnings	56,606	125,725	75,613	103,901
Balance for the Year	40,316	40,220	20,335	5,858

\*Deficit

During the year ending June 30, 1912 additional main track was completed and put into operation between Minnesota Falls and Great Northern Tower, 5.60 miles; Montevideo to Double Track Switch, 10.00 miles; and Wissota to Winona, 4.00 miles. The 20.60 miles of lines were all in Minnesota.<sup>2</sup>

In July, 1911 the Milwaukee purchased 30% of the capital stock of the Indiana Harbor Belt Railroad Company for the purpose of securing better facilities in the interchange of traffic with other railroads outside the limits of Chicago, enabling it (the Milwaukee) to more directly participate in securing the territory

1. Ibid., 1907, 1908, 1909, 1910.

2. Annual Report, 1912.

then under development in the vicinity of Indiana Harbor and  
<sup>1</sup>  
 Gary in Indiana.

The Indiana Harbor Belt Railroad Company.

The Terminal Railroad Company was chartered on April 12, 1896.<sup>3</sup> A line from Summit to Union Stock Yards in Chicago, 11 miles, was completed in 1896. The road was operated by the Michigan Central Railroad Company under a perpetual lease. About \$1,000,000 stock and \$725,000 bonds were issued. The bonds were first mortgage bonds at 4%, payable on January 1 and July 1, dated July 1, 1896, and due on July 1, 1941. The authorized amount was \$1,600,000. The \$725,000 bonds were issued by the Michigan Central, but the mortgage covered the property of the Terminal Railroad.<sup>3</sup>

The Indiana Harbor Railroad Company of Illinois was incorporated on January 25, 1905.<sup>4</sup> On February 1, 1905 this company took over the trackage rights the Michigan Central had on the tracks of the Chicago Junction Railway Company from Phitney, Indiana, to Franklin Park, Illinois, 40 miles, and also on the property known as the East Chicago Belt Railway from Hammond to Graceland in Indiana as well as the property known as the Terminal Railroad, then extending from the Union Stock Yards to Chappell in Illinois. This company issued \$1,000,000 capital

1. Chronicle, vol. 93, p. 184. Annual Report, 1912.

2. Poore, 1899, p. 648.

3. Ibid., 1899, p. 168; and 1907, p. 165.

4. Ibid., 1908, p. 563.

stock. No bonds were issued but the \$725,000 bonds on the property of the old Terminal Railroad Company were still out.<sup>1</sup>

The Indiana Harbor Belt Railroad Company was incorporated on June 29, 1907.<sup>2</sup> Half of the capital stock was owned by the Michigan Central Railroad Company and half by the Lake Shore & Michigan Southern Railway Company.<sup>3</sup> The property of the Indiana Harbor Railroad Company was taken over by the new company. In October, 1907 this new company purchased the so-called "Outer Belt" of the Chicago Junction Railway Company extending from Whitney to Franklin Park over which the Michigan Central had trackage rights, as mentioned previously. This line formerly belonged to the old Chicago, Hammond & Western Railroad Company. The consideration was \$2,500,000 Indiana Harbor Belt Railroad bonds; the assumption of \$2,500,000 Chicago, Hammond & Western bonds issued previously on this newly acquired line at 3% per annum, payable January 1 and July 1, dated January 1, 1897, and due January 1, 1957; and the performance of certain contracts which the Chicago Junction Railway had with other railroads companies for increased trackage facilities in connection with this line. The new Indiana Harbor Belt Railroad bonds were dated July 1, 1907, were due on July 1, 1957, and bore interest at 3% per annum for the first five years, 3½ per annum for the next five years, and 4% per annum thereafter, payable on January 1 and

1. Chronicle, Railway & Industrial Section, vol. 85, p. 70.

2. Poors, 1908, p. 303.

3. Chronicle, Railway & Industrial Section, vol. 85, p. 70.

July 1. The mortgage covered the road's entire property and authorized an issuance of \$25,000,000. Of this amount bonds were reserved to retire the old Hammond and Terminal bonds. The bonds were guaranteed as to principal and interest by the Michigan Central and the Lake Shore jointly and severally. The funded debt of the Indiana Harbor Belt Railroad now amounted to \$5,725,000. Besides \$2,450,000 capital stock was issued and held by the two railroads guaranteeing the bonds.<sup>1</sup> Shortly after the \$725,000 Terminal bonds were retired with a like amount of the Belt company's 4% bonds and, besides, \$1,000,000 more of the latter were issued. The bonded debt now amounted to \$6,725,000.<sup>2</sup>

In accordance with an agreement dated April 13, 1881 between the Milwaukee and the North Western with the Michigan Central and the Lake Shore, the latter two companies sold for cash in equal proportions to the former two companies 40% of their holdings in the \$2,450,000 capital stock of the Indiana Harbor Belt (50% or \$400,000 stock to each of the two purchasing companies). The former two companies each agreed to guarantee the \$6,725,000 bonds of the Belt road on the same basis as the Michigan Central and the Lake Shore.<sup>3</sup>

The Milwaukee and the North Western connected with the Belt line, and through partial ownership, secured advantages in

1. Ibid. Chronicle, vol. 85, p. 782. Poors, 1908, p. 863.

2. Poors, 1908, p. 873.

3. Ibid., 1881, p. 2828.