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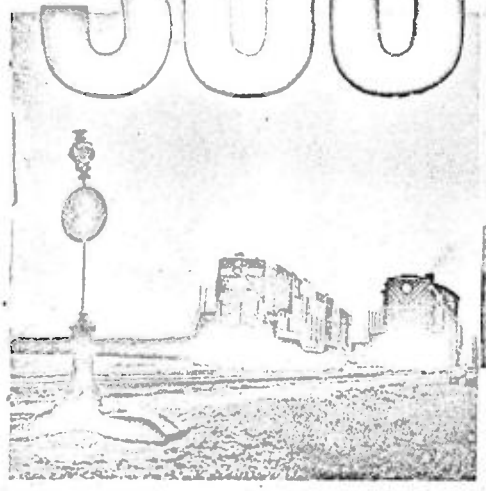
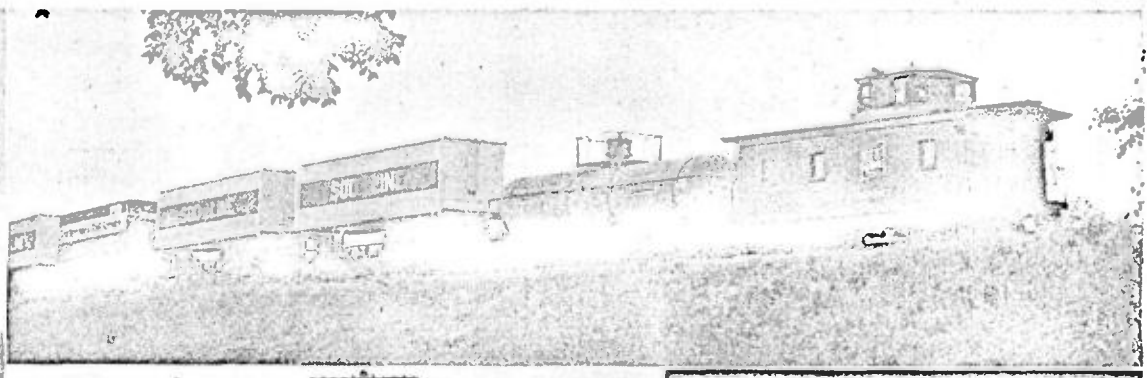
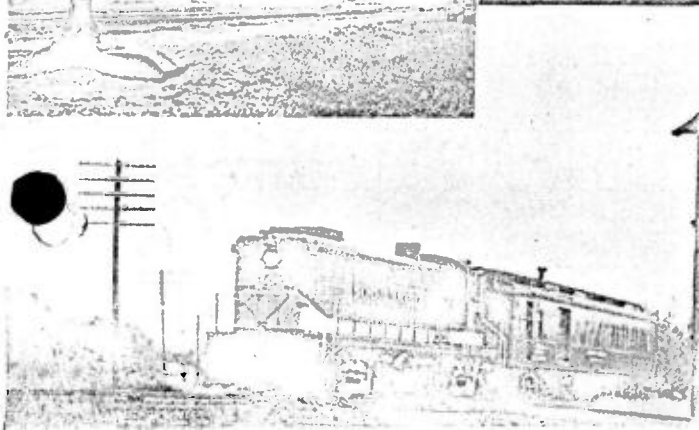
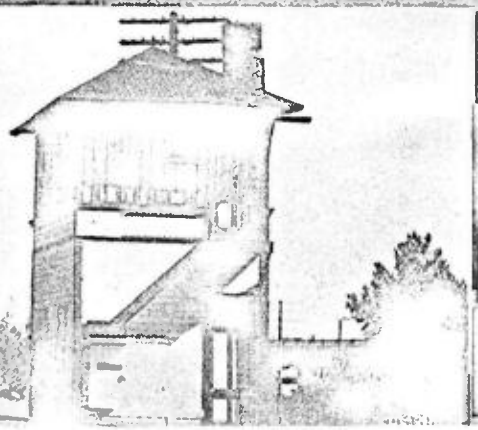
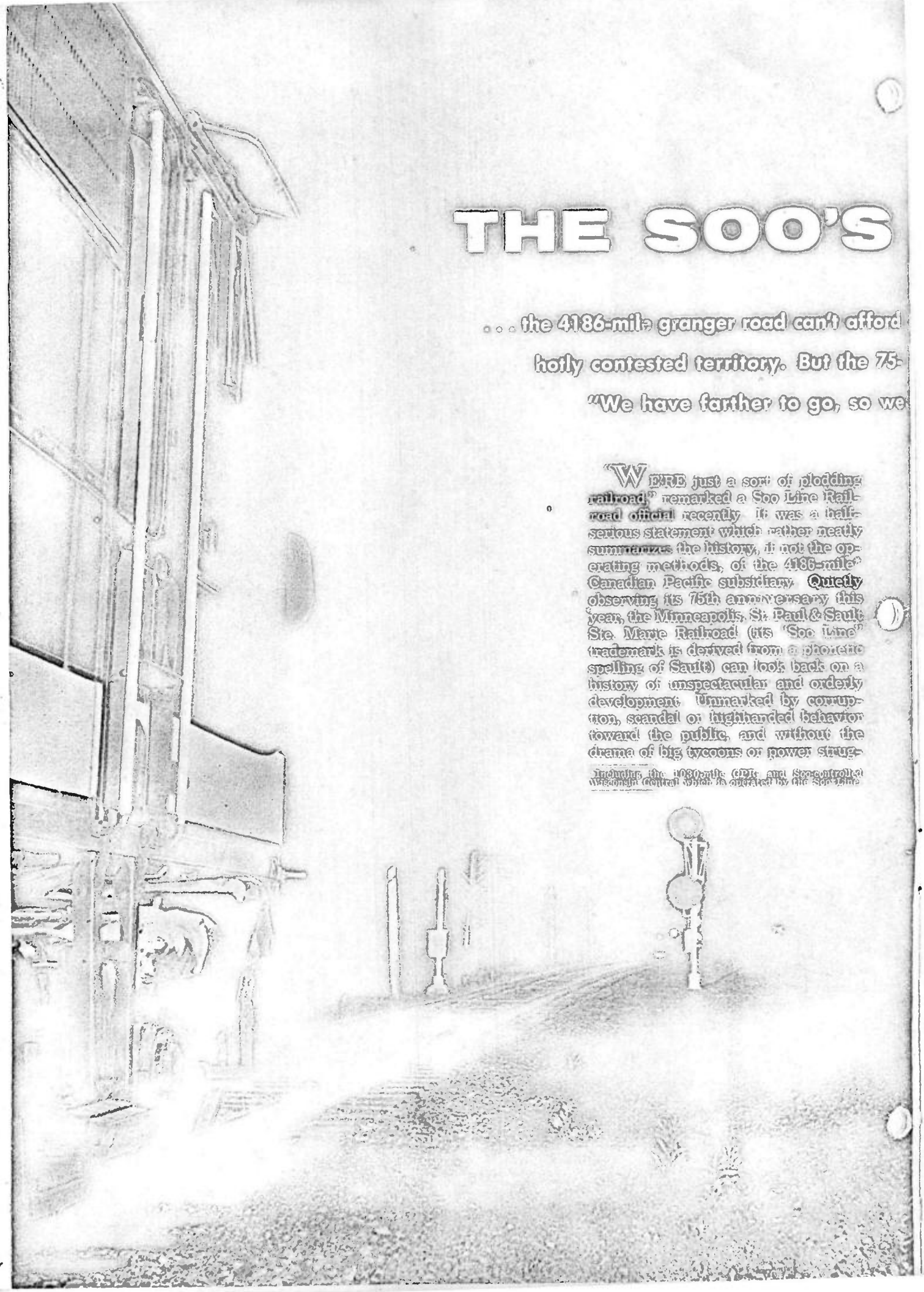










THE SOO'S

. . . the 4186-mile granger road can't afford

hotly contested territory. But the 75-

"We have farther to go, so we

"WE'RE just a sort of plodding railroad," remarked a Soo Line Railroad official recently. It was a half-serious statement which rather neatly summarizes the history, if not the operating methods, of the 4186-mile Canadian Pacific subsidiary. Quietly observing its 75th anniversary this year, the Minneapolis, St. Paul & Sault Ste. Marie Railroad (its 'Soo Line' trademark is derived from a phonetic spelling of Sault) can look back on a history of unspectacular and orderly development. Unmarked by corruption, scandal or highhanded behavior toward the public, and without the drama of big tycoons or power strug-

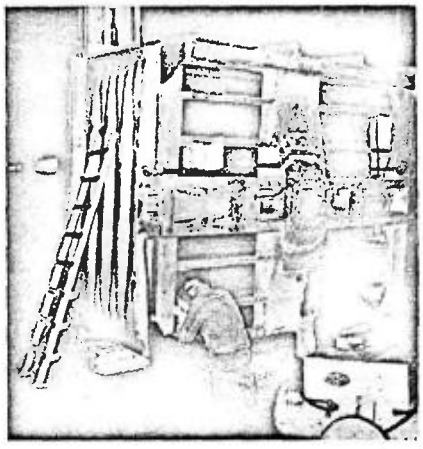
Including the 1080-mile CPR- and Soo-controlled Wisconsin Central which is operated by the Soo Line

BY WILLIAM D. MIDDLETON

Illustrated for TRAINS by the author

NOT SLEEPING

complacency. Soo rails go the long way around in a year-old refuses to panic. Says the president simply, have to run faster"



SOO rolls its own at North Fond du Lac; welders complete a 70-ton hopper.

gles, it is not the sort of history likely to bring fame, or notoriety, to a railroad. A relative latecomer to a Midwest largely overbuilt with railroads, the Soo has never enjoyed the eminence that goes with an Overland Route or high-density, multiple-track railroading. It is a passenger carrier of only minor importance, and the Soo's few leisurely "name" passenger trains are anything but household bywords, even in their own territory. The Soo is managed today by a group of quiet, competent railroaders who seem more concerned that the railroad earn its reputation by what it does rather than by what it says, and they give the impression that they would be somewhat embarrassed to find a high-pressure publicity man in their midst.

All of this has made the Soo Line a railroad relatively unknown outside its immediate territory. Which is unfortunate, for the Soo has much to recommend it and much of which to be proud.

A RATHER lengthy list of reasons why the Soo should not be a successful railroad could be prepared. One of the youngest of America's larger railroads, it has always faced the competition of a great many other railroads — most of which were firmly entrenched when the Soo came into existence. This excess of competition in a region that in general does not produce a very large amount of traffic has made the Soo Line a railroad with one of the lowest traffic densities among major railroads. Although it ranks 20th among U. S. railroads in miles of track operated, the Soo Line ranks only 33rd in total operating revenues. Soo Line proper earned less than $15,000 per mile of road in 1957. The Wisconsin Central did somewhat better, with revenues of over $33,000 per mile.

Built as a granger railroad, the Soo is less dependent on grain traffic today than it once was; but a good grain movement can still mean the difference between dividends and red ink. Another important commodity hauled by the Soo Line — iron ore — is even more seasonal than grain, and its volume is subject to still wider year-to-year fluctuations.

Because of the Soo Line's low traffic density and because of severe weather conditions it must spend a disproportionately high percentage of its revenues for maintenance of way; and because many of its lines were not built to the highest standards of curve and grade, it must contend with operating costs that are often not as low as they could be.

These inherent adversities, coupled with depression traffic levels and nine years of grain crop failures in the Soo's territory, were sufficient to send the railroad to the bankruptcy courts in 1938. Its leased and operated subsidiary, the Wisconsin Central, had already gone down the same path six years earlier.

In the 14 years since its bankruptcy was ended in 1944* not only has the Soo largely overcome the deferred maintenance and equipment obsolescence that were the legacies of

*The subsidiary Wisconsin Central didn't do quite so well. It remained in receivership until 1954, a near-record 22 years.

TRUCK is rewheeled after overhaul at Shoreham diesel shop in Minneapolis.

AN 856-FOOT length of 115-pound extends a welded rail program begun in '55.

eight years of depression and six years of bankruptcy but it has managed, since 1946, to pay modest dividends to its shareholders and has marked up some rather solid accomplishments in traffic growth, operating efficiency and progressive railroading in general.

In the postwar years the Soo Line's gains in total operating revenues exceeded not only the average for other Northwestern Region roads but the average for all class 1 railroads. In 1956 the combined Soo-Wisconsin Central net income of 4.5 million dollars was the highest since 1928.

Since 1950 the Soo has managed to reduce its transportation ratio (ratio of direct transportation costs to revenues) from one well above the industry average to one substantially below it. In reducing its transportation ratio (from 39.7 in 1950 to 36.8 in 1957) while that for most of the industry was rising, the Soo Line was numbered among a rather small group of carriers, including such sharp operators as Virginian and Norfolk & Western. The Soo's average freight train-miles per train-hour (22.6 in March 1958) — a good index of the way a railroad gets its tonnage over the road — is well above the national average of 18.8 and even above that of the fast-running Western roads. The Soo is outdone, as a matter of fact, by barely a half dozen major railroads. The Soo's average daily locomotive mileage (150 to 180 miles per day) regularly tops the performance of its Northwestern Region contemporaries.

A late starter in the conversion from steam, the Soo, once it began, didn't dawdle with dieselization. Except for standby steam, the system has been all diesel since early 1955 — one of the earliest to dieselize of the major railroads in the Upper Midwest.

In the increasingly vital application of modern railroad technology, the Soo Line has usually kept pace with its larger, often wealthier neighbors; and not infrequently it has shown them a few new angles of its own.

Soo Line maintenance of way crews have been putting down continuous welded rail since 1953, and the ribbon rail has been standard for all new rail jobs since 1955. The system's North Fond du Lac (Wis.) shops have been turning out welded freight cars for the past 10 years. As a point of interest, in the 1930's Soo in conjunction with Pullman-Standard, which was then building Soo's cars, was one of the railroad pioneers in the use of welded freight cars.

Since early 1955 the Soo has been hauling its own highway trailers in a modest piggyback service which, recently expanded with interchange agreements with connecting roads at

THE RAILROADS that move the ore from Minnesota's iron ranges down to the Lake Superior ore docks at Duluth, Superior and Two Harbors put together some of the world's heaviest freight trains to do the job. Duluth, Missabe & Iron Range and Great Northern, with their vast tonnages from the Mesabi and Vermilion ranges, move most of the ore, but Soo and Northern Pacific team up to move a substantial tonnage from the smaller Cuyuna Range.

Soo Line opened Cuyuna, Minnesota's newest range, in 1911, and Northern Pacific came in soon after. The two roads joined in a co-ordinated operation in 1929, dividing the tonnage equally.

TO GET a firsthand look at the way Soo Line moves its heaviest tonnage freight, I reported to the Soo's 21st Street roundhouse at Superior early one foggy July morning. Extra 2220B West was called for 6:45 a.m., and its power, a Soo GP9 sandwiched between a pair of Wisconsin Central Alco A units, was idling on the

How to gross $15,000

ready track. Engineer McCormick picked up the caboose and headed light through Stinson Yard to Northern Pacific's Hill Avenue ore yard, where 154 empty ore hoppers were waiting. The engine crew put on the caboose, then ran around the train to begin pumping up the train line. At 8:10, with the air test completed, the three units snaked their 3080 tons of empties out of the yard, rattled across the Great Northern crossing at South Superior, and headed for the long, steady climb to the range, over 100 miles away. Extra 2220B West covered the 40 miles into Moose Lake — almost all of it upgrade — in just under 2 hours but made the 30 miles from Moose Lake to the NP Junction at McGregor, including a stop to pick up three loads at Lawler, in 1 hour 10 minutes. We covered the 35 miles from McGregor to Ironton in just over an hour, and Extra 2220B West was by the New Yard limit board at 12:30. It cut off the caboose on the fly at Ironton depot and dropped its train of empties in Old Yard.

So far this ore extra hadn't earned a dime for Soo Line, but during the next few hours it was going to clean out every load of ore waiting in New Yard — and in the process of getting them over the road to Superior add something in the neighborhood of $15,000 to Soo's 1958 gross revenues. Unfortunately for Soo, the road wasn't running enough trains like this one in 1958. Though its Cuyuna Range ore haul normally earns around 1½ million dollars each year for Soo, it has done less than half that business in 1958.

The road engines coupled together three long cuts of NP and Soo hoppers, tested the air, and Extra 2220A East was ready to roll at 2:25 p.m. The Alcos smoked up the summer sky and the ampere needle dipped into the red as 4750 rugged diesel horsepower urged into motion 186 reluctant cars, each carrying as much as 70 tons of ore.

Once clear of the Deerwood yard limits Engineer McCormick picked up speed and rolled his tonnage train at a steady 25 miles an hour, carefully avoiding slack run-ins and run-outs on the humps and sags of the roller-coaster NP line. He pinched his train down to a 5-mile-an-hour slow order for bridge construction at Aitkin, then the needle dipped back into the red as he kept the hoppers rolling on the grade beyond. The extra made a brief stop at McGregor while the head brakeman doctored a hot journal, then tackled the 7-mile grade between McGregor and Lawler that is the ore line's toughest pull. The three units took 31 minutes to make the climb at a steady 15 miles an hour.

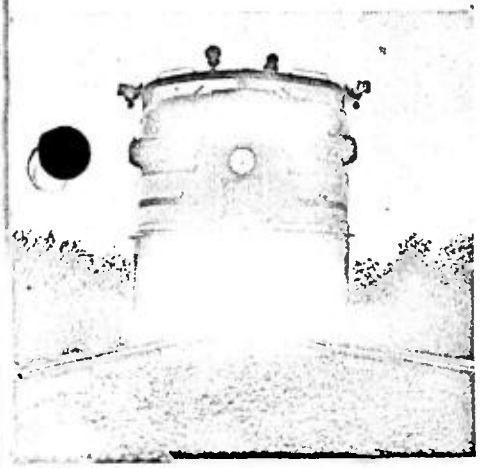
Extra 2220A East was by Nemadji at 6:15 p.m., and the rest of the trip was downgrade all the way. McCormick shut off and drifted, working air to keep his train under the 30-mile-an-hour limit for loaded ore cars. It was 7:15 p.m. when we got a clear board at Junction 278, where Soo's short Superior C.T.C. stretch begins. Fifteen minutes later the extra was stopped at Hill Street yard limits to wait for an NP ore drag to go over the scale. At 8 p.m. the road engines started by the scale house, and for the next hour ore hoppers clumped over the scale at a steady rate of three a minute. When the job was done the scale house clerk totted up his figures. Extra 2220A East had brought in a train grossing 12,227 short tons, and had made some money for the Soo Line doing it. The ore extra crew's 15-hour day was all but finished, and they headed for 21st Street with their engine and caboose. A few hours later, yard engines would be shoving the hoppers up on the ore dock and into a waiting lake steamer.

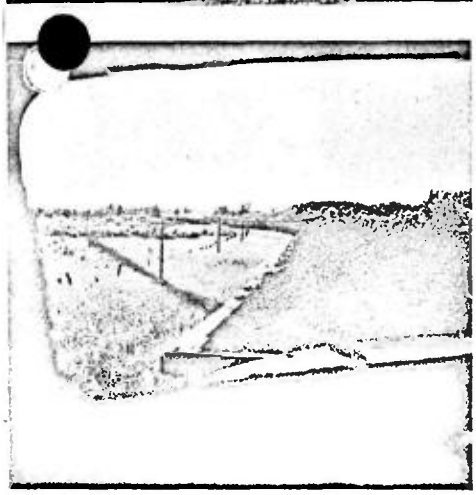
TOP: Extra 2220A East leaves Ironton, Minn., with 12,227-ton ore train.

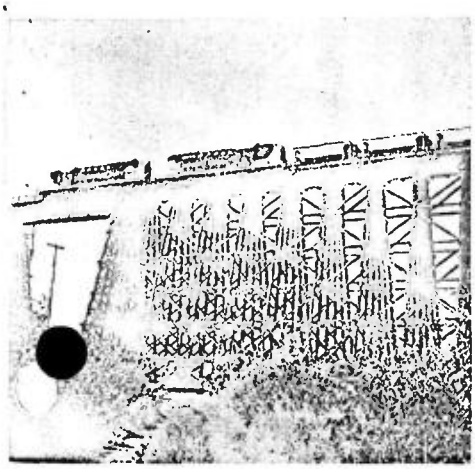
SECOND: Hotbox is spotted and doctored en route from the Cuyuna Range.

THIRD: Ore, 186 cars' worth of it, trails the diesels of Extra 2220A East

BOTTOM: Soo crew switches hoppers with NP Alcos on Superior (Wis.) dock.







both Chicago and Minneapolis, promises to develop into a major operation.

Late in 1957 the Soo wired up an IBM 650 model computer in its Minneapolis accounting offices, and its imaginative front office people have been grinding an impressive variety of statistical and research data through the "brain." Not the least of their projects has been the development of a perpetual diesel parts inventory system which is completely mechanized down to the automatic production of a punch card purchase order. It is, they modestly admit, the first and only system of its kind on any railroad. They have more clever ideas up their sleeves, too.

Last June the Soo placed in operation the first section of the mechanized freight car reporting system it hopes to have systemwide sometime in 1959. An integrated data processing system that eliminates all but an initial manual operation, the new system makes it possible, among other things, to place on operating and traffic officers' desks at 8 a.m. each morning a complete report of the previous day's cars loaded and received.

THE Soo Line has always been a Minneapolis concern. Its formation in 1883 by a group of Minneapolis millers was hardly dictated by a need for rail transportation, for the rails of the St. Paul & Pacific (now the Great Northern) had reached St. Anthony Falls from St. Paul fully 21 years earlier, and by 1883 a total of five railroads already served the city. What the millers did need was a "rate equalizer" to protect them from the "Chicago" railroads, which had established freight rates that favored Milwaukee, St. Louis and Chicago flour mills over those in Minneapolis.

An earlier rail connection to Duluth had given Minneapolis access to cheap Great Lakes water transportation for its flour, forcing the railroads to compete; but when winter closed the Lakes to navigation they demanded — and got — higher rates. Thirteen years before, many of the same men who founded the Soo Line had joined in the formation of another local railroad, the Minneapolis & St. Louis, built for the same purpose of independence from the Chicago lines. But growing overconfident, they sold their M&StL holdings to interests who soon found it more expedient to get along with the Chicago railroads. Once again Minneapolis needed its "own" railroad.

Headed by Gen.* William D. Washburn, who had been one of the M&StL's leading builders, the Minneapolis, Sault Ste. Marie & Atlantic Railway was incorporated in September 1883. Its projected line across Northern Wisconsin and Upper Michigan would connect with the Canadian Pacific at Sault Ste. Marie and would guarantee the Minneapolis millers competitive rates to Eastern markets. Almost immediately a new threat to Minneapolis appeared. Jim Hill's Great Northern established grain rates from the wheatlands to the west that were lower to the Head-of-the Lakes ports of Superior and Duluth than to Minneapolis. To protect the Minneapolis milling industry the same men who had organized MSSteM&A Railway the year before incorporated the Minneapolis & Pacific Railway in September 1884. The two roads were consolidated into the Minneapolis, St. Paul & Sault Ste. Marie Railway in 1888.

Canadian Pacific took an interest in the Soo Line even before its first line was built and has had a financial interest in it ever since 1888 (CPR currently owns 51 per cent of the Soo's stock). William Van Horne, one of the CPR's founders, saw the value of the proposed Minneapolis-East Coast short line, via the Sault and CPR, and encouraged and aided the Soo's builders from the start. For a time, Van Horne had general supervision of the project. Canadian money helped finance construction of the Soo's original line, and after 1888 Canadian Pacific guaranteed the Soo's bonds, a great aid to the rapid growth of the railroad.

The line to the Sault was completed late in 1887, and on January 5, 1888, the first through freight left Minneapolis in five sections with 102 carloads of flour for the East and Great Britain. A year and a half later the *Atlantic Limited*, featuring the first vestibule cars in the north country, began through passenger service to Montreal and Boston.

As the Soo built north and west from Minneapolis other strategic connections were made with Canadian Pacific. The main line west reached the Saskatchewan border and a CPR connection at Portal, N. Dak., in 1893. By 1904 the Soo had a line to Winnipeg, connecting with CPR at Noyes, Minn.

It took some 30 years to build the Soo Line. Its branches reached out across the wheat fields of Minnesota and North Dakota and tapped the vast lignite deposits of North Dakota and the timber of Minnesota, Wisconsin and Upper Michigan. In 1911 the Soo Line hauled the first trainload of iron ore out of Minnesota's Cuyuna Range. The Soo's last major line was completed in 1912, when the Twin Cities-Superior line was opened; but the sys-

*Washburn, who had been appointed Surveyor General of Minnesota, liked to be addressed as "General." He later became a United States Senator.

tem did not reach its present extent until 1921, when the Soo bought the Wisconsin & Northern Railroad, which extended 134 miles from Neenah to Crandon, Wis.

The Wisconsin Central Railroad, which came under Soo Line control in 1909, was organized in 1871 and completed its first major line, between Menasha and Ashland, in 1877. Unlike the Soo Line itself, the Wisconsin Central was a land grant railroad, receiving nearly a million acres for construction of its Ashland line. Much like the Soo Line, however, the Wisconsin Central was a latecomer in most of the territory it serves. Its St. Paul line wasn't completed until 1884 and the WC didn't get into Chicago over its own rails until 1886. The Duluth line was completed in 1909, the same year in which the Soo Line took over.

As early as 1906 a merger of the financially troubled Wisconsin Central with various other railroads was rumored. Earliest reports linked the Central with the Flint & Pere Marquette and the Cincinnati, Hamilton & Dayton; and during 1907-08 consolidation rumors involved B&O, Alton and the Soo. Finally, in 1908, the Soo acquired a majority stock interest and on April 1, 1909, entered into a 99-year lease. Under the agreement, the Wisconsin Central remained a separate corporation and the Soo did not participate in its profits or losses, nor did it pay any rental for the property. The combination was a mutually advantageous one. Each road gained traffic from the other, together the two lines had a stronger competitive position, and the Soo gained an entrance into Chicago.

Although some 54 per cent of its stock is owned by the Soo and Canadian Pacific, the Wisconsin Central has always retained its corporate identity, and it has always kept separate accounts and had its own officers. It has, however, largely lost its physical identity. The Soo Line hasn't leased the Central since it went bankrupt in 1932, but Soo has continued to act as "operating agent" for the road, which — to Soo's operating department — is its Stevens Point Division. It is operated entirely by Soo Line employees, and although its locomotives and cars are its own, they are painted and lettered like all other Soo equipment, with only a small "WC" and different numbering series to identify them.

During the depression years, when both Soo and Wisconsin Central were in receivership, serious consideration was given to a complete merger of the properties, including with them Canadian Pacific's third, also-bankrupt Midwestern subsidiary, the Duluth, South Shore & Atlantic. Now dormant, the merger proposal is a logical one and may well come up again.

Soon after construction started on the Soo Line a young Milwaukee Road division superintendent named Fred D. Underwood was brought in to take charge of its construction and operation. As its first general manager he stayed with the Soo until 1899, when he went east and soon became the Erie Railroad's president, a job he held for 26 years. He was one of the first of many Soo men to go on to greater accomplishments in the railroading field.

Including the Wisconsin Central, the 4186-mile Soo Line system reaches seven states, but it serves principally Wisconsin, Minnesota and North Dakota, each of which has over a thousand miles of track. For operating purposes it is split into five divisions. Traffic density being what it is, the Soo is almost exclusively a single-track railroad, with only a few miles of double track in the Chicago and Minneapolis areas. Except for 290

No. 24 makes its connections

THE Soo Line moves more freight over its 460-mile Chicago-Twin Cities route than it does over any other line. It has a lot of railroad competition just about anywhere it goes, but it has more between Chicago and the Twin Cities than anywhere else, for a shipper may choose among seven possible rail routes, not to mention a sizable number of highway carriers.

The Wisconsin Central route (the Soo's Stevens Point Division) is the longest of any of the major rail routes — fully 40 miles longer than its shortest competitor (North Western) — and its operating men must overcome the handicap of a line that is single track almost all the way. Only 290 miles of it are equipped with automatic block signals. Despite such disadvantages, the Soo manages to equal its competitors' running time, and — more important — to deliver cars "on time" to its Chicago connecting roads with commendable regularity (better than 90 per cent for the first six months of 1958).

To move freight over 460 miles of single-track railroad that is not particularly straight or level on schedules as fast as 15 hours — and to do it with day-in day-out regularity — requires a considerable extra effort. For Nos. 24-25 and 26-29, the big guns of the Soo's Chicago-Twin Cities service, extra effort means plenty of motive power, a strict tonnage limit, and a certain fussiness on the part of Soo brass about on-time operation. Both trains regularly get three 1500-horsepower units, and both are limited to 5000 tons (about 90 cars) in either direction. And whether the yardmaster has 20 cars or full tonnage for them, they're usually rolling out of Shoreham and Schiller Park yards with the punctuality of a passenger schedule. They were, in 1957, the first trains to get the Soo's new radio equipment.

It was a little after 6 p.m. at Minneapolis' Shoreham Yard when I climbed into the cab of the maroon and cream diesel. Fourth Subdivision Engineer Harold Olson had just backed his three F7 "covered wagons" onto the June 7, 1958, version of Chicago-bound time freight No. 24. Behind the rear unit's coupler was a recession-light train of 23 loads and 4 empties that totaled a mere 1392 tons. No. 24's waybills usually include such things as manufactures; piggyback trailers for Wisconsin, Chicago and eastern connections; perishables from the Northwest; and on occasion, meat from the St. Paul packing plants — all of them wanted somewhere else in a hurry.

Tonnage or not, the Soo leaves on time; and precisely at 6:30 p.m. the diesels were picking up speed past the yard limit board. Ten minutes later No. 24 was in the yard at New Brighton to pick up another 15 loads from the Minnesota Transfer Railway. The train now totaled 2223 tons. The crew picked up its clearance and a pair of 19 orders, and No. 24 was rolling again at 7:15. Half an hour later the diesels paused briefly at the end of double track at Cardigan Junction to wait out a meet with westbound No. 15, bound into Shoreham from Sault Ste. Marie. It was almost dark when Engineer Olson braked his train down to the 25-mile-an-hour limit as No. 24 slipped across the great steel arches of the St. Croix River bridge into Wisconsin.

Through the night No. 24 set a steady pace across Wisconsin. At 10:17 p.m. the crew dropped its train at CF Yard in Chippewa Falls and headed for the yard office to change crews while the yard engine switched the train. At 11 p.m., with its consist up to 40 loads and 5 empties, No. 24 was back on its way over the Third Subdivision. A red board stopped us at the North Western crossing

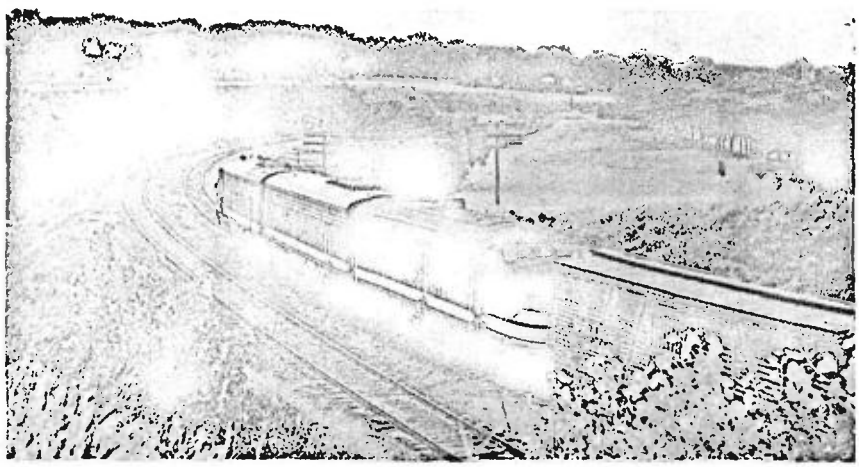
while the green and yellow *Chicago Limited* from Duluth slipped into the C&NW station. Then No. 24 got a green board and the wheel slip light flashed on and off as the diesels accelerated out of town on damp rail.

Shortly after midnight the operator at Owen handed up a pair of 19 orders. We'd meet westbound No. 29, another of the Chicago-Twin Cities hotshots, at Marshfield and No. 17, the westbound *Laker*, at Junction City. No. 24 lost 15 minutes waiting for No. 29, and even more waiting in the Junction City siding while the *Laker* handled a heavy head-end traffic.

It was 2:37 a.m. when No. 24 rolled past the brightly lighted Stevens Point depot and division headquarters and headed for the yard. Our westbound opposite number, train 25, was already in and a switcher was going to work on the rear end. Our engine crew took its three units through the yard and pulled alongside 25's diesels at the servicing track. An hour later No. 25 was rolling westward, and minutes afterward No. 24 was off on its nonstop run over the Second Subdivision. A warm sunrise over Lake Winnebago greeted the time freight as the fireman scooped up orders from the rack at the Neenah depot, and the pavement glistened from a predawn rain as the diesels cautiously worked their way, interurbanlike, down the Sunday-morning quiet of Oshkosh streets. With a train of only 1712 tons, 25 loads and 12 empties, 4500 diesel horsepower whipped No. 24 over the 91 miles to Shops Yard at North Fond du Lac in 2 hours 4 minutes.

It was 6:25 a.m. when First Subdivision Engineer Martin Watson took out the slack on 62 cars (totaling 2724 tons) at Shops Yard and started No. 24 on the last 141 miles to Schiller Park. A last-minute hotbox discovery had delayed the departure, and No. 24 was 25 minutes behind the timecard. Watson methodically set out to bring his train in on time. In the 61 miles to Waukesha he sliced the margin down to 18 minutes. By the time he rolled through Burlington it was down to 13 minutes. At 9:17 a.m., when No. 24 hit double track at Wheeling, Ill., No. 24 was a scant 2 minutes off the advertised. Then, at Des Plaines, a yellow distant signal for the C&NW crossing intruded. "He's gonna stick us," grumbled Fireman Helminski as Watson set the air, and No. 24 came to a stop before the red home signal. It took only minutes for the North Western's *Dakota 400* to clear the crossing, and time freight 24 rolled by the Schiller Park yard limits at 9:35 a.m., 15 hours 5 minutes out of Minneapolis and just 5 minutes off the schedule.

Minutes after the road crew dropped its train in the yard, a pair of switchers moved in and began classifying No. 24 for the transfer runs that would be delivering its consist of fast freight to a dozen Chicago connections throughout the afternoon — "on time," of course.



ELECTRO-MOTIVE F7's join arms with an Alco cab unit to accelerate No. 24 out of Shoreham Yard.

miles of automatic block signaling from Chicago to Spencer, Wis., and several isolated C.T.C. installations at congested points, the Soo Line is operated by timetable and train order.

Soo Line operates 171 diesel locomotives, 187 passenger cars, and over 14,000 freight cars, and it employs some 9000 people (temporarily reduced to a recession-level 7500).

Soo Line freight trains haul many things, but grain is still the system's principal commodity, as it has been for 75 years. On the Soo Line proper, grain traffic can account for as much as a third of all freight traffic revenues. In 1957, for example, the Soo (excluding Wisconsin Central) hauled 70 million bushels, a traffic that earned it almost 15 million dollars. During 1944, when shipments from Canada were unusually high, the railroad hauled 110 million bushels, the greatest grain movement in Soo history.

If any state can be called a "Soo Line State" it is North Dakota, where the greatest part of the Soo grain movement originates. North Dakota's grain harvest is usually exceeded only by Kansas' and there are times when it exceeds even that. And Soo Line moves more of it to market than any railroad except the Great Northern. In 1957 the Soo's 1300 miles of track in North Dakota gathered nearly 26,000 carloads of grain, most of it wheat.

Recent years have seen an interesting change in the character of the Soo's annual grain movement. Agricultural subsidies and Government storage programs have led to a year-round movement of grain to market, largely leveling off Soo's traditional August-September "grain rush."

The lumbering industry isn't what it once was in Minnesota, Wisconsin and Michigan, but forest products are still worth some 12 million dollars a year to the Soo and Wisconsin Central. Plenty of lumber still moves over the Soo, but it comes from the West and Canada now. A steady traffic in pulpwood for the paper mills in Wisconsin's Fox River Valley has replaced the north woods lumber traffic of earlier years. The Wisconsin Central makes money, too, hauling other raw materials to the mills and carrying the finished paper off to market.

Iron ore from Minnesota's Cuyuna Range and Michigan's Gogebic Range is another big moneymaker for Soo Line freight trains. Tonnage from the two ranges brought in over 3.5 million dollars in 1957 and revenues have approached 4 million dollars in recent years. High grade ores are playing out on both ranges now, but taconite development could rejuvenate traffic.

The lake steamers that carry the ore often bring coal on their return trips and the Soo makes nearly half as much hauling the coal as it does the ore. Lignite from North Dakota's vast deposits has earned nearly a million dollars a year for the Soo Line when the traffic was at its peak. It's been going down recently and construction of new hydroelectric projects will probably keep it on the way down. In 1957 lignite brought in less than a half million dollars for the Soo.

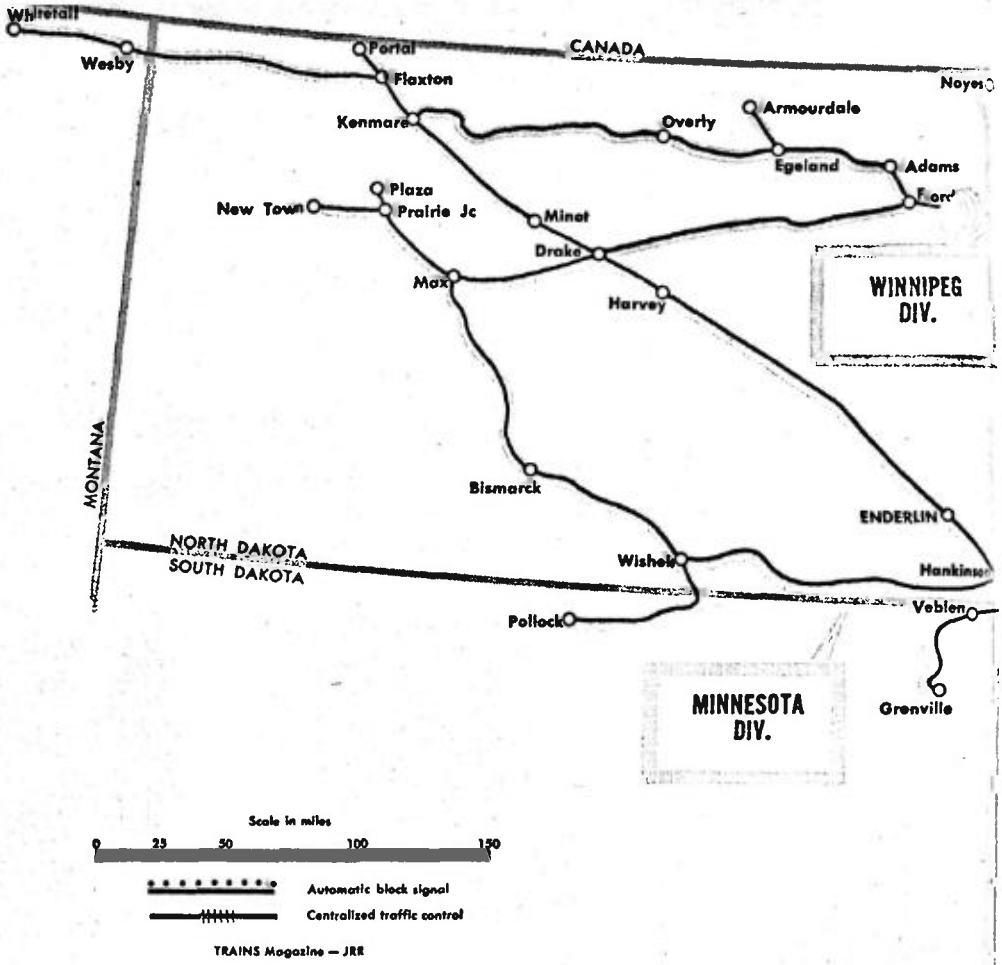
Both of the Soo's North Dakota neighbors, Great Northern and Northern Pacific, have cashed in handsomely from the recent North Dakota oil field development. Unfortunately, the Soo, which was built without land grants and which has no land holdings, has been little more than an envious bystander so far. However, a few wells at Flaxton, N. Dak., and Outlook, Mont., have recently begun to produce modest amounts, and the Soo has been moving some 50 carloads of oil a week to Wisconsin and Minnesota refineries. When prices are right, the Soo moves a little crude oil from Canada, too.

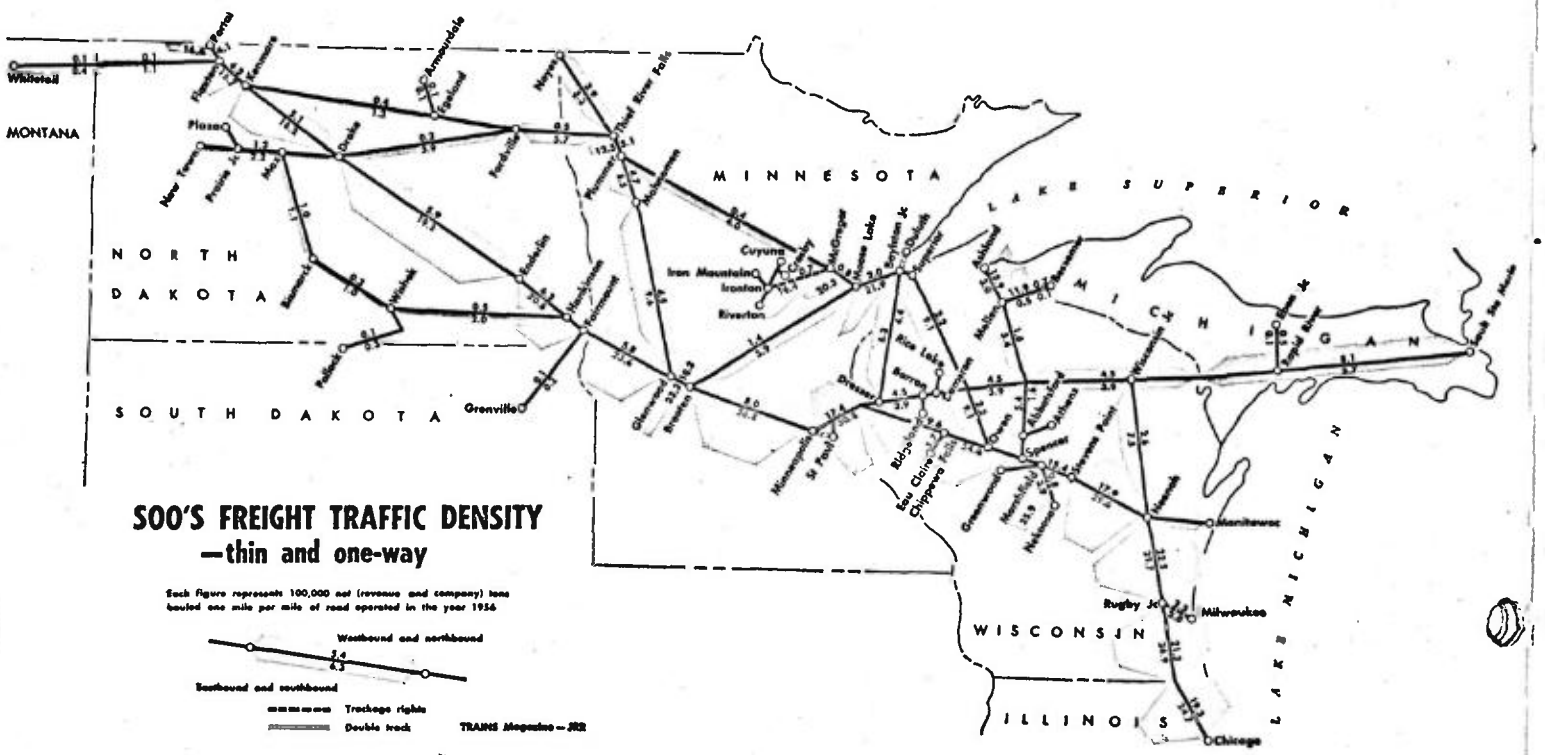
Soo Line has many good connections, and they have helped it become

a bridge road of considerable importance. Chief among them, of course, are its three links with the Canadian Pacific at Sault Ste. Marie, Noyes and Portal. During an average year the Soo delivers about 30,000 carloads and receives about 70,000 carloads at its CPR interchange points. It also gets a lot more Canadian traffic from the Duluth, Winnipeg & Pacific (CNR) at West Duluth. Chicago is the Soo's big eastern gateway, but it has other important eastern connections at Milwaukee, Manitowoc and Manistique where it connects with Chesapeake & Ohio, Grand Trunk and Ann Arbor Lake Michigan carferries. It has still another eastern connection via CPR subsidiary Duluth, South Shore & Atlantic at Trout Lake, Mich., which connects with Mackinac Straits carferries. Minneapolis is the Soo's most important Western United States gateway.

Although the Soo can hardly be regarded as a major competitor for traffic to Washington and Oregon it is interesting to note that its 1785-mile Minneapolis-Seattle route — via Portal, the CPR, Spokane International, and Northern Pacific from Spokane — is only 29 and 26 miles longer, respectively, than Great Northern's and Milwaukee's and is a full 93 miles shorter than Northern Pacific's. The difficulties of multiple interchanges being what they are, the Soo's schedules are a day longer than those of its competitors. But the Soo *does* move some of the traffic, and it has an undisputed advantage over all of them in moving freight that originates in Western Canada, a traffic which is becoming more important all the time, even if it still falls short of the optimistic visions of the Soo's builders. The Soo, of course, isn't happy about what will happen to the traffic it now hauls from Washington and Oregon when Spokane International (once a Canadian Pacific subsidiary) becomes a part of Union Pacific.

The Soo Line has very little captive freight traffic. Almost everything it carries is vulnerable to competition by other railroads, trucks, Great Lakes steamers, and river barges. Throughout its territory the





SOO'S FREIGHT TRAFFIC DENSITY
—thin and one-way

Each figure represents 100,000 net (revenue and company) tons hauled one mile per mile of road operated in the year 1956

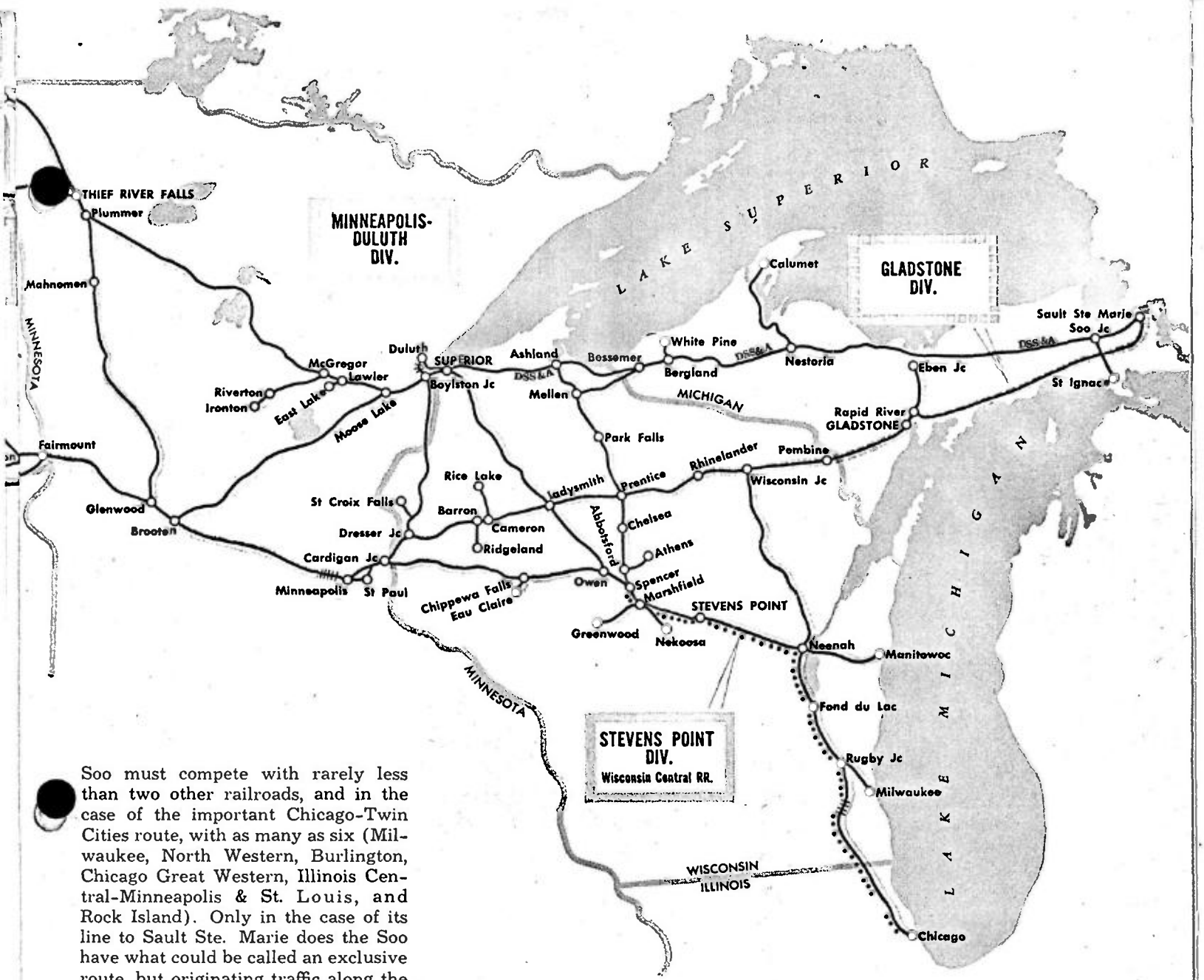
Westbound and northbound

Southbound and southbound

Trackage rights

Double track

TRAINS Magazine — JRR



Soo must compete with rarely less than two other railroads, and in the case of the important Chicago-Twin Cities route, with as many as six (Milwaukee, North Western, Burlington, Chicago Great Western, Illinois Central-Minneapolis & St. Louis, and Rock Island). Only in the case of its line to Sault Ste. Marie does the Soo have what could be called an exclusive route, but originating traffic along the line doesn't amount to much and through traffic has never lived up to the hopeful oratory that surrounded its opening. This fact was freshly brought home to the Soo only last year when it inaugurated an expedited service, the "Eastern Soo-per," to Eastern Canada and New England via the Sault. The traffic just wasn't to be had and the "Soo-per" was soon dropped.

Several threats to the Soo's vital grain traffic have appeared in recent years. The most serious of these is the decision by Congress that the transportation by trucks of certain agricultural commodities, including grain, should be exempt from all but safety regulation. This means that a trucker who, let us say, has hauled merchandise from Minneapolis to Minot, N. Dak., as a common carrier may, instead of returning empty, bring back a load of grain as an agricultural exempt carrier, charging whatever rate he must to get the traffic. The result, of course, is that much grain that should be going by rail is moving over the highway instead. The Interstate Commerce Commission has seen fit to expand periodically the list of exempt commodities to one of many pages; and many other agricultural products, such as meat, dairy products and Red River Valley potatoes, which the Soo Line once carried in volume, are often going by truck along with the grain.

The Soo is concerned, too, about an increasing movement of export grain by Mississippi River barge and Great Lakes steamers. Ever since 1955 Gulf Coast ports have been shipping more export grain than Atlantic Coast ports, which means that a lot more grain is going down the river by barge than is going east in box cars. Soo's coal traffic from Great Lakes ports has been suffering from barge competition too. In this case it's cheap Illinois coal coming up the river.

So far the Soo regards the coming St. Lawrence Seaway as "something of an enigma." With its access to both Lake Michigan ports and the Head-of-the-Lakes ports of Duluth and Superior, the Soo stands to get a good share of whatever traffic develops. But with present long hauls to the East Coast reduced to short hauls to the Great Lakes, the Soo feels there's a likelihood that truck competitors will get a bigger share of the traffic than before.

FORTUNATELY for the Soo Line, its operating and traffic men have done a lot more than just wring their hands over their excess of rail competition and the subsidies and regulatory inequities that have diverted much of their traffic to less economical competitors.

Service is one good way to gain — and hold — traffic and the Soo has set out to give the best. Currently the Soo's average freight train-miles per freight train-hour exceeds the performance of all its competitors. The

mere suggestion of such a situation would have been laughed at not so many years ago. Dieselization helped the Soo a lot more than most railroads, simply because its steam power was so much older than most. Except for a batch of Mountain types built in the '20's and four Northern types built in 1938, almost all of the Soo's steam power dated from the 1900-1920 period, and none of it was what could be termed "heavy" power. For example, when steam powered westbound Minneapolis-Portal freight No. 25, it took a helper to get a 3000-ton train out of Shoreham Yard and 30 hours to get it over 550 miles of railroad. A two-unit diesel now takes 5000 tons over the road in 24 hours — without the yard helper.

The Soo's fast time freights serve all of its important routes, but the pride of the Soo is its fleet of Chicago-Minneapolis freights that protect its busiest and most competitive route. Tonnage limits and plenty of power make them the system's fastest. The fastest westbound Chicago-Minneapolis time freight, No. 25, covers the 460 miles in 15 hours and continues westward on a 42-hour schedule over the more than 1000 miles to the CPR connection at Portal. Known as the "Western Soo-per," No. 25 provides the fastest railroad service available between Chicago and Western Canada. Currently, it is the Soo's only "name" freight.

As the Soo Line well knows, service alone won't fill freight cars if the price isn't right, and its traffic men have recently been taking some close looks at their rate structure. They know, for example, that it costs a lot less per car to move a block of cars or a whole train of cars between two points than it does to move a single car shipment between the same two points. Just how much less it costs is one of the many things the Soo's new traffic research department is looking into. More than one railroad, the Soo among them, proposes to pass the saving along to the shipper in the form of a "multiple car" rate, and while they're at it, pick up some of the business that's going another way now.

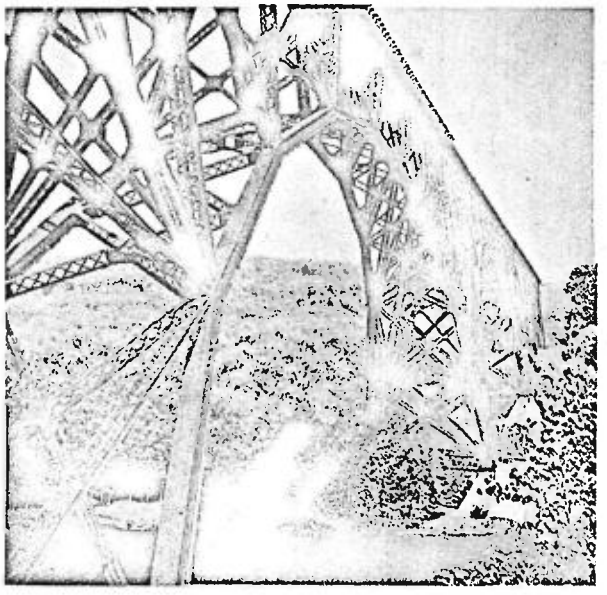
Take the case of that export grain that's now going down the river by barge or through the Great Lakes by steamer. The Soo recently proposed to meet the water competition with a special multiple car rate for grain shipments to Atlantic Coast ports from the Head-of-the-Lakes and the Twin Cities. Some of that truck competition for the haul from the grain fields would be nicely taken care of by applying the new rate to grain that came in via rail only.

The multiple car rate idea isn't exactly new on the Soo Line. The traffic men first tried it out several years ago on a Manitowoc (Wis.) cement mill that was shipping a lot of cement to Milwaukee by lake steamer. The Soo offered a special multiple car rate, based on a five-car-per-day minimum. The shipper sold his steamer, and the cement has been riding the rails ever since.

The Soo has recently been pushing another proposal for adoption of the same system of "agreed rates" now used by Canadian railroads. In return for a reduced rate, guaranteed for a specified period of time (usually 12 months), a shipper guarantees that a certain minimum percentage of his traffic will go by rail. The Soo recently won approval for a trial application of the rates, which it calls "guaranteed rates," and expects to have some of its shippers signed up soon.

Aggressive ratemaking, based largely on the findings of its new traffic research organization, promises to help the Soo win back some of its lost traffic. Recently, for example, the research men made a detailed study of the use of salt for highway ice control in Wisconsin. They found that its use had increased tremendously in recent years but that the Soo wasn't hauling any more salt than it ever had. They came up with a new rate proposal on bulk shipments of salt which should see a lot more of it moving on Soo freights. Similarly, new rates on sulfur moving to Wisconsin paper mills recently forestalled the loss of that traffic to trucks. Late in August the Soo placed in effect drastically reduced rates from the west to the Twin Cities and the Head-of-the-Lakes for corn, oats and soy beans. Early results indicate they'll help win back a lot of traffic from the trucks. The research men are working now on plans to recover some of the dairy products traffic lost to truckers.

The Soo ventured into the piggyback business (Soo calls it Rail-Van) on a modest scale early in 1955, and is currently moving better than 100 trailers a month of l.c.l. and trailer-load freight on its Chicago-Twin Cities line. Soo traffic men regard it as a highly promising development and have recently negotiated interchange agreements with a half dozen connecting roads at Chicago and with Northern Pacific at Minneapolis. Ex-



Soo spectacular

THE Soo system's principal engineering work is this structure of graceful lines and impressive dimensions that carries the main line of Wisconsin Central across St. Croix River near Somerset, Wis. Designed for Cooper's E-55 loading, it stretches 2682 feet between abutments and its single track is 185 feet above the St. Croix. Five steel arches, each spanning 350 feet, make up its main spans. The remainder of the bridge is of steel viaduct construction. Kelly-Atkinson Construction Company of Chicago built its piers and abutments and erected its 5035 tons of structural steel in 1910-11. It cost Wisconsin Central more than a half million 1910-value dollars, but its completion eliminated sharp grade descents to the old crossing which had been a major operating problem on Central's St. Paul extension ever since 1885.

Soo's horsepower

DIESEL

Wheel arr.	Class.	Numbers*	No. in class	Builder†	H.p.	Gear ratio	Wheel diam. (in.)	Weight (lbs.) On drivers	Weight (lbs.) Total	Start. tractive power (lbs.)	Cont. tractive power (lbs.)	Year built	Manuf. type	Remarks
B-B	Switcher	300, 301	2	EMD	1000	62:15	40	250,560	250,560	62,640	31,200	1939		
B-B	Switcher	310	1	Baldwin	1000	68:14	40	243,730	243,730	60,933	34,000	1945		
B-B	Switcher	311, 312	2	Baldwin	1000	68:14	40	229,500	229,500	57,735	34,000	1949		
B-B	Switcher	313, 314	2	Baldwin	1200	68:14	40	237,000	237,000	59,250	34,000	1952		
B-B	Switcher	320	1	EMD	600	62:15	40	202,520	202,520	50,630	24,000	1939		
B-B	Switcher	315-319	5	FM	1200	68:14	40	242,980	242,980	60,745	34,000	1952 (315) 1954 (316-319)		
B-B	Switcher	321-328, 2120-2127	16	EMD	1200	62:15	40	247,180	247,180	61,795	36,000	1954 (321-324) 1955 (325-328, 2120-2127)		
B-B	Switcher	2100-2102	3	EMD	900	62:15	40	253,000	253,000	63,250	30,600	1938		
B-B	Switcher	2103-2107	5	Alco	1000	75:16	40	231,000	231,000	57,750	34,000	1942 (2103-2104) 1946 (2105-2107)		
B-B	Switcher	2108	1	EMD	1000	62:15	40	245,640	245,640	61,410	31,200	1948		
B-B	Switcher	2109, 2110, 2116	3	Alco	1000	75:16	40	230,000	230,000	57,500	34,000	1949 (2109, 2110) 1952 (2116)		
B-B	Switcher	2111-2115, 2117-2119	8	EMD	1200	62:15	40	247,100	247,100	61,775	36,000	1952 (2111-2115) 1953 (2117-2119)		
B-B	Road-switcher	360-367	8	Baldwin	1500	63:15	42	253,000	253,000	63,250	42,800	1947 (360-365) 1948 (366-367)		
B-B	Road-switcher	350-353	4	Alco	1000	75:16	40	242,300	242,300	60,575	34,000	1954		
B-B	Road-switcher	375-378, 381-383	7	EMD	1500	62:15	40	240,300	240,300	60,075	40,000	1950 (375, 376) 1951 (377, 378) 1952 (381-383)	GP-7	
B-B	Road-switcher	379, 380	2	Baldwin	1600	63:15	42	256,000	256,000	64,000	52,500	1951		
B-B	Road-switcher	400-414	15	EMD	1750	62:15	40	246,340	246,340	61,585	61,585	1954 (400-406) 1955 (407-410) 1956 (411) 1957 (412-414)	GP-9	
B-B	Road-switcher	2400-2413	14	EMD	1750	62:15	40	246,340	246,340	61,585	61,585	1954 (2400-2409) 1956 (2410) 1957 (2411-2413)	GP-9	
B-B	Road-switcher	2360-2368	9	Alco	1000	75:16	40	242,300	242,300	60,575	34,000	1950 (2360-2362) 1951 (2363-2367) 1952 (2368)		
B-B	Road-switcher, passenger	550-558	9	EMD	1750	62:15	40	251,540	251,540	62,885	62,885	1954 (550-552) 1955 (553-556) 1956 (557-558)	GP-9	Equipped with steam boilers.
B-B	Road-switcher, passenger	2550-2554	5	EMD	1750	62:15	40	251,540	251,540	62,885	62,885	1954	GP-9	Equipped with steam boilers.
B-B	Road-switcher, passenger	2555, 2556	2	EMD	1750	62:15	40	253,000	253,000	63,250	63,250	1955 (2555) 1956 (2556)	GP-9	Equipped with steam boilers.
A1A-A1A	Road-switcher	368-371	4	Alco	1500	74:18	40	161,700	242,500	40,425	42,500	1949		
A1A-A1A	Road-switcher	372-374	3	Alco	1600	74:18	40	167,180	250,760	41,795	52,500	1950		
A1A-A1A	Road-switcher	2380	1	Alco	1600	74:18	40	167,400	251,100	41,850	52,500	1951		
CC	Road-switcher	2381	1	EMD	1750	62:15	40	296,600	296,600	74,150	74,150	1954	SD-9	
2(B-B)	Road freight	200-204	5	EMD	3000	62:15	40	461,450	461,450	115,363	65,000	1947 (200) 1948 (201-204)	F-7	
2(B-B)	Road freight	205-209	5	Alco	3000	74:18	40	476,000	476,000	119,000	85,000	1948		
2(B-B)	Road freight	210, 211, 2220-2223	6	Alco	3000	74:18	40	466,000	466,000	116,500	85,000	1949		
2(B-B)	Road freight	212-214	3	EMD	3000	62:15	40	460,600	460,600	115,150	65,000	1951 (212) 1952 (213-214)	F-7	
2(B-B)	Road freight	2224-2230	7	EMD	3000	62:15	40	460,600	460,600	115,150	80,000	1950 (2224, 2225) 1951 (2226-2227) 1953 (2228-2230)	F-7	
3(B-B)	Road freight	2200	1	EMD	4500	62:15	40	684,780	684,780	117,195	97,500	1948	F-7	
3(B-B)	Road freight	2201-2203	3	EMD	4500	62:15	40	701,820	701,820	175,455	120,000	1949	F-7	
2(B-B)	Road passenger	500-501	2	EMD	3000	62:15	40	513,960	513,960	128,490	80,000	1949 (500 A B, 501 B) 1950 (501 A)	F-7	Equipped with steam boilers.
2(B-B)	Road passenger	502-503	2	EMD	3000	62:15	40	504,900	504,900	126,225	80,000	1951	F-7	Equipped with steam boilers.
2(B-B)	Road passenger	2500-2501	2	EMD	3000	62:15	40	513,960	513,960	128,490	80,000	1949 (2500) 1950 (2501)	F-7	Equipped with steam boilers.
B-B	Road passenger	504, 505	2	EMD	1500	62:15	40	257,200	257,200	64,300	40,000	1952	F-7	Equipped with steam boilers.

*Three digit numbers indicate Soo ownership; four digit numbers indicate Wisconsin Central ownership.
†EMD: Electro-Motive Division, General Motors; Baldwin: Baldwin-Lima-Hamilton; FM: Fairbanks-Morse; Alco: Alco Products.

STEAM

Class	Wheel arrangement	Numbers	Cylinders (in.)	Drivers (in.)	Pressure (lbs.)	Engine weight (lbs.)	Tractive effort (lbs.)	Builder	Date	Remarks
F-9	2-8-0	451, 472	22½ x 34	63	200	208,740	41,392	Schenectady	1905-06	Stored serviceable.
F-9	2-8-0	471	22½ x 34	63	185	208,740	42,960	Schenectady	1905-06	Stored serviceable.
L-1	2-8-2	1003	28 x 30	63	170	297,600	53,940	Schenectady	1913	Stored serviceable.
L-2	2-8-2	1011, 1012, 1017	28 x 30	63	170	297,600	53,940	Dunkirk	1920	Stored serviceable.
L-4	2-8-2	1025	28 x 30	63	170	302,100	53,940	Dunkirk	1912	Stored serviceable.
H-3	4-6-2	730, 736	25 x 26	75	200	277,570	36,833	Schenectady	1911, 1913	Stored serviceable.
H-23	4-6-2	2719	25 x 26	75	200	281,080	36,833	Schenectady	1923	Stored serviceable.

Corrected to July 1958.

tension of the service to Duluth and North Dakota points and its expansion to include common carrier truckers and shipper-owned trailers are getting serious consideration.

SCHILLER PARK, some 17 miles from the Chicago Loop, is the Soo's principal yard, and the center of its Chicago Terminal activity. It has over 40 miles of track within its yard limit boards, and its 24 yard tracks can store 2000 cars. Among its facilities are the Soo's Chicago l.c.l. and Rail-Van terminals, a roundhouse, and a running repair track. It has a newly installed floodlight system and its yardmaster has a complete talkback speaker system to run his yard. But, like all Soo yards, it is still a flat switching yard. The industrial district within Schiller Park's yard limits has 77 industries that are good for 500 to 600 carloads a month. Schiller Park forwards as many as 1200 cars a day, and during its busiest years it has forwarded nearly 255,000 cars. Every day it dispatches and receives five time freights and a local in each direction, plus extras, and its work keeps anywhere from 16 to 20 switch and transfer crews busy. It is not a large yard, as railroad yards go in Chicago, but it is vital to the Soo.

Schiller Park's task is the complex one of classification, and delivery and collection of cars going to and from the Soo's Chicago connecting roads. The job of delivery begins almost the moment an eastbound time freight is "dead" in the yard. Two switchers usually move in to work a train — one switching a cut while the other pulls another off the train — and they can have a 90-car freight blocked into transfer cuts in an hour and a half.

Throughout the Chicago area the Soo's transfer runs have connecting

road cutoff times to meet. Eastbound perishable and meat traffic coming off No. 24, for example, has a 1:30 p.m. cutoff at the Indiana Harbor Belt. The Soo blocks its perishable traffic on the train's head end, where it can be switched out first, and on a typical day the IHB transfer cut of reefers is out of Schiller Park in a little over half an hour after No. 24's late-morning arrival and is delivered to IHB within the hour. Throughout the early afternoon, still other transfer runs move out into the Chicago area to meet other eastbound and southbound cutoff times.

Because direct delivery to connecting roads can save as much as 24 hours over delivery through one of the belt lines, the Soo is doing more of it all the time. Its radio-equipped transfer crews currently deliver about 100 cars a day to nearly a dozen Chicago railroads, handle all transfers to the belt roads, and pick up all connecting line traffic destined for the Soo.

Shoreham, at Minneapolis, and Superior, at the Head-of-the-Lakes, are the Soo's other major yards. Each of them forwards some 1000 cars a day. The Soo has long-range plans for a "push-button" yard in the Minneapolis vicinity to replace Shoreham. It will come when traffic growth makes the investment worth it, perhaps 10 years from now.

THE Soo Line operates no streamliners, and it has never made anyone's speed survey. Its newest coach was built the year Archduke Ferdinand was assassinated, and the average age of all its passenger rolling stock is in excess of 40 years. In 1957 the Soo hauled only some 238,000 passengers and earned, on the average, a little over 60 cents per passenger train-mile from them. Even including mail and express, its passenger trains grossed considerably less than $2 a mile, and on an I.C.C. formula basis the Soo Line figures the operation of passenger trains in 1957 cost it some 5.5 million dollars more than it took in. Understandably enough, Soo Line management is unhappy about the passenger train.

These melancholy facts aside, the Soo's passenger trains are held in remarkably high regard by the limited numbers of Midwest rail travelers who happen to be going its way. The Soo's elderly rolling stock has never wanted for maintenance (example: it's repainted every three to five years), and over the years its equipment for principal trains has received such improvements as reclining seats and air conditioning. The Soo's resourceful Shoreham Shops at Minneapolis have rebuilt many cars from the frame up, producing a number of well-appointed, thoroughly modern sleeping and cafe-lounge cars. Important, too, the Soo's equipment is invariably tidy, and its passenger train personnel seems to have retained much of the amiable hospitality that all too often has disappeared from the passenger train.

A large part of the Soo passenger reputation has been earned in its dining cars. This is no accident, for the Soo Line regards meal service as an accommodation for its passengers, and it has never had any notions about making money in its diners. It has preferred instead to take itself seriously when it claims "the best meals on wheels." Indeed, such is the reputation of Soo diners that one Fond du

Mr. Mac

Fabian Bachrach.

SINCE January 1, 1950, "the boss" to 9000 Soo Liners has meant a big (6-foot 4-inch), vigorous Canadian named G. Allan MacNamara. A youthful-looking 64, he was born in Winnipeg, Man., on February 4, 1894. At the age of 18 he went to work as a Canadian National Railways stenographer. After four and a half years in France with the Princess Pat Regiment during World War I he returned to the Canadian National, but in 1920 he went over to the Canadian Pacific's freight traffic department. A succession of CPR traffic jobs brought him to Minneapolis in 1925 and soon after he became a United States citizen. For close to 20 years he represented the Canadian Pacific in Minneapolis, Indianapolis, Detroit, Boston and Chicago. Then followed his appointment on October 1, 1944, to head the Soo Line's traffic department. The sort of job he did in rebuilding the Soo's traffic organization was indicated by his appointment in 1948 to Vice-President, Traffic, of Canadian Pacific Railway — a position which has been described as "the world's biggest traffic job," with CPR's rail, steamship, air, telegraph and express services. Two years later he returned to the Soo as its president. "Mr. Mac," as intimates know him, lives with his wife and son in suburban Edina.

In his eight years on the Soo, MacNamara has pushed a steady program of such fundamental improvements as employee relations, line changes, physical betterment, track and shop modernization, operational efficiency, accounting mechanization. Good track is particularly important to the Soo, he says, because "on the east end we have farther to go, so we have to run faster to meet our competitor's schedules." Quick to see the diesel's value on the Soo, he scrapped a program that called for full dieselization by 1960 and had the job done five years earlier.

Perhaps because of his Canadian Pacific background MacNamara favors a concept of railroads as "integrated transportation systems" that would offer not just rail service but truck service as well wherever trucks can do the job best. Piggyback would be an important part of integrated transportation, and he thinks it's important that railroads get together on piggyback standardization to permit full interchange.

MacNamara regards development of co-ordinated operations between railroads as more likely to bring distinct benefits than would mergers — and more likely to come sooner. He has effected some and he has more in the mill. Although he believes that the industry could gain much by smaller mergers, he considers the recently proposed creation of four huge regional railroads as going too far.

Railroads, says MacNamara, must change their traditional methods of ratemaking. He believes there is a trend toward rates designed to be compensatory, with less emphasis on the commodity's value in establishing a rate. "Multiple car" and "guaranteed" rates, such as the Soo is now pushing, are typical of this trend. He thinks provisions of the Transportation Act of 1958, which permit greater freedom in ratemaking, will be a big help in this direction.

MacNamara likes, too, the elimination of the freight excise tax granted by the 1958 Act, but he hasn't much to say in favor of the guaranteed loan. "As far as I'm concerned it would be a last resort," he comments.

The Soo's boss is not particularly optimistic about any traffic bonanza the St. Lawrence Seaway may bring. "But it won't do us any harm," he says, "and in the long run it may do us some good."

Eying the continuing trend to travel by private automobile, MacNamara sees no future for the Soo's passenger operation and, for that matter, he has little optimism about the future of any rail passenger service in the Upper Midwest.

Lac (Wis.) businessman has been known to entertain his guests by taking them down the line to Burlington on the afternoon local, just so he can treat them to a return trip dinner in the *Laker*'s diner.

The Soo's capable dining car boss, Joe Christensen, who learned the business on his way up from third cook, allows no compromise in food quality or preparation. "Maybe we're old-fashioned," he says, "but we operate today much as we did 30 years ago." Not that the Soo is above accepting a worth-while innovation, but not at the expense of quality. This means that the Soo spurns such short cuts as "prefabricated" meats, precooked and frozen foods, prepared mixes. A Soo Line cook cuts his own meats, mixes his own soup, biscuits and hotcakes, and generally puts the entire meal together right there on the train.

Among the Soo's best-known dining car offerings are its Soo Line Special Breakfast, an abundant spread that has been widely imitated in other dining cars, and its steaks, which Joe Christensen flatly states are of the finest quality and the largest offered by any Midwest railroad. Few who have tried them will disagree.

The Soo's principal year-round passenger trains are the overnight St. Paul-Winnipeg *Winnipeger*, operated in conjunction with Canadian Pacific; the Chicago-Duluth *Laker* (with Ashland and Minneapolis connections); and the St. Paul-Portal *Soo-Dominion*, which connects with Canadian Pacific for points in Western Canada. All three trains offer coaches, a variety of sleeping car accommodations, and feature one of the Soo's congenial Shoreham-rebuilt cafe-lounge cars. Soo's onetime pride, the Minneapolis-Sault Ste. Marie *Atlantic Express*, has declined to a six-day-a-week run with only coaches, an alternate-day sleeper, and scheduled meal stops. Except for the *Laker*, which has Pullman sleepers, all Soo sleeper trains have Soo- or CPR-operated sleeping cars.

A perennial favorite among Canadian Rockies vacationers is the Soo-Canadian Pacific *Mountaineer*, whose annual appearance on the summer timecard in place of the *Soo-Dominion* makes the Soo, for a few months, something of a major passenger carrier. Until the Wisconsin Central bankruptcy in 1932 the Soo operated the *Mountaineer* all the way from Chicago. For a number of years the North Western handled the equipment to St. Paul. Now, except for special cars handled by connecting roads, the entire train originates at St. Paul. In addition to a modest amount of individual travel, the *Mountaineer* handles a prodigious number of organized tours, which make up 90 per cent of its clientele, and not infrequently operates in two or more sections. When it is running, the *Mountaineer* is easily the Soo's most profitable passenger train — or more correctly, its least unprofitable. From May to September of 1957, when it moved over 17,000 passengers, the *Mountaineer* grossed $190,000 for Soo Line.

The unhappy economic facts of its passenger business being what they are, the Soo Line has committed itself to a gradual withdrawal from passenger operation, a process it concedes will take a good many years. Currently, abandonment petitions for several of its secondary passenger runs are pending. Still other runs have already come off in recent months.

Its years of depression and bankruptcy left the Soo Line with a serious backlog of deferred maintenance. That Soo Line in 1958 is a railroad without major deferred maintenance work is a tribute to a management that has recognized the need for a continuing maintenance program in times of poor as well as good earnings and to an engineering organization that has constantly experimented and pioneered with machinery and methods.

Mechanization, more than anything else, has enabled Soo MofW men to meet rising costs with methods which have returned more and more maintenance per dollar. The Soo has for many years worked closely with one of the major manufacturers in the development of new MofW machinery. This pioneering in equipment has led to a highly mechanized organization with an impressive productivity. For example:

¶The Soo used to lay about 10 new ties per man-day when it did the work with regular section gangs. Now, with fully mechanized tie-laying gangs it's putting in 25 to 30 ties per man-day. Four such gangs normally handle all of the Soo's annual new-tie program — an average of 460,000 ties per year.

¶A few years ago the Soo's rail-laying gang consisted of 100 men. Time and motion studies and new equipment led to a reorganized gang that now does the same work with only 55 men. Only one such gang takes care of all the Soo's new and re-lay rail work.

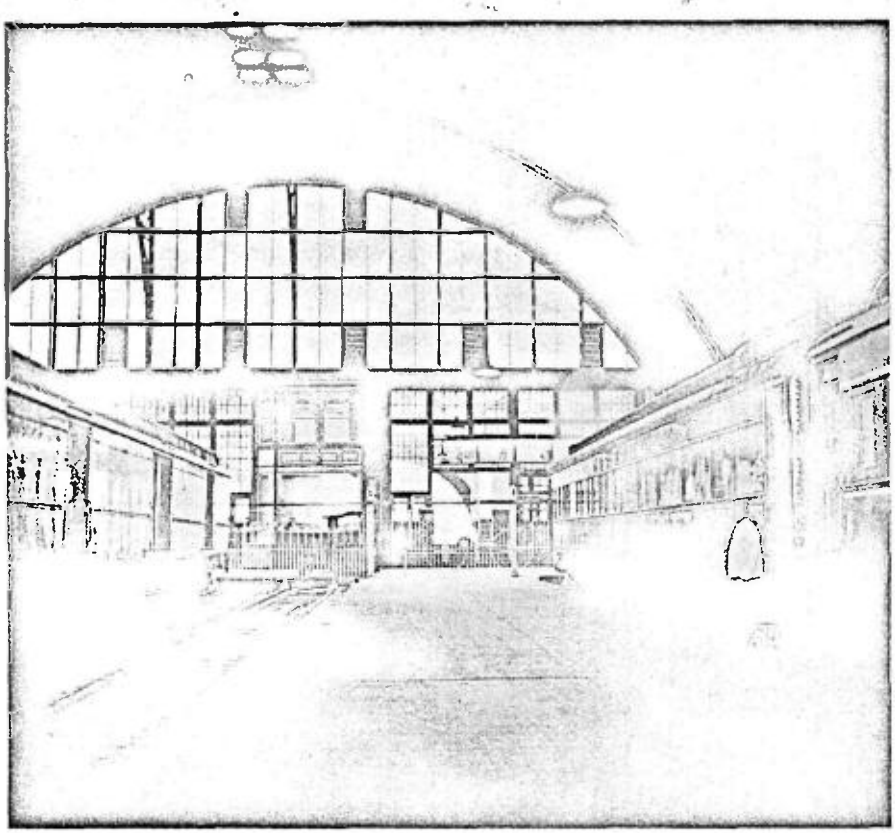
The Soo engineering department has been busy, too, with a continuing program of right of way improvements. Since 1952 it has moved more than 5 million cubic yards of earth on its western lines in a program of cut widening that will reduce drainage and snow removal problems. It has been replacing timber trestles with steel and concrete structures, and it has lengthened sidings and yards for diesel-length trains throughout the system.

The Soo's mechanical department is the sort of resourceful organization that could undoubtedly build anything on flanged wheels it wanted to build. It can turn out any kind of freight car it has a mind to, has completely rebuilt old passenger cars to meet new traffic requirements, and hasn't the slightest doubt that it can upgrade its diesel locomotives if and when the need arises.

Its shops are divided between Shoreham at Minneapolis, which handles all heavy passenger car repairs and diesel repairs for the Soo Line proper, and the old Wisconsin Central shops at North Fond du Lac, where heavy freight car repairs, new-car production, and Wisconsin Central diesel repair are concentrated.

Soo decided in 1949 to turn to its own freight car construction simply because it could do the job for less. At North Fond du Lac it had both a good work force and a well-equipped erecting shop which was no longer required for steam locomotive repair and needed little modification for car production. North Fond du Lac adopted welding for nearly all of its new-car fabrication, and its production men have designed almost all of the time-saving jigs and positioners they use. Since 1949 North Fond du Lac has turned out an average production of 400 cars a year, and it has produced as many as 700 in one year. In addition to such standard car types as box cars, flat cars and gondolas, it has put together such specialized equipment as a batch of 70-ton, airtight covered hopper cars for hauling carbide.

The IBM 650 electronic computer the Soo placed in operation at Minneapolis last year was only the latest step in a mechanization of its accounting and statistical work which began with the adoption of IBM punch cards for statistical operations in 1917. In addition to its pioneering development of a mechanized diesel parts inventory system, now in use at Shoreham and soon to be extended to North Fond du Lac, the Soo uses the new computer to process payrolls and to prepare revenue, car- and locomotive-mile, and wage statistics. Among the further applications of computer technology now being studied are many operations related to rate divisions and reporting for interline freight shipments, and a centralized station accounting system whose ultimate aim is to process car reports and compute



LAKER awaits departure from Chicago's venerable, graceful Grand Central Station. Soo's Wisconsin Central helped erect terminal in 1886-1888, moved over to the IC in 1893, returned as a tenant in 1914. For a spell WC even operated commuter runs.

freight bills in the general office, eliminating errors or the need for verification of bills prepared by agents.

Closely allied with its computer is the Soo's new freight car reporting system, which went into operation on the Minneapolis-Portal and Glenwood-Noyes lines last June 1. The system utilizes teletype circuits to transmit complete information about freight shipments originated or received from connections. Complete data on each shipment is transmitted at the first reporting only. Subsequent updating reports, as a car moves along the system, transmit only information needed for switching. The information is reproduced at receiving stations both as a typed summary of a train's consist and on a punched tape, which can be fed through automatic equipment to produce a complete IBM punch card record for each carload. Fed through the computer, the cards enable the Soo to compile in minutes summaries and studies that once took days.

Twelve principal west end stations are now on the reporting system, with every nonmechanized station reporting to one of them. Nineteen more reporting stations will complete the systemwide application, possibly by July 1959.

Just what does the Soo's car reporting system do? To begin with it enables current revenue estimates and reports to management on day-to-day traffic developments that were impossible before. It provides intermediate yards with complete switching information hours before a train arrives, makes possible better car distribution, faster car location, and simplifies en route diversions. The Soo's new traffic research department has been feeding the versatile punch cards through the computer to assemble movement studies and other traffic statistics needed for its new rate proposals and multiple car rate studies.

Co-ordinated operation by competing railroads is one good answer to some of the problems generated by too many railroads in areas where there just isn't enough traffic to support separate facilities. The Soo has been involved in co-ordination ever since 1929, when it entered into a joint 50-50 Cuyuna Range iron ore operation with Northern Pacific. The NP uses Soo Line trackage on the range, the Soo uses NP track between McGregor and Ironton, Minn., and the two roads share NP's ore yard and dock at Superior. Since 1936 the Soo has had a similar co-ordinated ore operation with C&NW between Ironwood, Mich., and Ashland, Wis. Both roads use the Soo's ore dock at Ashland.

A few years ago the Soo entered into an unusual co-ordinated operation with Great Northern. The Soo tore up 26 miles of line between Schley and Bemidji, Minn., and now runs its trains over GN rails; Great Northern took up 28 miles of track between Nashua, Minn., and Hankinson, N. Dak., and now operates over Soo track. Neither road pays any rental or wheelage, and each takes care of all maintenance of its own track.

The Soo is now waiting for I.C.C. approval of an 80-mile Rapid River-Marquette (Mich.) co-ordination agreement with the Lake Superior & Ishpeming that would give the Soo access to Marquette and the LS&I access to Lake Michigan. Currently the Soo, along with other railroads entering Duluth, is considering still another co-ordinated operation — a consolidation into one of three Duluth passenger terminals.

THE year 1957 was not a particularly good one for the Soo Line, and 1958 will probably turn out to be even worse. The combined Soo-Wisconsin Central net income for 1957 was only 1.7 million dollars, against a 1956 net of 4.5 million. The business recession beginning late in 1957 was the cause, of course, for the Soo, like all railroads, is highly sensitive to business conditions.

Traffic in 1958 has been running well below 1957 levels. In the case of the Soo's important iron ore traffic, tonnage has been running only about 40 per cent of what it was in 1957. The bumper grain crop — if it continues to move to market — could help improve the Soo's earnings for the year, but as late as September the Soo was still figuring that 1958 revenues would be some 10 per cent under 1957. Employment was down to 7500 from the usual 9000, and the Soo's annual improvement and maintenance programs had been severely reduced.

In any case, the Soo Line is in better shape than it once was to absorb a few poor years; and for that matter, it is in better shape than a good many railroads. Certainly it has already survived quite a number of them in its 75 years.

This, then, is the Soo Line. A railroad which has been a model of corporate propriety, a dependable public servant, and a respected competitor. It has made many friends and even, of late, a few dollars for its owners. A railroad for which no great need existed. But it has done much with its modest resources, and it has made a useful place for itself in the region it serves.

Which, all things considered, is commendable indeed.