

# SOUTH DAKOTA RAILROADS IN SUMMARY



PREPARED BY:

SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
DIVISION OF PLANNING  
OFFICE OF PLANNING AND PROGRAMMING  
700 BROADWAY AVENUE EAST  
PIERRE, SOUTH DAKOTA 57501

FEBRUARY 1989

## TABLE OF CONTENTS

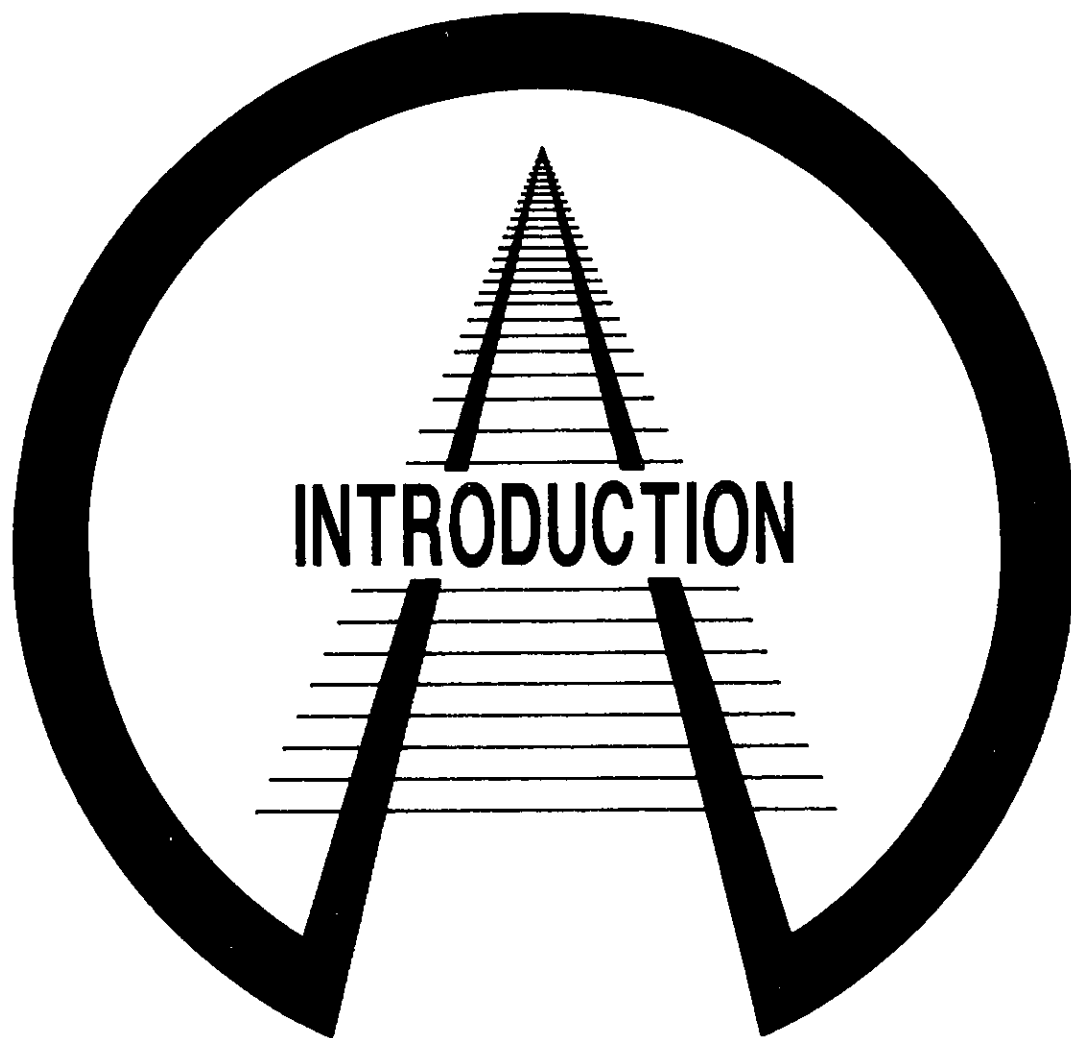
	<u>PAGE</u>
Introduction	1
Significant Events Since the 1986 Railplan	4
Railroad Rehabilitation Projects	7
Railroads Today - Present Situation	11
Rail Carriers	13
Rail Traffic	21
Other Rail Characteristics	26
Unit Grain Train Facilities and Shipments	29
Current Status of the State-Owned System	31
Core System Traffic Analysis	31
Abandonments	36
The Future	38

## LIST OF FIGURES

<u>FIGURE</u>		<u>PAGE</u>
1	Class I, Short Lines and Regional Railroads Mileage Comparison	2
2	Rail Lines Which Have Received Rehabilitation Assistance	9
3	South Dakota Rail Line Abandonments	12
4	Burlington Northern - South Dakota Operations	14
5	Dakota, Minnesota and Eastern - South Dakota Operations	16
6	Other Rail Operations	18
7	Carloads of Commodities Originating and Terminating by Rail in South Dakota	23
8	Tons of Commodities Originating and Terminating by Rail in South Dakota	23
9	Percentage of Rail Carloadings by Commodity - 1987	24
10	Class I Railroads Gross Operating Revenues	27
11	Rail Freight Traffic Density	28
12	Maximum Allowable Load Limits	29
13	Unit Train Loading Facilities	31
14	South Dakota-Owned Rail Lines	33
15	State-Owned Core System Traffic	34
16	South Dakota Rail System Mileage 1964-1987	37

## LIST OF TABLES

<u>TABLE</u>		<u>PAGE</u>
1	Rail Improvement Projects	8
2	Current Mileage Operated in South Dakota by Carrier	11
3	Burlington Northern - South Dakota Operations	15
4	Dakota, Minnesota and Eastern - South Dakota Operations	17
5	Chicago and North Western - South Dakota Operations	19
6	Other Rail Operations in South Dakota	20
7	Rail Freight Operating Statistics	25
8	State Core System Rail Traffic - Carloads	35
9	State Core System Rail Traffic - Tons	35



**INTRODUCTION**

## INTRODUCTION

This publication, South Dakota Railroads in Summary, serves as an addendum to the 1986 South Dakota Railplan. It is intended to provide a condensed update of the data and information in the 1986 plan and to highlight important events which have occurred since its publication.

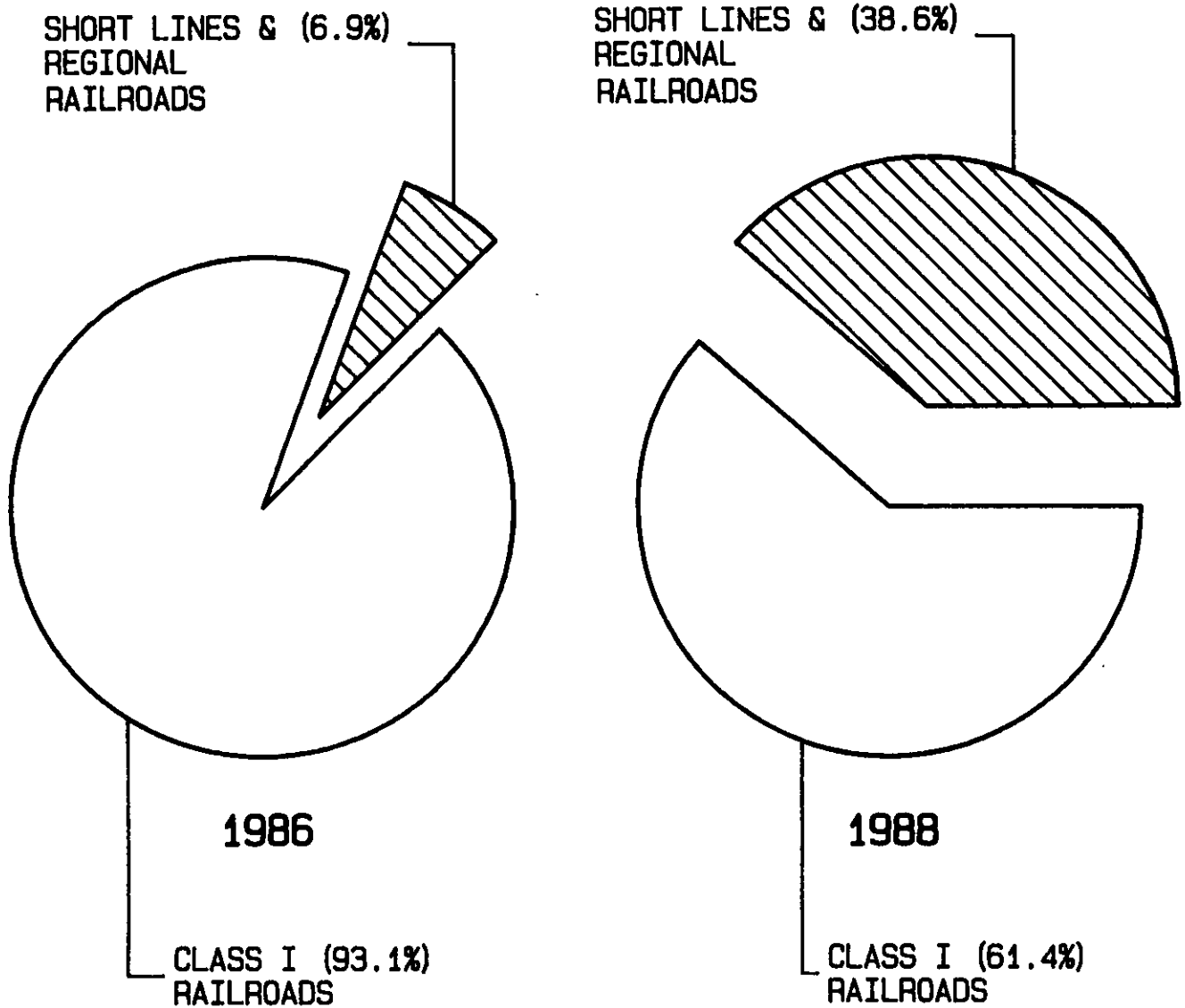
Even though the rail environment has stabilized significantly since the turmoil of the late 1970's and early 1980's, important issues continue to affect South Dakota's rail transportation system.

South Dakota has fewer miles of track than it had in 1986, but the remaining trackage is in better physical condition. Most abandonments have occurred on poorly maintained, lighter density rail lines. This fact, coupled with the state's aggressive rail rehabilitation program of strategic lines, has resulted in a higher percentage of track capable of safely supporting today's modern rail equipment at higher operating speeds.

Today there are fewer miles served by Class I railroads and more served by short lines and regional railroads as illustrated in Figure 1. This change, along with improved rail service and a stronger rail industry, is responsible for better shipper/railroad relations and increased rail traffic. Many rail lines that had an uncertain future a few years ago now enjoy a stable future.

Unit grain train loading facilities, which did not exist in South Dakota until 1982, have also been instrumental in increasing rail traffic and

FIGURE 1  
CLASS I, SHORT LINES & REGIONAL RAILROADS  
OPERATION MILEAGE COMPARISON  
1986 - 1988



enhancing the role of railroads in grain transportation. The efficiency of these facilities, the ability to utilize attractive unit train rates, and improved rail service have resulted in additional rail traffic and stronger rail lines.

Rail traffic on the state-owned core system continues to exceed the forecast developed in 1980. Rehabilitation of this system has been completed and traffic has increased each year since rail service was restored.

There will still be occasional rail line abandonments and many challenges, but the overall future of the rail industry is brighter than at any time in the last decade.





## SIGNIFICANT EVENTS SINCE THE PUBLICATION OF THE 1986 RAIL PLAN

The tumultuous period for the railroad industry in South Dakota began in 1976. At one time, the situation was so volatile that several addendums to the state rail plan were published in a single year. Now that the pace of change has slowed, rail plans and addendums are prepared less frequently. Nevertheless, several significant events have occurred since the last railplan.

1. Dakota, Minnesota and Eastern Railroad - On

September 4, 1986, the L. B. Foster Company purchased 825 miles of main line track and secured 140 miles of trackage rights from the Chicago & North Western Transportation Company and created the Dakota, Minnesota and Eastern Railroad (DM&E). Of the purchased track, 502 miles are located in South Dakota. The line extends from Rapid City to Winona, MN with branch lines in South Dakota from Blunt to Onida, Redfield to Mansfield, Aberdeen to Oakes, ND and Sioux Valley Jct. to Watertown. Operations started on September 5, 1986. The DM&E has undertaken an ambitious track rehabilitation program to improve service, safety and efficiency. The DM&E is expected to provide essential and stable service on lines which in the past had uncertain futures.

2. Sisseton Southern Railroad - In 1982, the abandoned 37 mile Milwaukee Road rail line from Milbank to Sisseton was purchased by some of the line's shippers. They contracted for service with Dakota Rail, a short line railroad created expressly for this purpose. Dakota Rail ceased operations on the line in 1987 and the line's owners have contracted with a new short line, the Sisseton Southern Railway Company, for service.
  
3. Dakota Southern Railroad Company - The Dakota Southern Railroad Company, a short line railroad, was formed for the purpose of restoring service to the state-owned Napa to Platte branch line. Operations started October 12, 1985 on this 82 mile line which had been idle since the Milwaukee Road ceased service in 1980. Dakota Southern expanded its operation on January 1, 1987 to the 68.5 mile Mitchell to Chamberlain line. The Mitchell to Chamberlain line is also owned by the State of South Dakota and previously had been operated by the Burlington Northern Railroad Company. In 1988, Dakota Southern expanded its operations again to extend its service from Chamberlain to Kadoka, a distance of 121 miles. This trackage had been without service since 1980.

4. D & I Railroad - On October 24, 1980 the Sioux Falls to Dell Rapids branch line was purchased by the State following its abandonment by the Milwaukee Road. The D & I Railroad Company, a subsidiary of the L. G. Everist Company, was formed to operate this line to provide service to their rock quarry at Dell Rapids. The State has since sold the rail line to L. G. Everist. The D & I also has operating rights on the state-owned line from Sioux Falls to Sioux City for overhead movements of rock products. On November 1, 1986, the D & I Railroad began common carrier service on the Canton to East Wye Switch and Hawarden to Beresford lines which were previously operated by the Burlington Northern Railroad.
  
5. New Core System Agreement - A new, 15 year agreement was executed on July 10, 1986 between the State of South Dakota and the Burlington Northern Railroad Company for service on the 369 mile state-owned core rail system. Changes in the agreement include (a) the exclusion of service on the Mitchell to Chamberlain line and (b) a provision which requires BN to remit a portion of the gross freight revenues earned on the core system when those revenues exceed a threshold amount.



**RAILROAD  
REHABILITATION  
PROJECTS**

## RAILROAD REHABILITATION PROJECTS

In 1976, the Local Rail Service Assistance Program (LRSA) was enacted by the federal government to assist states in railroad planning, rehabilitation and restructuring. The LRSA program provides federal grant funds directly to states which require financial assistance to improve their railroad systems. Since the program's enactment, South Dakota has received several grants which have been combined with state and private funds and used to improve the rail lines which are important for the movement of South Dakota's rail freight.

Table 1 is a list of past railroad rehabilitation projects which shows the state and federal funds involved in individual projects. Figure 2 highlights the completed and ongoing rail line rehabilitation projects in South Dakota. The federal funds available to the state through the LRSA program have diminished greatly in recent years. The program expired on September 30, 1988 and the future federal role in rail rehabilitation is uncertain.

In 1987, the project which rehabilitated the state-owned line from Ortonville, MN to Terry, MT was completed. This project was made possible by a \$30 million dollar loan to the South Dakota Railroad Authority through the Federal Preference Share Loan Program, and the loan is being repaid by Burlington Northern. The project began in 1982 and consisted of comprehensive track rehabilitation.

TABLE 1

RAIL IMPROVEMENT PROJECTS  
USING SOUTH DAKOTA AND/OR FEDERAL FUNDS  
(ESTIMATED COSTS)

RAIL SEGMENT	RAIL LINE OWNER	YEAR IMPLEMENTED	TYPE OF IMPROVEMENT*	TOTAL COST	STATE PARTICIPATION**	PROJECT STATUS
Big Stone-Gascoyne	MILW	1979	1-2-3	\$ 2,227,000	\$ 1,781,000	Completed
Miles City-Gascoyne	MILW	1980	1-2-3-6	2,477,000	1,982,000	Completed
Sioux Falls-Madison	BN	1981	1-2-3-4-6	5,670,000	1,760,000	Completed
Core System***	SD	1981	1	2,794,297	2,794,297	Completed
West Jct.-Canton	SD	1981	1-2-3-4-5-6	879,100	879,100	Completed
Sioux City-Mitchell	SD	1981	1-2-3-5-6	6,382,035	6,382,035	Completed
Mitchell-Canton	SD	1982	1-2-3-5-6	2,016,512	2,016,512	Completed
Huron-Pierre	C&NW	1982	1-2-3-4-6	4,474,015	3,376,198	Completed
Britton Spur	SD	1982	1-2-3-4-5-6	896,776	717,421	Completed
Ortonville-Terry	SD	1982	1-2-3-4-5-6	30,000,000****	-0-	Completed
Canton-East Wye Switch and						
Hawarden to Beresford	SD	1983	1-2-3	812,136	212,136	Completed
Milbank-Sisseton	DAK.R.	1983	1-2-3-6	933,813	655,699	Completed
Aberdeen-Wolsley	SD	1983	1	1,961,000	1,961,000	Completed
Blunt-Onida	C&NW	1984	1-2-3-4-5-6	2,271,506	498,781	Completed
Mitchell-Tulare	SD	1984	1-6	1,865,000	1,865,000	Completed
Aberdeen-Mitchell	SD	1986	2-3	1,712,237	1,712,237	Completed
Redfield-Mansfield	DM&E	1987	1-2-3	894,490	626,143	Completed
Hawarden-East Wye Switch	SD	1988	1-2-3	872,661	597,378	Completed
<b>TOTALS</b>				<b>\$69,139,578</b>	<b>\$29,816,937</b>	

\* Major Components of Improvement  
1 - Ties  
4 - Rail  
2 - Ballast  
5 - Crossings  
3 - Surfacing  
6 - Anchors

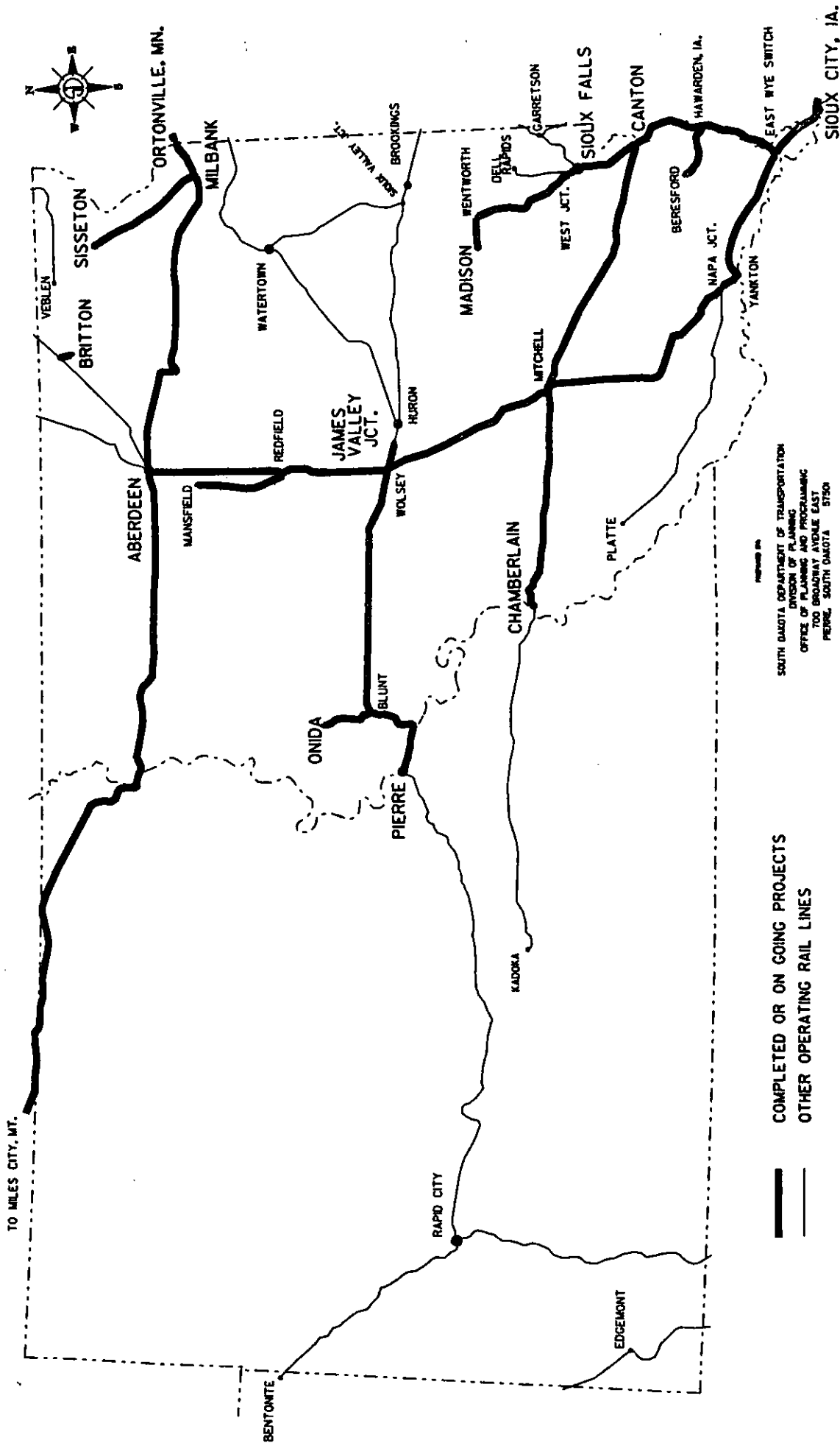
\*\* Includes Federal 803 and/or State Funds

\*\*\* Directed Service Project

\*\*\*\* Section 505 Loan to the South Dakota Railroad Authority

FIGURE 2

# RAIL LINES WHICH HAVE RECEIVED REHABILITATION ASSISTANCE THROUGH STATE and/or FEDERAL PROGRAM





Three rail rehabilitation projects have been initiated since the 1986 rail plan was adopted. The Burlington Northern undertook a \$1,712,237 project to ballast and surface the 128.6 mile state-owned line from Aberdeen to Mitchell. This project brought the line up to Class 2 standards, allowing speeds of 25 MPH and unit train operations.

The second rehabilitation project was a \$894,490 project done by the Dakota, Minnesota and Eastern Railroad upgrading the 26.3 mile line from Redfield to Mansfield. The project, which was completed in November 1987, consisted of ties, ballast and surfacing and upgraded the line to Class 2 condition. Seventy percent of the funding for the project was provided by the Federal Railroad Administration and the balance was provided by the DM&E.

The third rehabilitation project was the rehabilitation to Class 2 standards of the state-owned line from Hawarden, Iowa to East Wye Switch. This project was divided into two phases. The first phase was the rehabilitation of 18 miles of track from Hawarden, IA to Westfield, IA. This \$658,289 project was completed in 1988. The second phase of the rehabilitation was also completed in 1988 and addressed seven miles of track from Westfield to East Wye Switch. The cost of this project was \$214,372. Rehabilitation of the 25 miles of track from Canton to Hawarden will commence when funds become available.



**RAILROADS  
TODAY**

## RAILROADS TODAY - PRESENT SITUATION

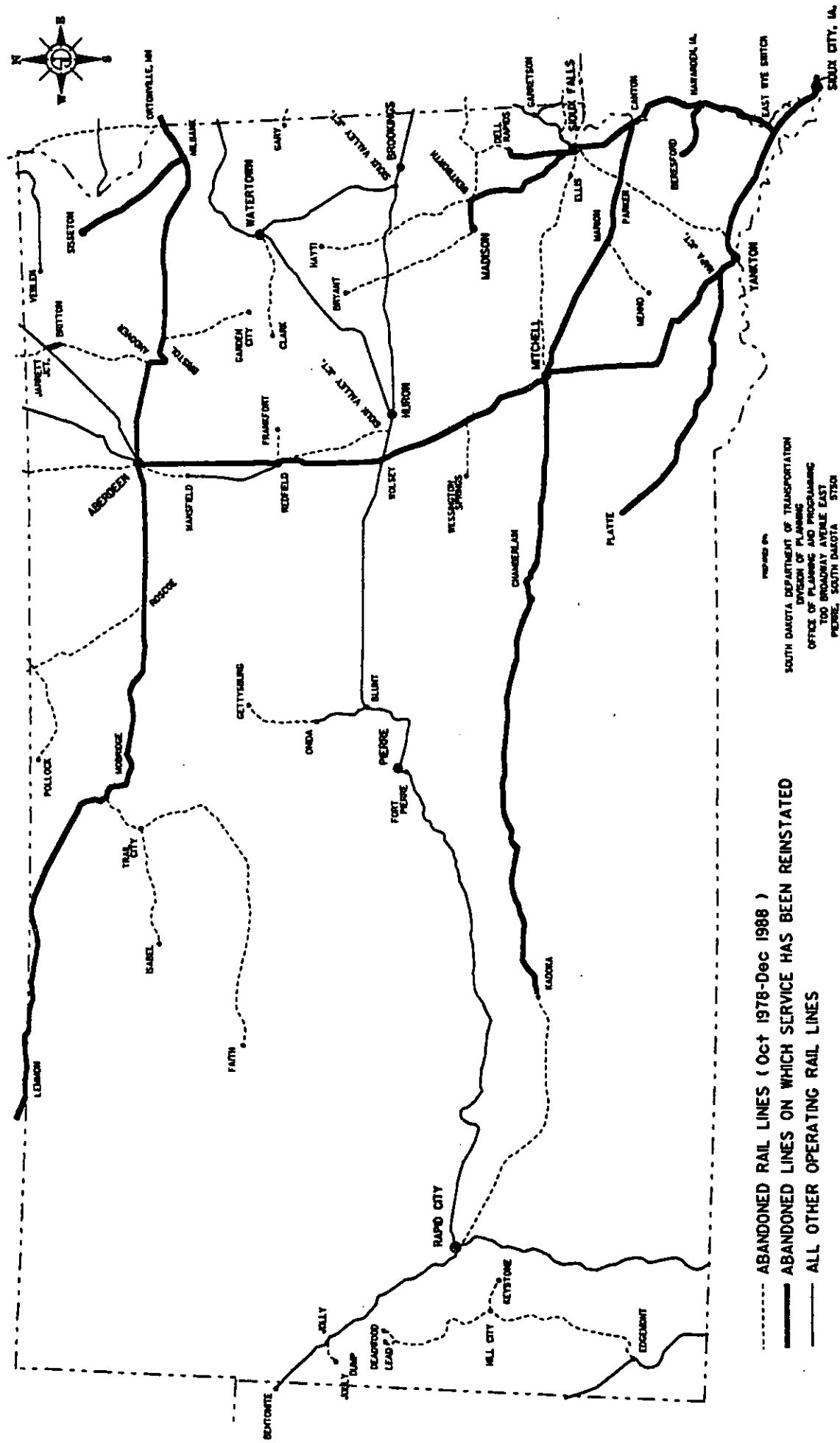
Table 2 shows the current rail mileage and the carriers providing service. The current rail system, as well as those lines which have been approved for abandonment since October 1978, are shown on Figure 3.

TABLE 2  
CURRENT RAIL MILEAGE OPERATED IN SOUTH DAKOTA  
BY CARRIER

<u>Railroad</u>	<u>Miles Owned</u>	<u>Other Miles Served</u>	<u>Trackage Rights</u>	<u>Total Miles Served in SD</u>
Class I				
Burlington Northern	289.6	666.7	13.3	956.3
Chicago & North Western	157.8	---	---	157.8
Soo Line	33.5	---	10.4	33.5
Class II				
DM&E	501.6	---	74.0	501.6
Class III				
Sisseton Southern	---	37.1	---	37.1
D & I	16.8	30.3	38.1	47.1
Dakota Southern	---	<u>272.1</u>	---	<u>272.1</u>
Total	999.3	1,006.2	135.8	2,005.5

The State of South Dakota owns 969 miles of trackage which is leased to various railroads which provide service on the lines. In addition, South Dakota owns 223 miles of track in surrounding states to provide necessary and efficient links to the national rail network.

# FIGURE 3 SOUTH DAKOTA RAIL LINE ABANDONMENTS OCTOBER 1978 THROUGH DECEMBER 1988



## Rail Carriers

Currently seven railroad companies provide freight service in South Dakota. Three of these companies are Class I carriers, one is a Class II carrier and the remaining three are short line operators.

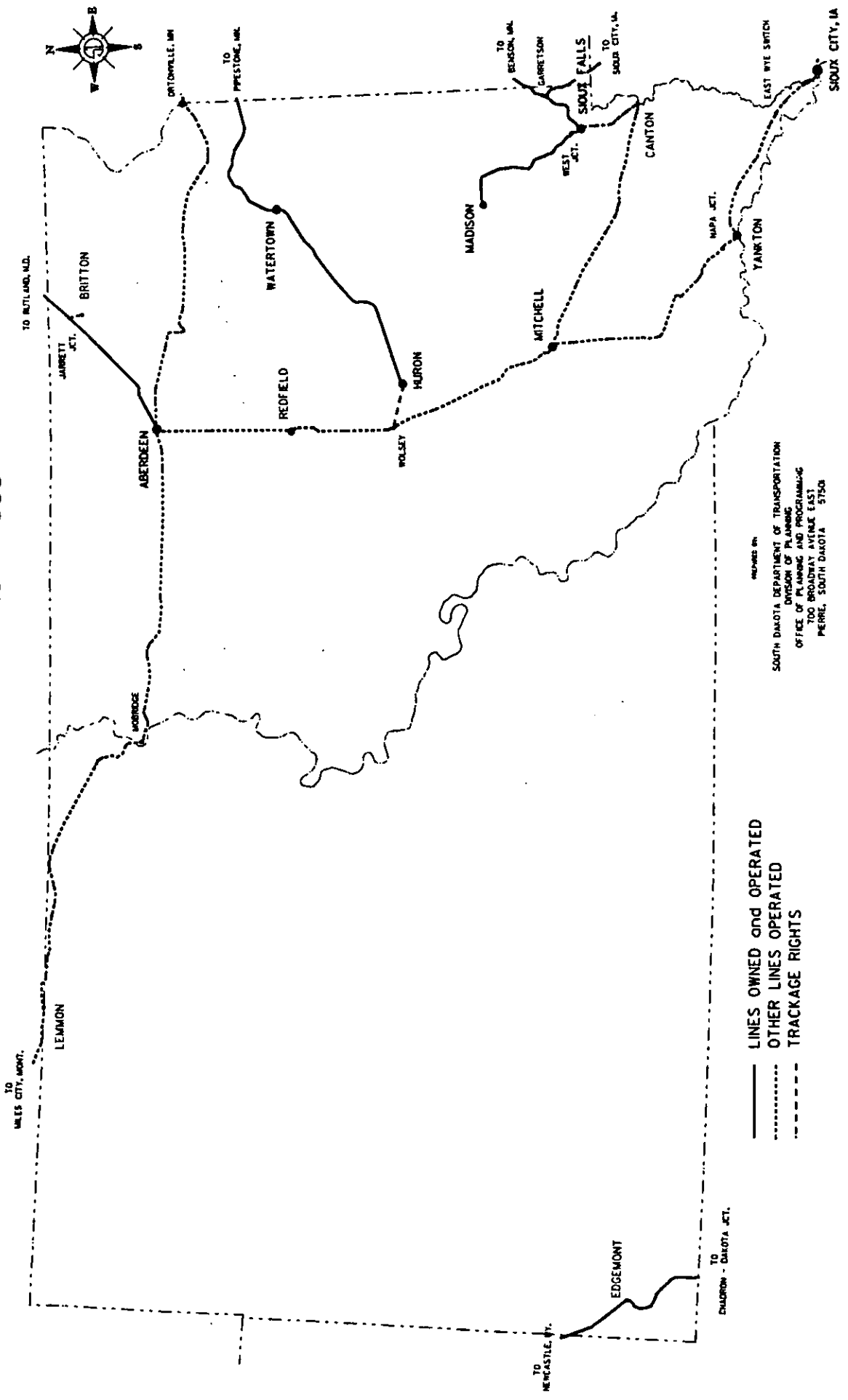
The Burlington Northern (BN), see Figure 4, continues to operate more miles of track in the State than all other carriers combined. Its system is composed of 290 miles of their own track and 667 miles of State-owned track. Table 3 is a line by line listing of its trackage, showing the miles and the weight limits.

The Dakota, Minnesota and Eastern (DM&E), see Figure 5, operates 502 miles of their own track and has the trackage rights on 74 miles of State-owned track. Table 4 is a line by line listing of its trackage, showing the miles and the weight limits. All but two of the lines operated by the DM&E are capable of accommodating the fully-loaded covered hopper cars which are preferred for grain service.

The Chicago & North Western (C&NW), see Figure 6, operates only 158 miles of their own track in South Dakota. In 1988, the C&NW received ICC approval for abandonment of the Ellis, SD to Agate MN line. Table 5 is a listing of the C&NW's trackage and weight limits.

The four remaining rail carriers in the State are also illustrated in Figure 6. The various links and weight limits for each carrier are listed in Table 6.

# FIGURE 4 BURLINGTON NORTHERN SOUTH DAKOTA OPERATIONS - 1988



PREPARED BY  
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
DIVISION OF PLANNING  
OFFICE OF PLANNING AND PROGRAMMING  
700 BROADWAY AVENUE EAST  
PERDRE, SOUTH DAKOTA 57508

— LINES OWNED and OPERATED  
- - - OTHER LINES OPERATED  
· · · TRACKAGE RIGHTS

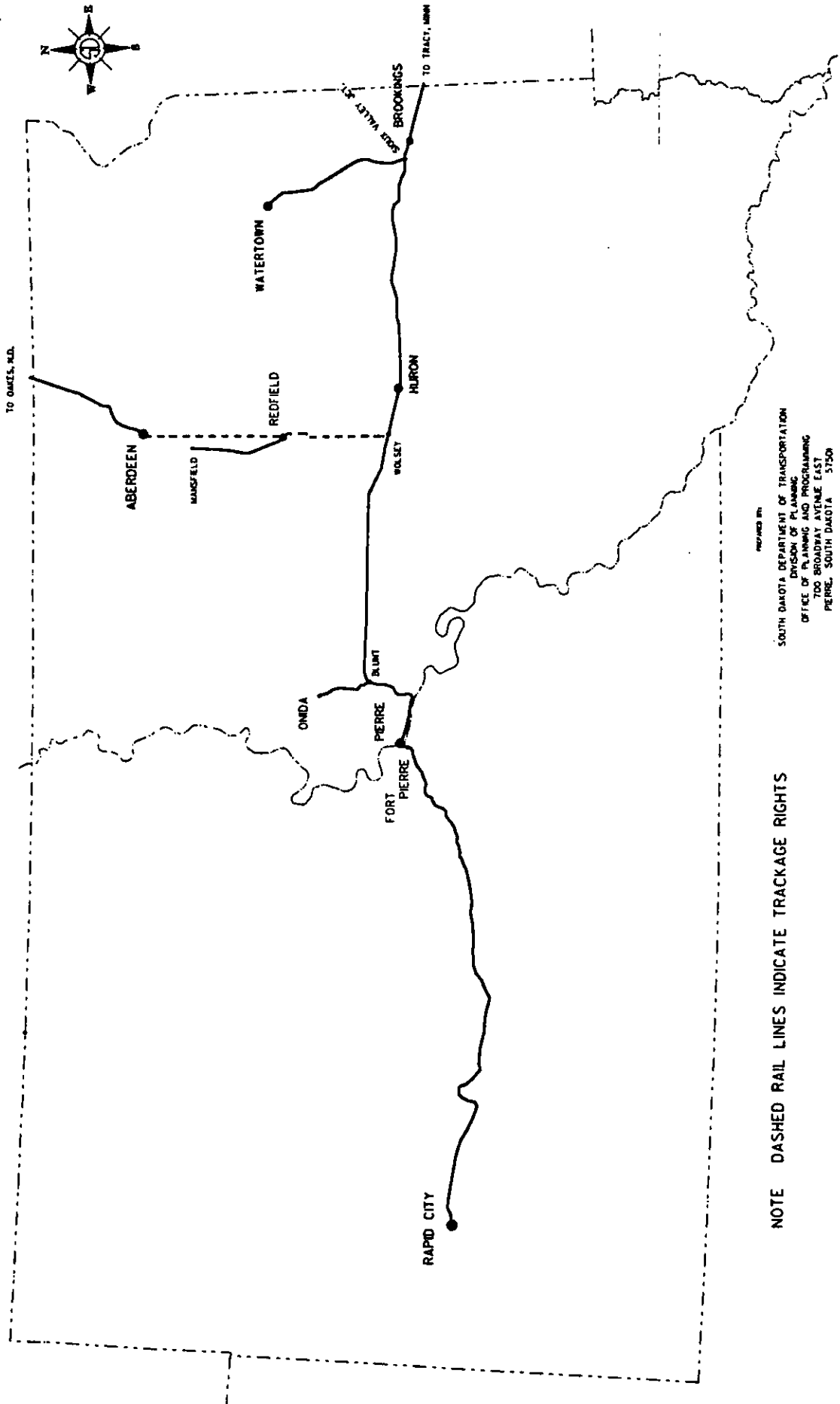
TABLE 3  
BURLINGTON NORTHERN  
SOUTH DAKOTA OPERATIONS (1-1-88)

SEGMENT (BN OWNERSHIP)		TOTAL MILES	WEIGHT LIMIT (LBS.)	
FROM	TO		SD MILES	
Willmar, MN	Garretson	127.9	4.6	263,000
Garretson	Sioux City	94.3	8.1	263,000
Garretson	Sioux Falls	17.4	17.4	263,000
Sioux Falls	Madison	42.1	42.1	263,000
Benson, MN	Watertown	92.0	45.1	263,000
Watertown	Huron	69.9	69.9	263,000
Geneseo Jct.	Aberdeen	76.6	53.6	263,000
Alliance, NE	Edgemont	110.6	27.4	315,000
Edgemont	Gillette, WY	121.1	21.4	315,000
TOTAL		751.9	289.6	

SEGMENT (SD OWNERSHIP)		TOTAL MILES	SD MILES	WEIGHT LIMIT (LBS.)
FROM	TO			
Sioux Falls	Canton	20.8	20.8	263,000
Canton	Mitchell	79.2	79.2	263,000
Mitchell	Wolsey	54.6	54.6	263,000
Wolsey	Aberdeen	74.0	74.0	263,000
Mitchell	Yankton	74.9	74.9	263,000
Yankton	Sioux City	62.0	56.0	263,000
Jarrett Jct.	Britton	5.0	5.0	263,000
Ortonville, MN	Aberdeen	110.7	110.7	263,000
Aberdeen	Mobridge	98.6	98.6	263,000
Mobridge	Terry, MT	270.6	89.8	263,000
Sioux Falls	West Jct.	3.1	3.1	263,000
TOTAL		853.5	666.7	

TRACKAGE RIGHTS ON DM&E		TOTAL MILES	SD MILES	WEIGHT LIMIT (LBS.)
FROM	TO			
HURON	WOLSEY	13.3	13.3	263,000

FIGURE 5  
**DAKOTA, MINNESOTA and EASTERN**  
**SOUTH DAKOTA OPERATIONS - 1988**



PREPARED BY:  
 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF PLANNING  
 OFFICE OF PLANNING AND PROGRAMMING  
 700 BROADWAY AVENUE EAST  
 PIERRE, SOUTH DAKOTA 57509

NOTE DASHED RAIL LINES INDICATE TRACKAGE RIGHTS



TABLE 4  
 DAKOTA, MINNESOTA & EASTERN RAILROAD  
 SOUTH DAKOTA OPERATIONS (1-1-88)

<u>SEGMENT (DM&amp;E OWNERSHIP)</u>		<u>TOTAL MILES</u>	<u>SD MILES</u>	<u>WEIGHT LIMIT (LBS.)</u>
<u>From</u>	<u>To</u>			
Tracy, MN	Wolsey	149.7	104.5	263,000
Wolsey	Ft. Pierre	108.3	108.3	263,000
Ft. Pierre	Rapid City	164.6	164.6	263,000
Redfield	Mansfield	26.3	26.3	263,000
Aberdeen	Oakes, ND	52.7	37.5	210,000
Sioux Valley Jct.	Watertown	44.2	44.2	210,000
Blunt	Onida	16.2	16.2	263,000
TOTAL		<u>562.0</u>	<u>501.6</u>	

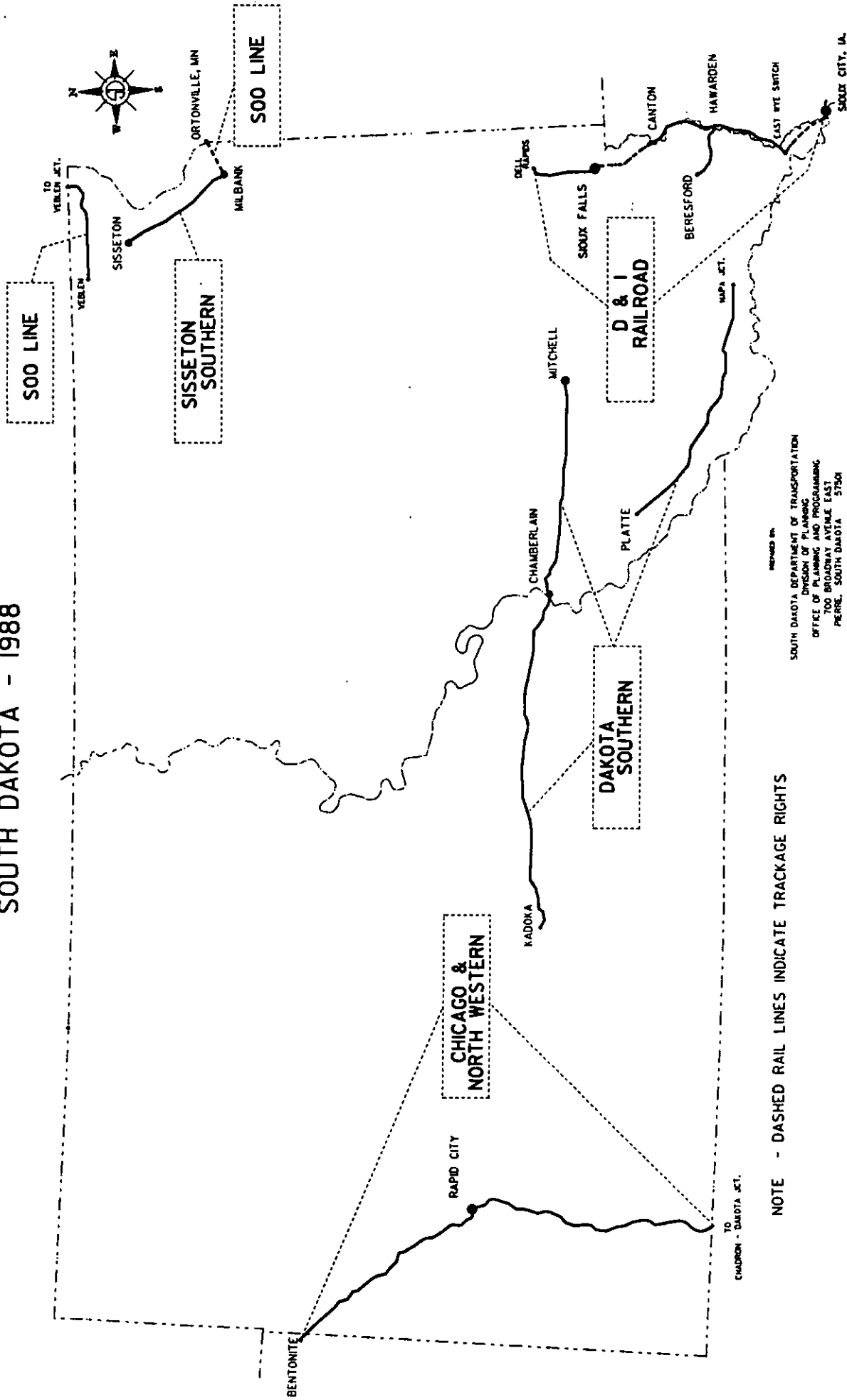
=====

TRACKAGE RIGHTS ON SOUTH DAKOTA OWNED LINES

Wolsey	Aberdeen	74.0	74.0	263,000
--------	----------	------	------	---------

-----

FIGURE 6  
**OTHER RAIL OPERATIONS**  
**SOUTH DAKOTA - 1988**



NOTE - DASHED RAIL LINES INDICATE TRACKAGE RIGHTS

PREPARED BY:  
 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF PLANNING  
 OFFICE OF PLANNING AND PROGRAMMING  
 700 BROADWAY AVENUE EAST  
 PERRE, SOUTH DAKOTA 57501

TABLE 5  
 CHICAGO AND NORTH WESTERN TRANSPORTATION COMPANY  
 SOUTH DAKOTA OPERATIONS (1-1-88)

<u>SEGMENT (C&amp;NW OWNERSHIP)</u>		<u>TOTAL MILES</u>	<u>SD MILES</u>	<u>WEIGHT LIMIT (LBS.)</u>
<u>From</u>	<u>To</u>			
Chadron, NE	Rapid City	102.2	86.8	251,000
Rapid City	Bentonite, WY	77.6	71.0	251,000
TOTAL		<u>179.8</u>	<u>157.8</u>	

=====

TABLE 6  
OTHER RAIL OPERATIONS  
-SOUTH DAKOTA-

<u>SEGMENT FROM - TO</u>	<u>TOTAL MILES</u>	<u>SD MILES</u>	<u>WEIGHT LIMIT (LBS.)</u>
<u>Sisseton Southern</u>			
Milbank - Sisseton	37.1	37.1	263,000
<u>Soo Line</u>			
Veblen Jct. - Veblen	42.2	33.5	263,000
Ortonville, MN - Milbank, SD (Trackage Rights on SD Owned Line)	10.4	10.4	263,000
TOTAL	52.6	43.9	
<u>D&amp;I Railroad</u>			
Sioux Falls - Dell Rapids (West Jct.)	16.8	16.8	263,000
Canton - East Wye Switch (SD Owned Track)	49.7	14.1	263,000
Hawarden, IA - Beresford, SD (SD Owned Track)	16.9	16.2	263,000
Sioux Falls - Canton (Trackage Rights on SD Owned Line)	20.8	20.8	263,000
East Wye Switch - Sioux City (Trackage Rights on SD Owned Line)	17.3	11.3	263,000
TOTAL	121.5	79.2	
<u>Dakota Southern (SD Owned Track)</u>			
Napa - Platte	82.4	82.4	263,000
Mitchell - Chamberlain	68.5	68.5	263,000
Chamberlain - Kadoka	121.2	121.2	263,000
TOTAL	272.1	272.1	

The Soo Line Railroad Company operates one dead end branch line which extends 33.5 miles into the State from North Dakota. It also has trackage rights on approximately ten miles of State-owned track to Milbank.

The D & I Railroad operates on its own track from Sioux Falls to Dell Rapids. In November 1986, the D & I began common carrier service on the State-owned lines from Canton to East Wye Switch and the branch line from Beresford to Hawarden, IA.

The Dakota Southern Railway Company operates the State-owned line from Napa to Platte. In 1987, Dakota Southern extended their operations to include the State-owned line from Mitchell to Chamberlain. They extended their operations even further in 1988 to include the operation of the 121 mile State-owned line from Chamberlain to Kadoka which had been without service since 1980.

The Sisseton Southern Railroad operates a 37 mile, locally-owned branch line from Milbank to Sisseton. The Sisseton Southern replaced Dakota Rail which ceased operations on the line in 1987.

### Rail Traffic

Rail traffic can be measured in several different ways. Common measurements of traffic are cars, tons and revenue, whereas railroads also measure traffic in gross tons per mile of track.

The historical trend for carloadings for the years 1975-1987 is shown in Figure 7. The number of rail cars of commodities moved in 1985, 1986 and 1987 is down slightly from 1984 traffic levels. This statistic can be misleading, as the condition of the rail lines has improved, thereby allowing the movement of heavier (and fewer) cars.

A trend of rail tonnage for the years 1975-1987 is shown in Figure 8. Tonnage continued to increase for originating traffic while the terminating traffic continued its trend of steady decline.

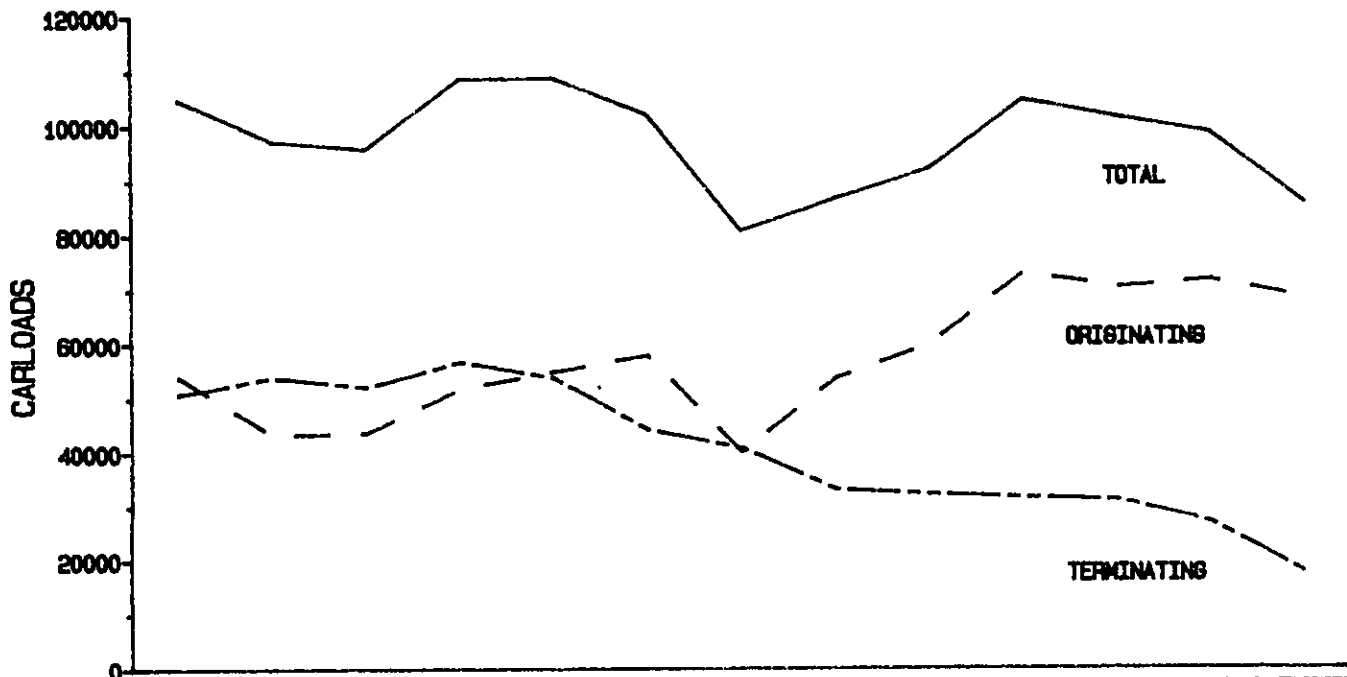
Figure 9 graphically shows the carloadings for the major rail commodities in South Dakota during the year 1987. The leading rail commodities were:

- o Farm Products (66.6%, mainly grain)
- o Coal (8.8% of the total traffic)
- o Stone, Clay and Non-Metallic Minerals (10%)

Farm products accounted for 83.3% of the originating traffic, whereas coal dominated the terminating traffic with 43.2%. The three major commodity groups represent 85.4% of the rail traffic, based on the number of cars.

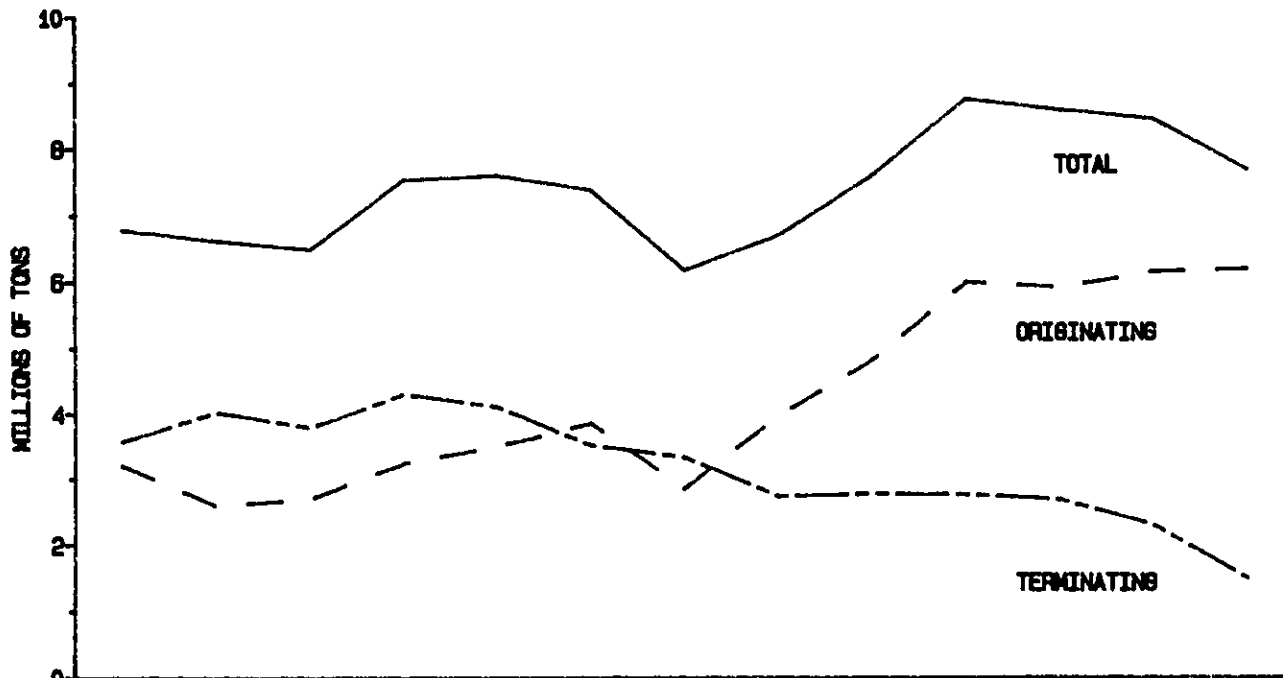
Table 7 shows that although the number of miles in operation has increased since 1984, the number of cars per mile has remained relatively steady. The number of tons per car continues to increase, reflecting the rail improvements which have allowed larger hopper cars to be utilized.

**FIGURE 7  
CARLOADS OF COMMODITIES ORIGINATING AND TERMINATING BY RAIL  
IN SOUTH DAKOTA**



ORIGINATING	54008	43310	43642	51801	54907	57792	39982	53545	58709	72885	70118	71807	88093
TERMINATING	50848	53920	62094	55702	53728	44118	40704	32981	32185	31506	30971	28729	17384
TOTAL	104856	97230	95736	108503	108633	101910	80686	86526	91894	104381	101089	98236	86477
YEARS	1976	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987

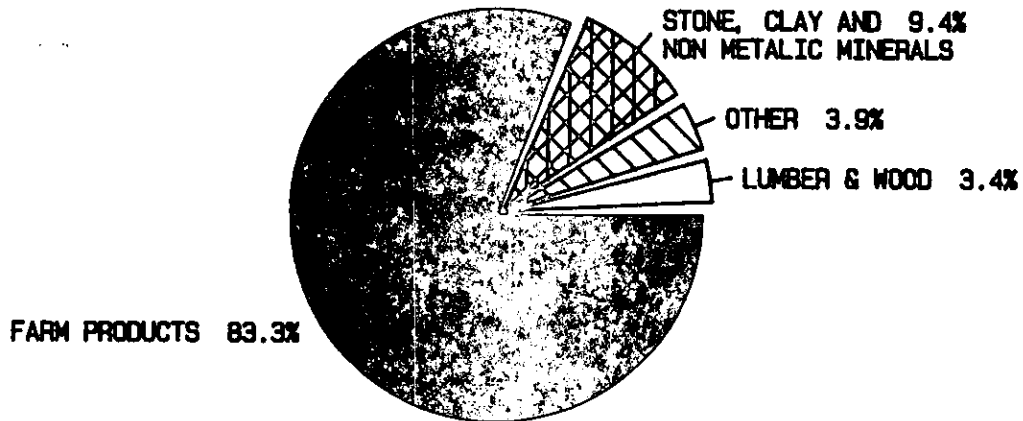
**FIGURE 8  
TONS OF COMMODITIES ORIGINATING AND TERMINATING BY RAIL  
IN SOUTH DAKOTA**



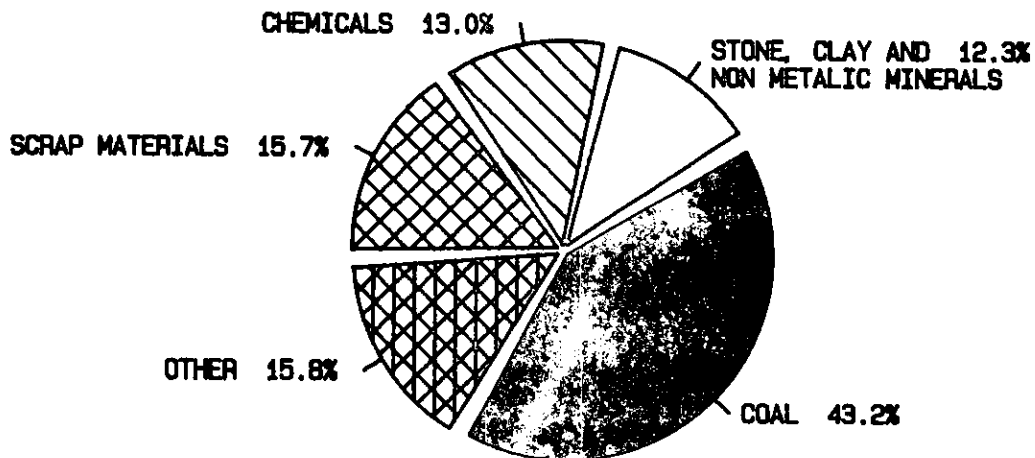
ORIGINATING	3.20	2.58	2.68	3.23	3.49	3.84	2.84	3.96	4.79	5.96	5.89	6.11	6.15
TERMINATING	3.58	4.02	3.78	4.29	4.09	3.50	3.31	2.72	2.76	2.75	2.57	2.29	1.49
TOTAL	6.78	6.61	6.47	7.52	7.58	7.35	6.15	6.67	7.56	8.71	8.54	8.40	7.64
YEARS	1976	1976	1977	1978	1978	1980	1981	1982	1983	1984	1985	1986	1987

FIGURE 9  
**PERCENTAGE OF RAIL CARLOADINGS  
 BY COMMODITY - 1987**

*ORIGINATING*



*TERMINATING*



*TOTAL*

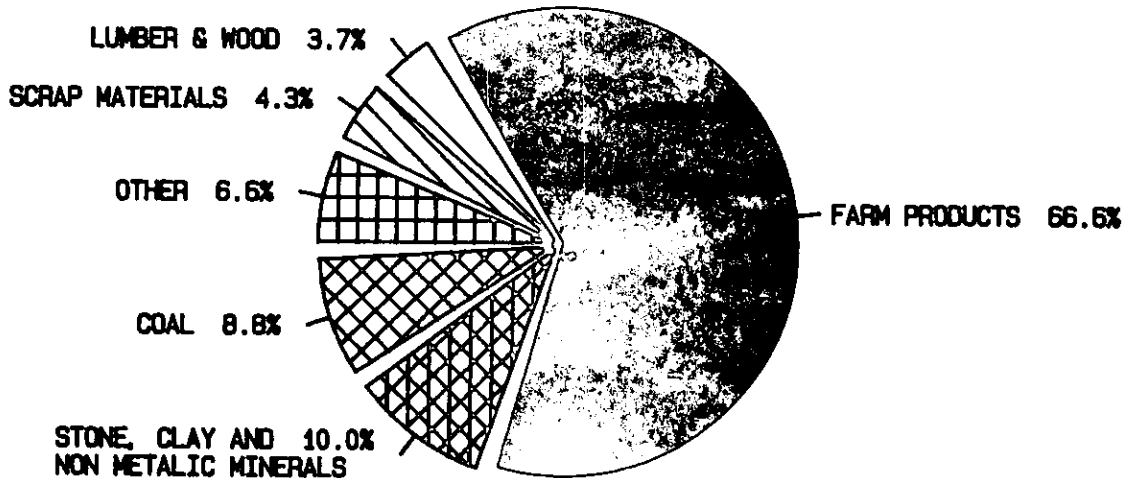




TABLE 7  
RAIL FREIGHT OPERATING STATISTICS  
SOUTH DAKOTA

<u>YEAR</u>	<u>MILES IN OPERATION</u>	<u>CARS PER MILE</u>	<u>TONS PER MILE</u>	<u>TONS PER CAR</u>
1975	3,346	31	2,027	65
1976	3,342	29	1,977	68
1977	3,199	30	2,022	68
1978	2,988	36	2,516	69
1979	2,741	40	2,767	70
1980	1,760	58	4,175	72
1981	2,049	39	3,003	76
1982	2,004	43	3,329	77
1983	1,932	48	3,911	82
1984	1,917	54	4,543	83
1985	1,984	51	4,307	85
1986	1,984	50	4,235	86
1987	1,909	45	4,002	89

=====

Figure 10 lists gross operating revenues for Class I railroads on their South Dakota operations for the years 1980 through 1987. Gross revenues on South Dakota operations for the Soo Line, Burlington Northern and Chicago & North Western have declined in 1985, 1986 and 1987. This may be a reflection of the reduction of operations in the State by all three carriers and a revenue shift to the short line carriers. In addition, some grain rates declined during these years.

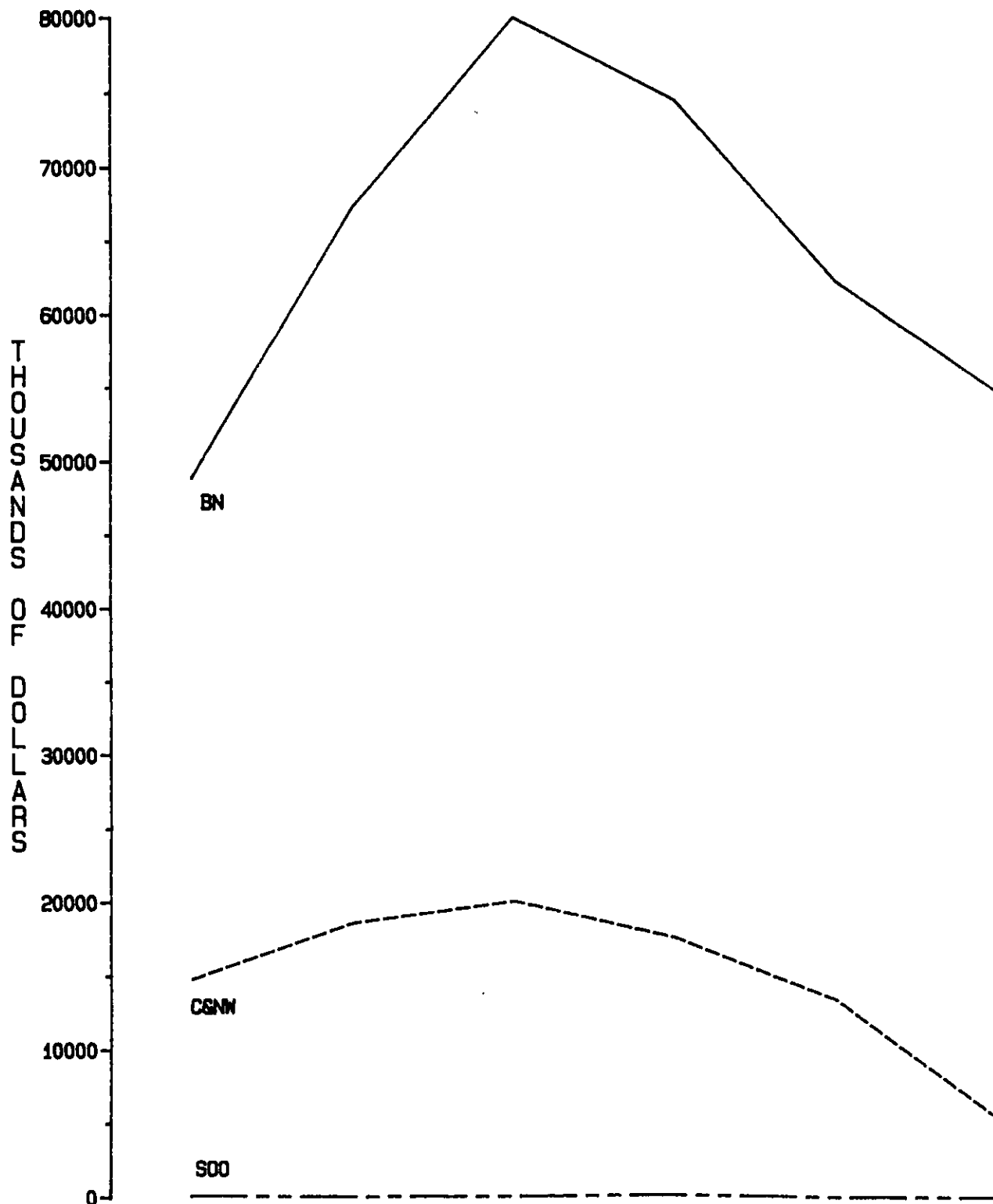
A common measurement of rail line health by a railroad company is freight density. This measurement is quantified in millions of gross tons per mile of track operated. Figure 11 is a traffic density composite of all operating lines in the State for the year 1987.

#### Other Rail Characteristics

Rail volume is an indicator of rail usage. However, many factors influence traffic, income and abandonment decisions. An examination of other rail characteristics besides those previously mentioned is necessary to understand and analyze rail transportation in South Dakota.

Figure 12 illustrates the maximum load limits for each operating rail line in the State. A line should have the capacity to carry 263,000 pounds or more to fully utilize fully loaded covered hopper cars. Any line rated less than 263,000 pounds will most generally suffer inefficiencies (less than full

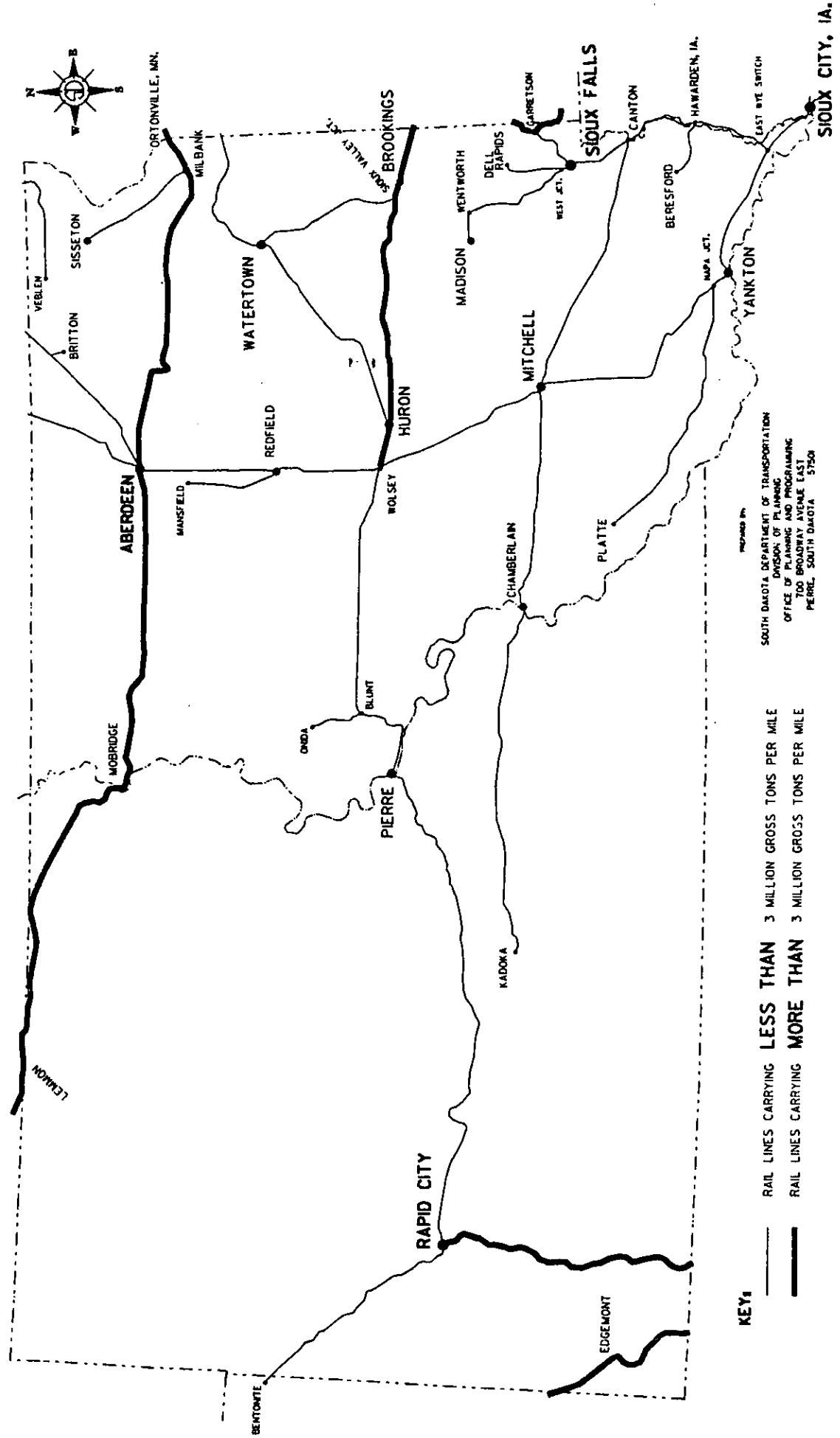
**FIGURE 10  
CLASS I RAILROADS GROSS OPERATING REVENUES  
FROM SOUTH DAKOTA**



BN	48897	67311	79923	74407	62105	54513
CSNW	14828	18611	20114	17612	13362	5463
SDD	142	133	161	298	114	97
TOTAL	63827	86055	100198	92317	75581	60073
YEARS	1982	1983	1984	1985	1986	1987

# 1987 - RAIL FREIGHT TRAFFIC DENSITY

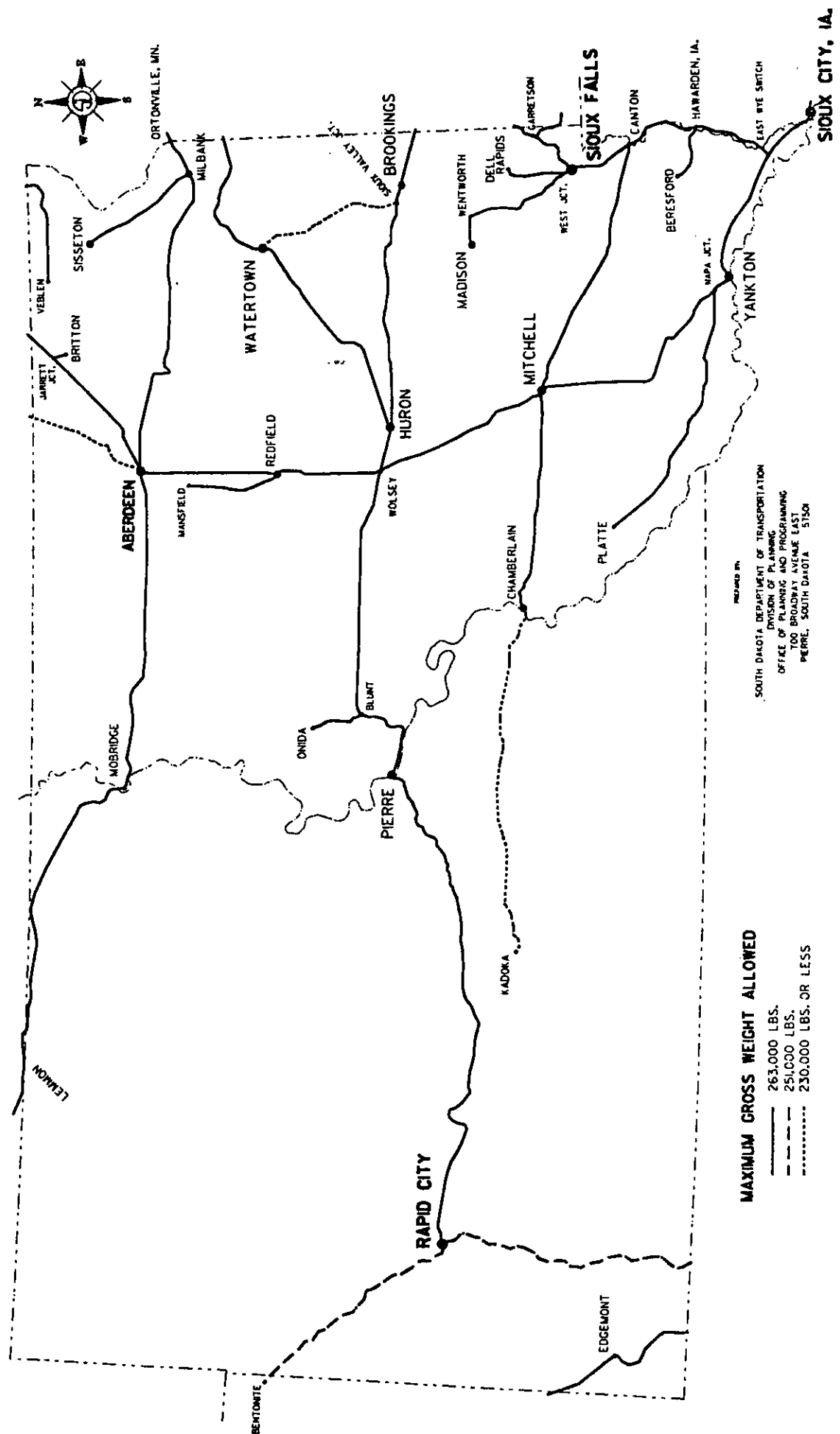
FIGURE 11



PREPARED BY:  
 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF PLANNING  
 OFFICE OF PLANNING AND PROGRAMMING  
 700 BROADWAY AVENUE EAST  
 PIERRE, SOUTH DAKOTA 57508

KEY:  
 — RAIL LINES CARRYING LESS THAN 3 MILLION GROSS TONS PER MILE  
 — RAIL LINES CARRYING MORE THAN 3 MILLION GROSS TONS PER MILE

FIGURE 12  
**1988 - SOUTH DAKOTA OPERATING SYSTEM  
 MAXIMUM ALLOWABLE LOAD LIMITS**



PREPARED BY:  
 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF PLANNING  
 OFFICE OF PLANNING AND PROGRAMMING  
 100 BROADWAY AVENUE EAST  
 PIERRE, SOUTH DAKOTA 57501

loads) or force shippers to rely on smaller cars, such as boxcars or smaller hopper cars, to move freight. Grain sold to export terminals, if transported by rail, must be moved in the large hopper cars to facilitate handling and unloading.

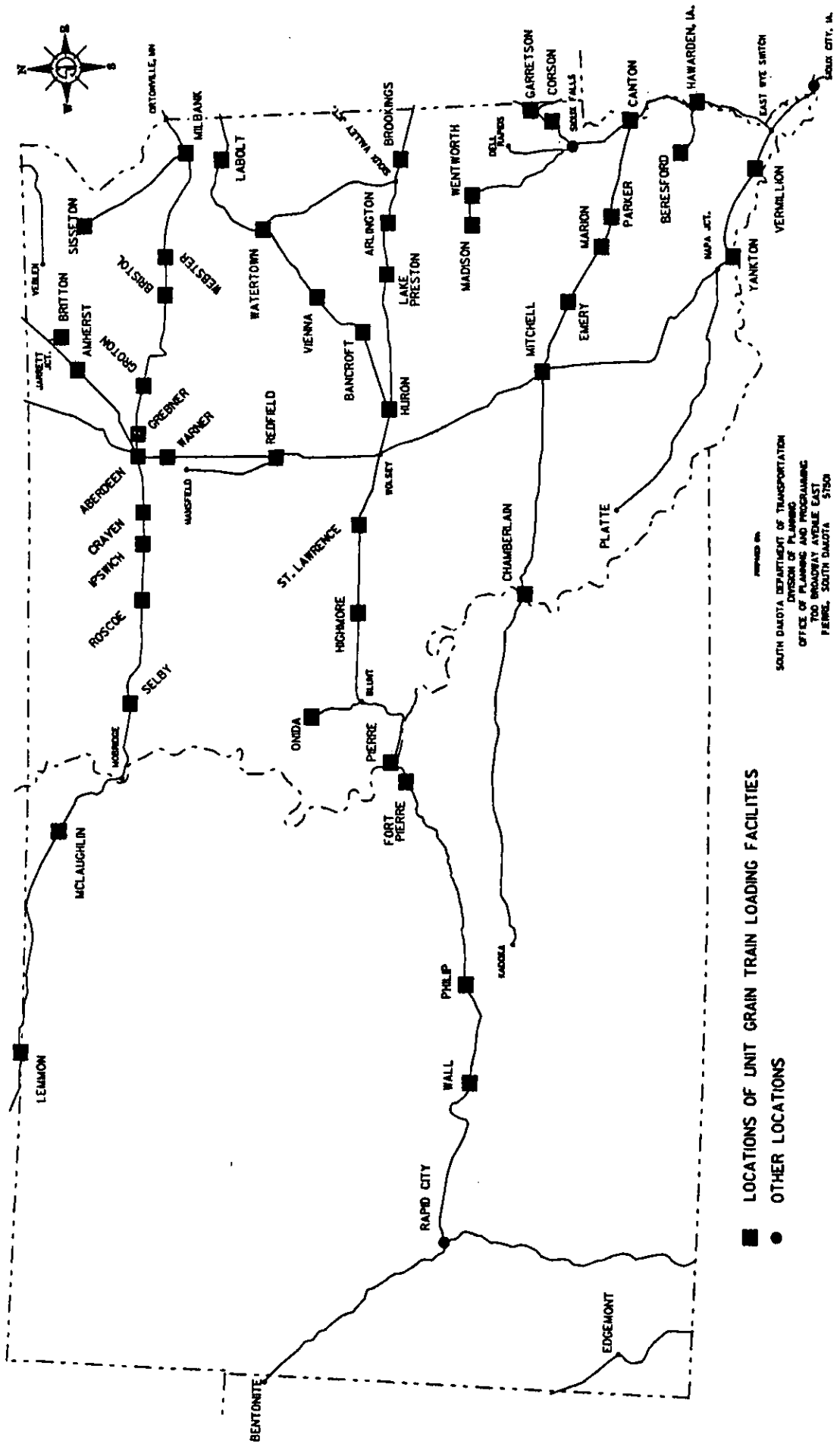
Since the publication of the 1986 Railplan, the capacity limit on 315.4 miles of track has been increased to 263,000 pounds. This has improved the competitive ability of the carrier and increased the profitability of grain movement for the shippers.

#### Unit Grain Train Facilities and Shipments

Unit trains are largely responsible for reversing the railroads' long standing loss of market share to trucks in grain transportation. There has been a greater utilization of trucks for short hauls to unit train terminals as opposed to long haul trips to out-of-state markets. This is contributing much-needed revenue to rail lines and better prices for grain producers through lower transportation costs. Private industry has built new elevators and made changes to existing elevators to take advantage of unit train rates.

Figure 13 shows the locations of existing unit train loading facilities. Since the 1986 Railplan unit train facilities have been created at Roscoe, Craven, Groton, Amherst, Bristol, Webster, Milbank, La Bolt, Garretson, Vermillion, Wall, Philip, Highmore, Lake Preston, Arlington, and Brookings.

FIGURE 13  
**UNIT GRAIN TRAIN LOADING FACILITIES  
 CAPABLE OF LOADING 25 OR MORE CARS**



### Current Status Of The State-owned System

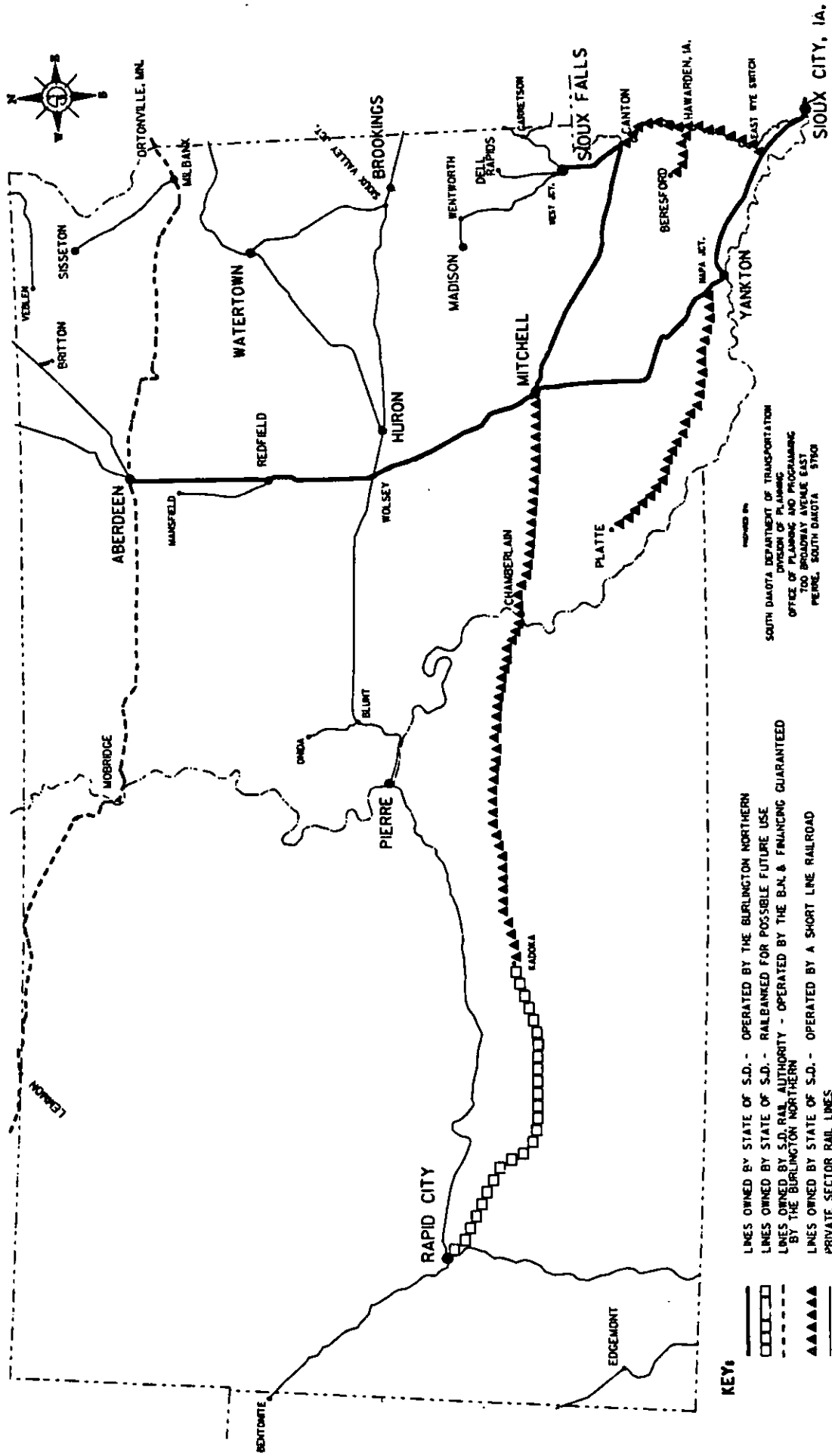
The Burlington Northern is the largest operator of the state-owned system, currently providing service on 667 miles of track. The BN has relinquished operations on two state-owned lines since the 1986 Railplan. The operating rights for the 68.5 mile line from Mitchell to Chamberlain have been transferred to the Dakota Southern Railroad and the D & I Railroad has assumed operation of the formerly BN-operated 50 mile line from Canton to East Wye Switch and the 17 mile Hawarden to Beresford line. Figure 14 highlights the state-owned rail lines.

### Core System Traffic Analysis

Figure 15 graphically shows the number of rail carloads originating and terminating on the core system by individual line segments. This same data is documented in Table 8 and Table 9. Traffic on the core system has shown a steady increase since 1984. Looking at the individual line segments, the traffic on the Canton to Mitchell line has nearly doubled over the last four years. Traffic on the Mitchell to Aberdeen line increased dramatically in 1987 due to an increase in shipments received from the DM&E at Wolsey. The Mitchell to Sioux City segment has had a stable traffic flow while traffic on the Chamberlain to Mitchell line has declined slightly.



FIGURE 14  
**STATE OF SOUTH DAKOTA**  
 MAP HIGHLIGHTED TO SHOW STATE OWNED RAIL LINES



Prepared by  
 SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION  
 DIVISION OF PLANNING AND PROGRAMMING  
 OFFICE OF PLANNING AND PROGRAMMING  
 700 BROADWAY AVENUE EAST  
 PIERRE, SOUTH DAKOTA 57501

**KEY:**

- LINES OWNED BY STATE OF S.D. - OPERATED BY THE BURLINGTON NORTHERN
- - - LINES OWNED BY STATE OF S.D. - RAILBANKED FOR POSSIBLE FUTURE USE
- ..... LINES OWNED BY S.D. RAIL AUTHORITY - OPERATED BY THE B.N. & P. FINANCING GUARANTEED BY THE BURLINGTON NORTHERN
- ▲▲▲▲ LINES OWNED BY STATE OF S.D. - OPERATED BY A SHORT LINE RAILROAD
- - - PRIVATE SECTOR RAIL LINES

FIGURE 15  
 STATE CORE SYSTEM RAIL TRAFFIC

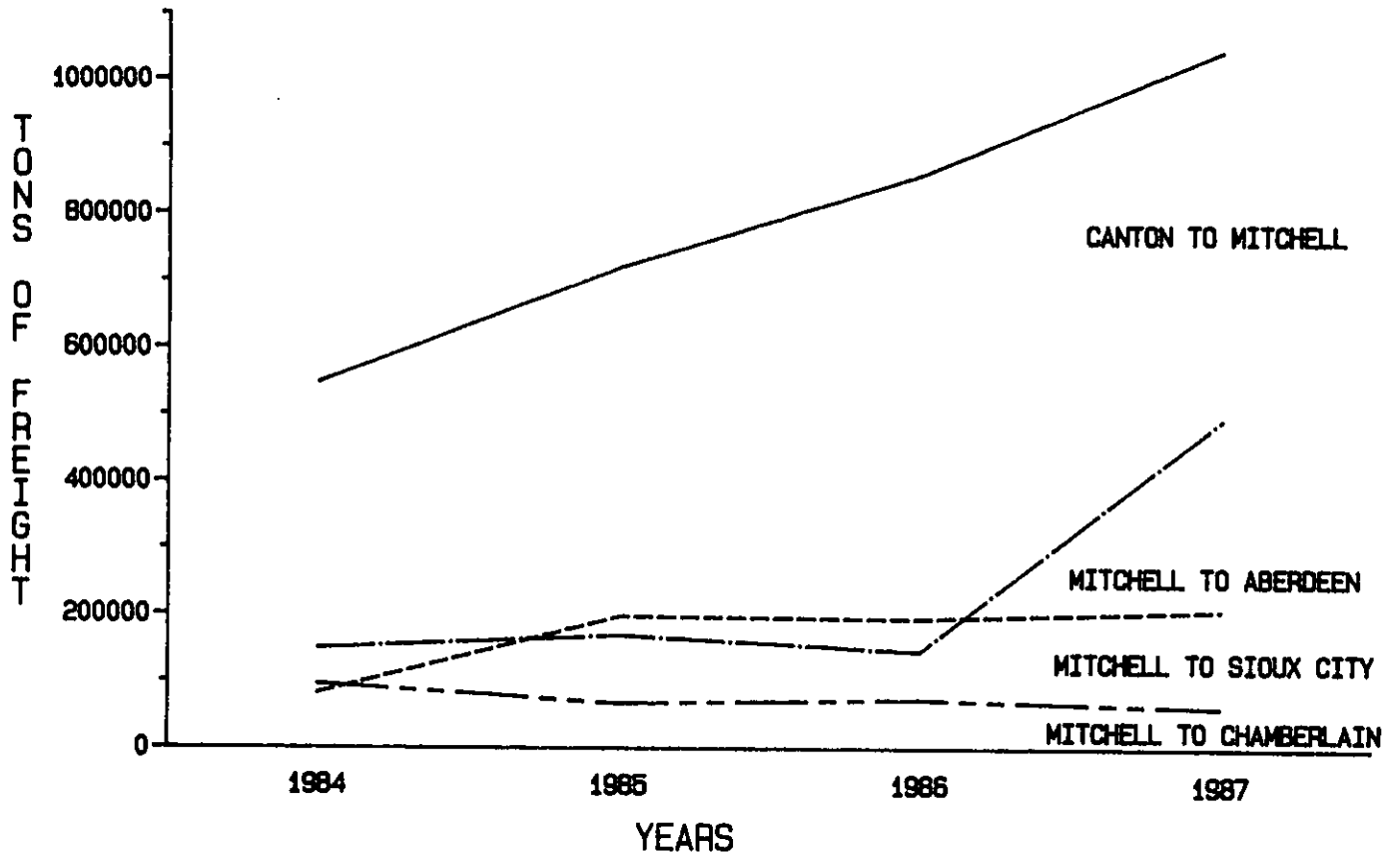
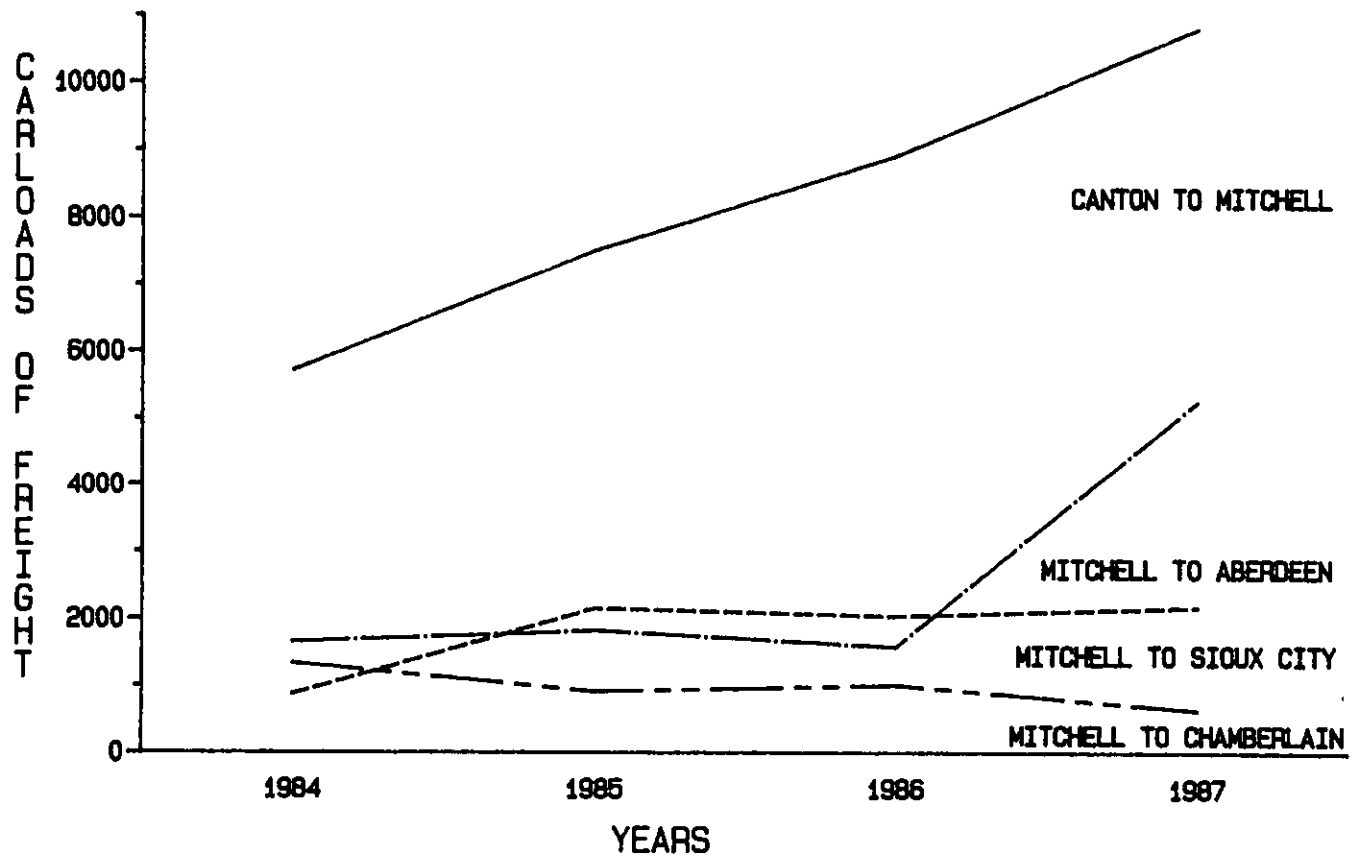


TABLE 8  
STATE CORE SYSTEM RAIL TRAFFIC  
CARLOADS OF FREIGHT

<u>SEGMENT</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Canton to Mitchell	5,718	7,495	8,898	10,770
Mitchell to Sioux City	874	2,142	2,020	2,158
Mitchell to Aberdeen	1,654	1,815	1,561	5,233
Mitchell to Chamberlain	1,329	908	1,002	623
<b>TOTAL</b>	<b>9,575</b>	<b>12,360</b>	<b>13,481</b>	<b>18,784</b>

TABLE 9  
STATE CORE SYSTEM RAIL TRAFFIC  
TONS OF FREIGHT

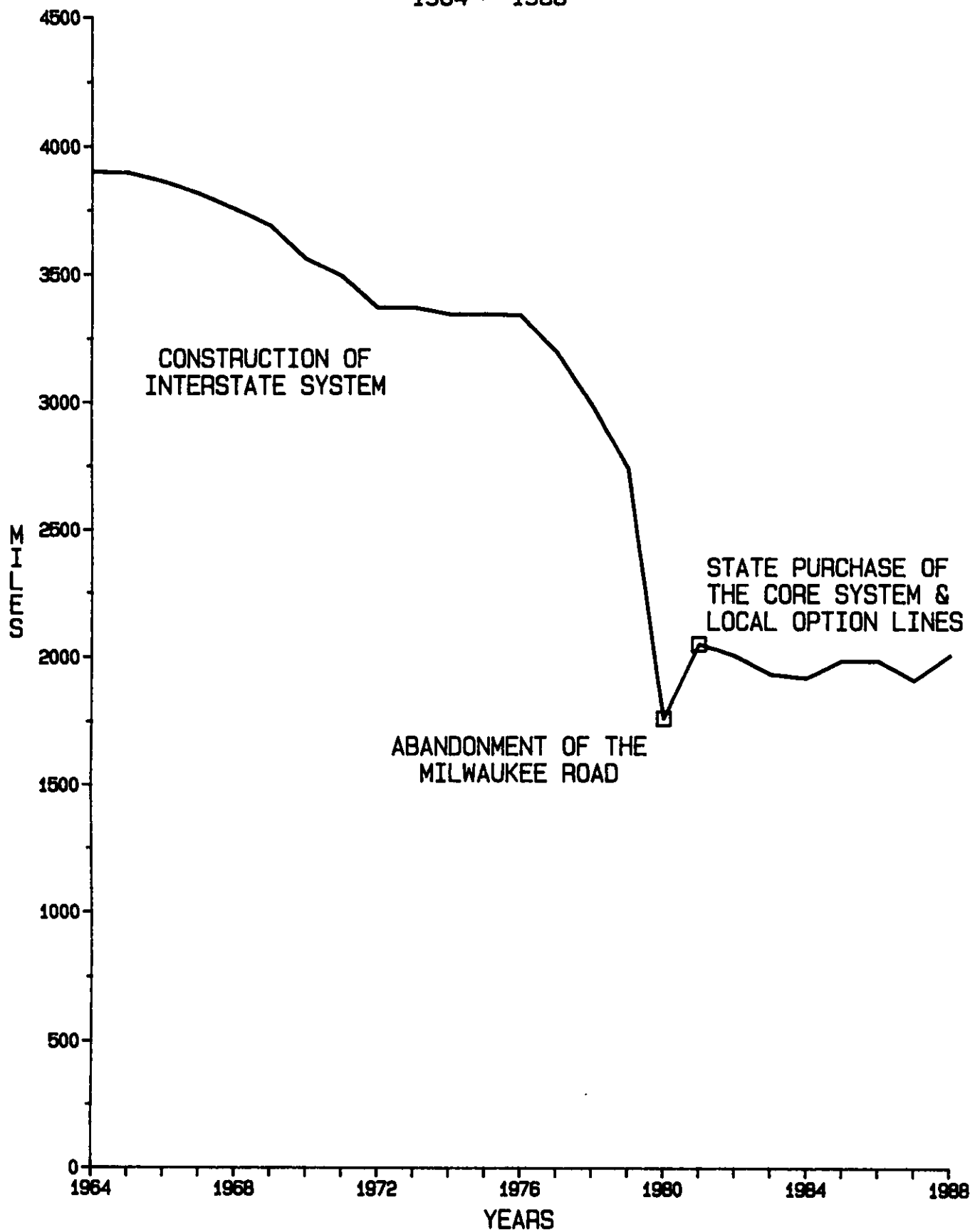
<u>SEGMENT</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>
Canton to Mitchell	547,469	718,563	855,220	1,039,988
Mitchell to Sioux City	82,010	195,966	192,699	205,276
Mitchell to Aberdeen	149,039	167,593	143,476	490,553
Mitchell to Chamberlain	95,364	66,334	72,616	61,054
<b>TOTAL</b>	<b>873,882</b>	<b>1,148,456</b>	<b>1,264,011</b>	<b>1,796,871</b>

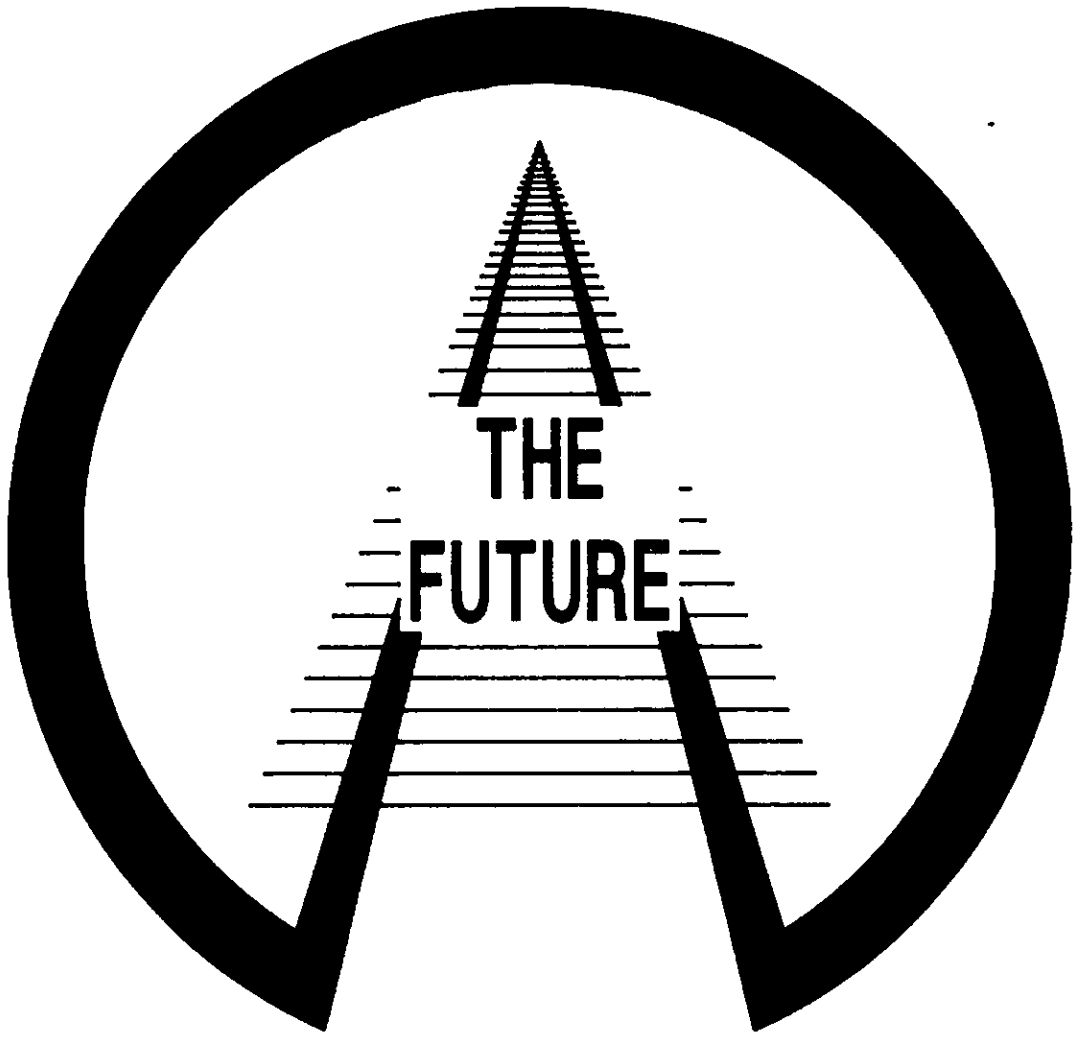
### Abandonments

Since 1976, 2,359 miles of track in South Dakota have been approved for abandonment. However, through the efforts of the State, the railroads, local businesses and local units of government, 1,047 of those miles were purchased and service was reinstated. Today, there are 2,006 miles of track in service compared to 3,343 miles in 1976.

Since the 1986 Railplan, three rail lines have been approved for abandonment. The Ashley, ND to Pollock, SD line which was operated by the Soo Line was abandoned effective in September, 1987. This line was 49.27 miles in length, with 32.8 miles operating in South Dakota. The 41.63 mile long Edgemont to Custer rail line operated by the Burlington Northern was abandoned effective in December, 1987. The 22.6 mile line from Agate, MN to Ellis, SD line was abandoned in October, 1988 by C&NW. Figure 16 gives the historical record of South Dakota's railroad system.

FIGURE 16  
SOUTH DAKOTA RAIL SYSTEM MILEAGE  
1964 - 1988





## THE FUTURE

The future for South Dakota's rail transportation system appears much more secure than it did only a few years ago. The State survived the crisis of the Milwaukee Road bankruptcy and emerged with a rail system which, although smaller, can be supported by the traffic it carries. The cycle of rail line neglect and abandonment has been reversed by the combined efforts of the State, the railroads and private investors to improve and rehabilitate South Dakota's railroad infrastructure.

Abandonments will continue in the future, but at a much slower pace. The future abandonments will occur on the light density rail lines which are unable to safely support the larger rail cars and on rail lines which do not generate sufficient traffic to cover operating expenses.

Railroad restructuring, track upgrading, equipment modernization, unit train movements, increased rail traffic and improved efficiency have made the rail industry in South Dakota more economically sound today than it has been in recent history. This trend should continue into the future, as rail traffic continues to increase and railroad facilities are continually improved and modernized.



**SOUTH DAKOTA  
RAIL MAP**



