

PUBLIC TRANSIT RIDERSHIP TRENDS IN SOUTHEASTERN WISCONSIN 1975-1986

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MEMORANDUM REPORT NUMBER 7

PUBLIC TRANSIT RIDERSHIP TRENDS
IN SOUTHEASTERN WISCONSIN:
1975-1986

Prepared by the
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The preparation of this report was financed in part through a joint planning grant from the Wisconsin Department of Transportation and the U. S. Department of Transportation, Federal Highway and Urban Mass Transportation Administrations.

May 1987

Inside Region \$2.50
Outside Region \$5.00

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Table of Contents

Introduction.....	Page 1
Milwaukee County Transit System.....	1
Waukesha County Transit System.....	9
City of Waukesha Transit System.....	14
City of Racine Transit System.....	20
City of Kenosha Transit System.....	27
Summary and Conclusions.....	36

List of Tables

Table		Page
1	Transit Ridership, Service, Financial, and Related Data for the Milwaukee County Transit System: 1975-1986.....	4
2	Factors Influencing Change in Milwaukee County Transit System Ridership: 1975-1986.....	6
3	Transit Ridership, Service, Financial, and Related Data for the Waukesha County Transit System: 1977-1986.....	12
4	Factors Influencing Change in Waukesha County Transit System Ridership: 1977 to 1986.....	13
5	Transit Ridership, Service, Financial, and Related Data for the City of Waukesha Transit System: 1981-1986.....	18
6	Factors Influencing Change in City of Waukesha's Transit System Ridership: 1977 to 1986.....	19
7	Transit Ridership, Service, Financial, and Related Data for the City of Racine Transit System: 1975-1986.....	24
8	Factors Influencing Changes in the City of Racine Transit System Ridership: 1975 to 1986.....	25
9	Transit Ridership, Service, Financial, and Related Data for the City of Kenosha Transit System: 1975-1986.....	32
10	Factors Influencing Changes in City of Kenosha Transit System Ridership: 1975-1986.....	33

List of Figures

Figure		Page
1	Milwaukee County Transit System Annual Ridership: 1975 to 1986.....	2
2	Annual Percentage Change in Milwaukee County Transit System Ridership: 1976 to 1986.....	3
3	Waukesha County Transit System Annual Ridership: 1977 to 1986.....	10
4	Annual Percentage Change in Waukesha County Transit System Ridership: 1978 to 1986.....	11
5	City of Waukesha Transit System Annual Ridership: 1981 to 1986.....	16
6	Annual Percentage Change in City of Waukesha Transit System Ridership: 1983 to 1986.....	17

Figure		Page
7	City of Racine Transit System Annual Ridership: 1975 to 1986.....	22
8	Annual Percentage Change in City of Racine Transit System Ridership: 1976 to 1986.....	23
9	City of Kenosha Transit System Annual Ridership: 1975 to 1986.....	30
10	Annual Percentage Change in City of Kenosha Transit System Ridership: 1976 to 1986.....	31

List of Maps

Map		Page
1	Average Weekday Traffic Volumes on Selected Surface Arterial Streets in the Milwaukee County Transit System Service Area: 1975, 1978, 1980, and 1984.....	8
2	Average Weekday Traffic Volumes at Selected Locations Within the Waukesha County Transit System Service Area: 1975-1985.....	15
3	Average Weekday Traffic Volumes at Selected Locations Within the City of Waukesha Transit System Service Area: 1973, 1976, 1982, and 1985.....	21
4	Average Weekday Traffic Volumes at Selected Locations Within the City of Racine Transit System Service Area: 1975, 1978, 1981, and 1984.....	28
5	Average Weekday Traffic Volumes at Selected Locations Within the City of Kenosha Transit System Service Area: 1975, 1978, 1981, and 1984.....	35

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PUBLIC TRANSIT RIDERSHIP TRENDS
IN SOUTHEASTERN WISCONSIN: 1975-1986

INTRODUCTION

On March 30, 1987, the Wisconsin Department of Transportation, Bureau of Transit, requested the Commission staff to analyze the trends in public transit ridership in southeastern Wisconsin since 1980. This memorandum presents the results of that analysis. These transit ridership trends are documented and analyzed for each of the five public transit operators in southeastern Wisconsin: the City of Kenosha, Milwaukee County, the City of Racine, the City of Waukesha, and Waukesha County. Transit ridership trends are presented and analyzed not only for the years 1980 through 1986, but also for the years 1975 through 1980. Transit ridership trends have been presented as well for the years 1975 through 1980, because, they represent the remaining period of public transit ownership and operation for most transit operators within the Region.

Many factors affect public transit ridership. A particularly important factor, however, is the level of transit service provided, as represented by the geographic area covered by the service provided, and the frequency of that service. The frequency of service is an important determinant of the convenience of the transit service provided, particularly by a transit system with a grid route system, where transferring between routes is required for many of the trips made on the system.

Another important factor affecting public transit ridership is the cost of the transit service as measured by the transit fare, and the relative cost of alternative means of travel. The principal alternative to public transit is the automobile, and the principal cost perceived by the public is generally considered to be the "out-of-pocket" automobile cost, which is largely determined by the price of motor fuel and the motor fuel efficiency of the automobile.

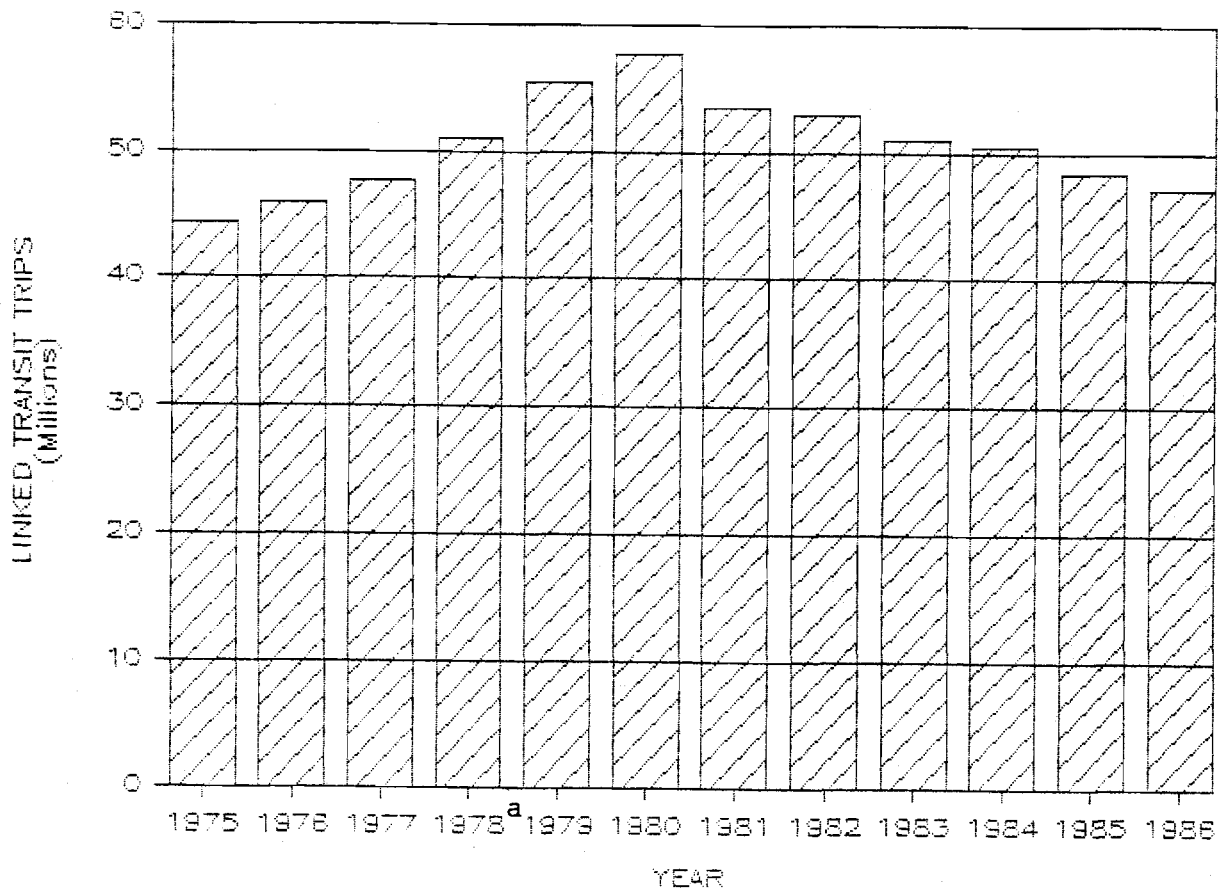
Other factors which may affect public transit ridership include the quality of the equipment used to provide the transit service, the reliability of the service, and weather conditions. Transit ridership trends will also be affected by economic conditions and the amount of total travel in an area, as transit ridership represents a share of that travel--the other share being principally accommodated by the automobile.

MILWAUKEE COUNTY TRANSIT SYSTEM

The Milwaukee County Transit System generally experienced steadily increasing transit ridership each year for the years 1976 through 1980, and experienced steadily declining transit ridership each year for the years 1981 through 1986, as shown in Figures 1 and 2. Table 1 presents transit system ridership,

Figure 1

MILWAUKEE COUNTY TRANSIT SYSTEM
ANNUAL RIDERSHIP: 1975 TO 1986



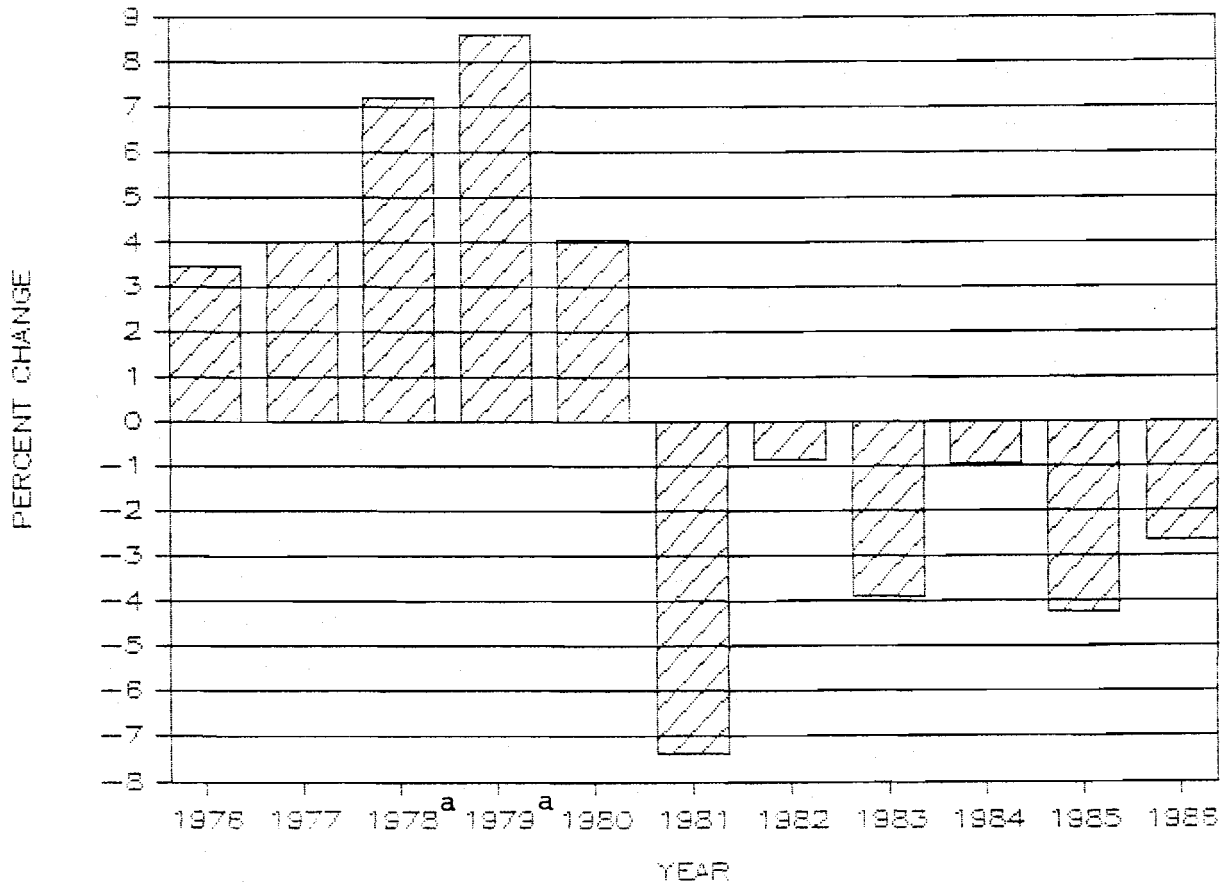
a

Adjusted to reflect one and one-half month strike in 1978.

Source: SEWRPC.

Figure 2

ANNUAL PERCENTAGE CHANGE IN MILWAUKEE
COUNTY TRANSIT SYSTEM RIDERSHIP: 1976 TO 1986



^a Adjusted to reflect one and one-half month strike in 1978.

Source: SEWRPC.

Table 1

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TRANSIT RIDERSHIP, SERVICE, FINANCIAL, AND RELATED
DATA FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1975-1986

TRANSIT SERVICE CHARACTERISTIC/ EXTERNAL FACTOR	YEAR											
	1975	1976	1977	^a 1978	1979	1980	1981	1982	1983	1984	1985	^b 1986
Transit Service Levels and Utilization												
Annual Linked Revenue Passenger Trips.....	44,262,500	45,800,900	47,630,700	45,417,000	55,435,000	57,680,000	53,416,000	52,981,400	50,932,400	50,464,500	48,339,500	47,073,300
Annual Revenue Vehicle Miles Operated.....	17,023,100	17,544,700	18,173,400	16,856,200	19,665,000	21,091,000	21,573,300	20,736,500	19,775,200	18,153,600	17,789,000	17,125,900
Transit Service Financial Information												
Total System Operating Expenses.....	\$22,423,300	\$24,899,400	\$27,833,100	\$30,319,800	\$40,338,700	\$48,871,400	\$57,163,000	\$58,436,400	\$60,551,100	\$62,354,800	\$65,018,000	\$65,615,000
Total System Operating Revenues.....	\$19,137,500	\$17,820,300	\$18,353,300	\$17,528,800	\$21,973,800	\$22,923,900	\$27,090,900	\$29,463,800	\$30,283,500	\$29,845,700	\$29,596,100	\$30,297,100
Base Adult Cash Fare.....	\$0.60/0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50	\$0.65	\$0.75	\$0.80	\$0.80	\$0.80	\$0.85
Total System Operating Deficit.....	\$3,285,800	\$7,079,000	\$9,479,800	\$12,791,000	\$18,364,900	\$25,947,500	\$30,072,100	\$28,972,600	\$30,267,600	\$32,509,100	\$36,221,900	\$35,317,900
Federal Share of Deficit.....	\$1,462,000	\$3,521,100	\$5,257,400	\$7,240,100	\$10,078,100	\$10,231,900	\$8,700,000	\$7,465,100	\$7,445,500	\$7,445,500	\$5,997,200	\$5,997,200
State Share of Deficit.....	\$1,255,200	\$1,981,500	\$2,197,900	\$3,703,500	\$5,894,100	\$11,157,600	\$15,387,900	\$17,530,900	\$18,165,300	\$21,824,200	\$22,339,300	\$23,931,000
Local Share of Deficit.....	\$568,600	\$1,576,400	\$2,024,500	\$1,847,400	\$2,392,700	\$4,558,000	\$5,984,200	\$3,976,600	\$4,656,800	\$3,239,400	\$7,085,400	\$5,989,700
Farebox Recovery Ratio.....	85.3	71.6	65.9	57.8	54.5	46.9	47.4	50.4	50.0	47.9	45.0	46.2
Operating Expense per Revenue Vehicle Mile..	\$1.32	\$1.42	\$1.53	\$1.80	\$2.05	\$2.32	\$2.65	\$2.82	\$3.06	\$3.43	\$3.70	\$3.83
Other Factors												
Price of Gasoline.....	\$0.575	\$0.583	\$0.613	\$0.659	\$0.919	\$1.237	\$1.395	\$1.364	\$1.317	\$1.298	\$1.293	\$0.901
Population												
Milwaukee County.....	1,019,500	998,900	975,500	954,100	950,200	965,000	964,600	959,500	945,000	944,600	939,600	935,800
City of Milwaukee.....	670,700	654,500	637,200	620,200	613,200	636,200	635,000	629,300	618,200	602,900	612,100	608,400
Milwaukee County Employment.....	515,700	539,800	552,000	562,200	576,500	574,700	563,100	532,700	509,700	536,000	538,000	NA
Consumer Price Index (1975 Base).....	100.0	106.3	113.2	122.5	140.7	160.1	178.3	190.8	197.0	204.1	210.4	211.1
Heating Degree-days (Annual).....	7020	7435	7281	7702	7503	7537	7387	7493	7203	6846	7310	5683
Days 0 or Below (Annual).....	8	19	28	11	21	11	14	22	12	9	24	6
Inches of Snow/Sleet (Annual).....	62	38	69	77	52	64	32	60	48	39	71	28
Inches of Rain (Annual).....	19	26	24	32	20	25	29	25	27	35	22	35

^a Less than twelve months of transit service due to bus drivers strike. Without the interruption of service caused by the strike, it is estimated that about 51,320,000 linked revenue trips would have been made on the system, and about 18,622,300 vehicle miles of service would have been operated.

^b 1986 Weather data available for 11 months.

Source: Wisconsin Dept. of Transportation, Bureau of Transit; Milwaukee County Dept. of Public Works; and SEWRPC.

service, and financial data for the years 1975 through 1986; and Table 2 identifies the key factors influencing the change in transit ridership from 1975 through 1986.

The transit ridership increases experienced during the years 1976 through 1980 occurred during a period of transit service expansion, including new service introduction and existing service improvement. Also, during this period which immediately followed the initiation of publicly provided transit service, transit fares were not increased and new buses were purchased and placed in service over much of the system. Also, toward the end of this time period, and particularly in 1979 and 1980, the price of gasoline increased substantially.

Total travel--by both public transit and automobile--within the Milwaukee County Transit System service area remained relatively stable from 1975 to 1980 and, therefore, changes in such travel were not a major factor in transit ridership trends over that time period. The transit system service area was and is concentrated in the City of Milwaukee. From 1975 to 1980, the resident population in the City of Milwaukee is estimated to have declined from 670,700 persons to 636,200 persons, a decline of 34,500 persons, or about 5 percent. During that same period, the resident population of Milwaukee County is estimated to have declined from 1,119,500 persons to 965,000 persons, a decline of 54,500 persons, or about 5 percent. Employment in Milwaukee County over that same period, however, is estimated to have increased from 515,700 to 574,700 jobs, or an increase of about 59,000 jobs, or 11 percent. A significant share of that job growth, however, may have occurred in the outlying areas of Milwaukee County, not well served by public transit, as these areas are not yet fully developed.

Average weekday vehicle traffic counts on selected arterial streets in the Milwaukee County Transit System service area provide an indication of overall travel trends in the transit service area. As shown on Map 1, the average weekday traffic volumes on selected surface arterial streets in the Milwaukee County Transit System service area were generally stable in the period 1975 to 1980.

The years 1981 through 1986 represented a period of steady, modest decline in transit ridership. During each year of that period, transit ridership declined generally by about 1 to 4 percent each year. A key factor in that ridership decline was the increase in transit fares experienced in four of these six years for a total increase from \$0.50 to \$0.85, an increase of 35 cents, or 70 percent. In addition, transit service as measured by bus miles provided was generally reduced from 2 to 8 percent each year, a total reduction of from 21 million revenue bus miles in 1980 to 17 million in 1986, a four million revenue bus miles, or 20 percent, reduction. The increases in transit fares and reductions in transit service combined to produce reduced transit ridership, which, in turn, led to further reductions in transit service and increases in transit fares, a situation typical of that experienced by private transit operations in the 1960's and 1970's, including the operation in Milwaukee County. It should, as well, be noted that, during this period gasoline prices were relatively stable, except in the year 1986, when the price dropped approximately 30 percent--from \$1.29 in 1985, to \$0.90 in 1986.

Table 2

FACTORS INFLUENCING CHANGE IN MILWAUKEE COUNTY TRANSIT SYSTEM RIDERSHIP: 1975-1986

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1976	Increase +3 percent.	Increase +3 percent.	Decrease -16 percent.	None.	First full year of public operation.	Ridership increase was principally a result of service expansion, a full year of operation under the reduced fare initiated in mid-1975, and the stability brought by public operation.
1977	Increase +4 percent.	Increase +4 percent.	None.	Increase +5 percent.	--	Ridership increase was principally a result of service expansion and improvement, and continuing increased use of the new public transit system.
1978	Increase ^b +7 percent.	Increase ^b +1 percent.	None.	Increase +8 percent.	--	Ridership increase was principally a result of service expansion and improvement, and continuing increased use of the new public transit operation, which began using new equipment in 1978.
1979	Increase ^b +8 percent.	Increase ^b +7 percent.	None.	Increase +39 percent.	--	Ridership increase was principally a result of gas price increase and, as well, service and equipment improvement.
1980	Increase +8 percent.	Increase +7 percent.	None.	Increase +35 percent.	--	Ridership increase was principally a result of gas price increase and, as well, service and equipment improvement.
1981	Decrease -7 percent.	Increase +2 percent.	Increase +33 percent.	Increase +13 percent.	Deepening economic recession. City of Milwaukee unemployment of 9 percent.	Ridership decrease was principally a result of large fare increase, although continuing gas price increase reduced its impact on ridership.
1982	Decrease -1 percent.	Decrease -4 percent.	Increase +15 percent.	Decrease -3 percent.	Approaching bottom of economic recession. City of Milwaukee unemployment of 13 percent.	Ridership decrease was principally a result of fare increase and service decrease and, as well, economic recession.

-continued-

Table 2 (continued)

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1983	Decrease -4 percent.	Decrease -5 percent.	Increase +7 percent.	Decrease -3 percent.	Bottom of economic recession. Job loss in Milwaukee County of 11 percent compared to 1982. City unemployment of 13 percent.	Ridership decrease was a result of fare increase, service decrease, and economic recession.
1984	Decrease -1 percent.	Decrease -8 percent.	None.	Decrease -2 percent.	Some improvement in economy. City unemployment of 8 percent, and increase in jobs in County of 5 percent.	Ridership decrease was a result of service reduction, although improvement in economy reduced impact.
1985	Decrease -4 percent.	Decrease -2 percent.	None.	Decrease -1 percent.	No improvement in economy.	Ridership decrease was a result of continuing service reduction and weak economy.
1986	Decrease -3 percent.	Decrease -4 percent.	Increase -6 percent.	Decrease -30 percent.	Little improvement in economy.	Ridership decrease was a result of fare increase and continuing reduction in service and, as well, substantial decline in gas price. Mild winter may also have been factor.

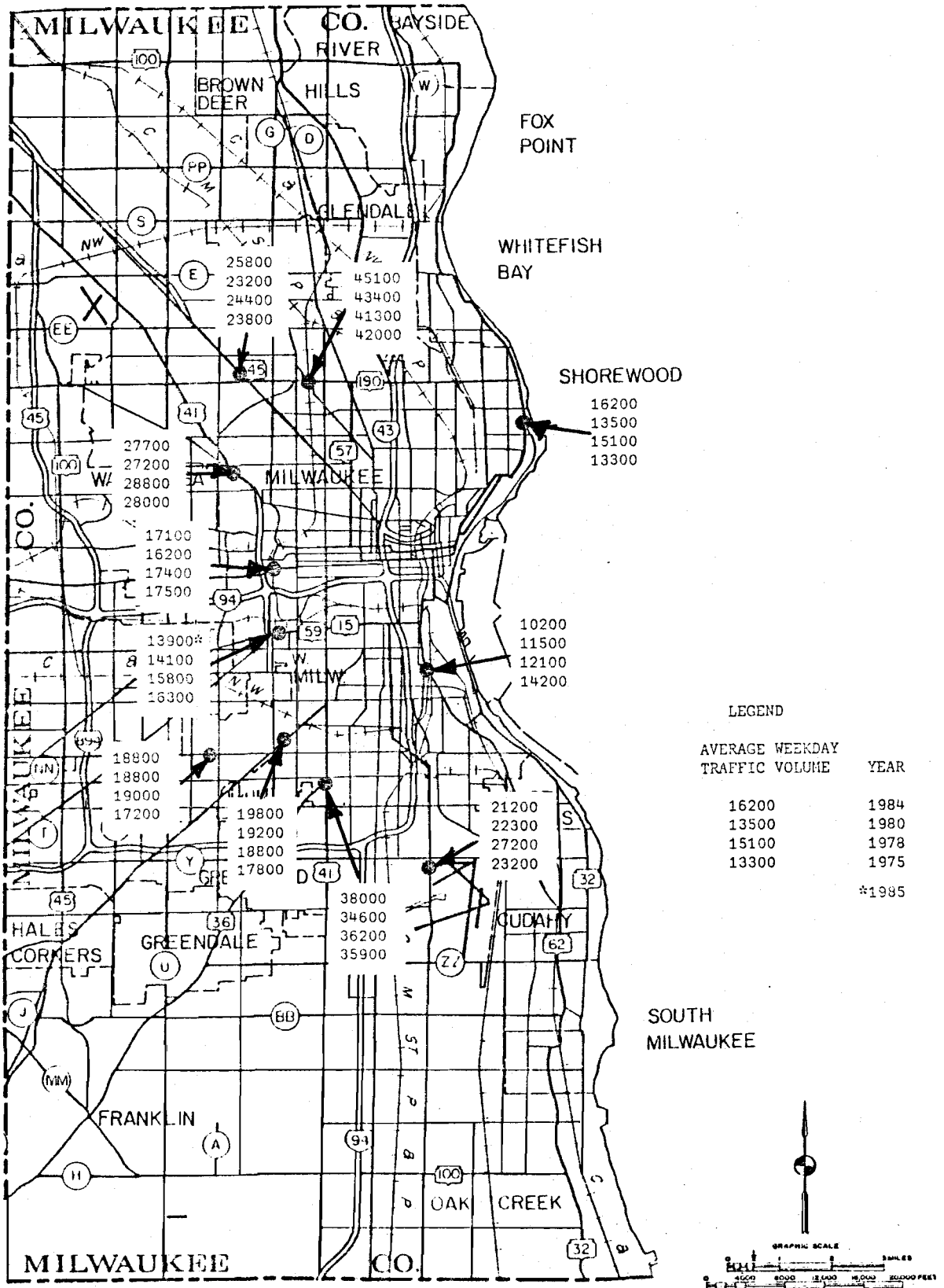
^aService is represented by revenue vehicle miles.

^b1978 ridership and service data have been adjusted to reflect one and one-half month strike.

Source: SEWRPC.

Map 1

AVERAGE WEEKDAY TRAFFIC VOLUMES ON SELECTED
SURFACE ARTERIAL STREETS IN THE MILWAUKEE COUNTY
TRANSIT SYSTEM SERVICE AREA: 1975, 1978, 1980, AND 1984



Also, over this period, overall travel in the transit service area remained relatively stable, with a small decline from 1980 to 1983 as a result of an economic recession, and a slight increase from 1983 to 1986, as the economy began to recover. Employment in Milwaukee County, which was estimated at 574,700 jobs in 1980, declined to 509,700 jobs in 1983, a loss of 65,000 jobs, or 11 percent. The estimated number of jobs in Milwaukee County in 1985 was 538,000, an increase of 29,700 jobs, or about 6 percent, over the 1983 level-- but still substantially below the level of jobs in the County in 1980. The resident population of the City of Milwaukee declined from 636,200 persons in 1980 to 608,400 persons in 1986, a decline of 27,800 persons, or approximately 5 percent. The resident population of Milwaukee County during that same period declined from 965,000 persons in 1980 to 935,800 persons in 1986, a decline of 29,200 persons, or approximately 3 percent. Average weekday traffic volumes on selected arterials in the City of Milwaukee generally remained stable over this period.

Summary and Conclusion: Milwaukee County Transit System

The increase in transit ridership on the Milwaukee County Transit System over the time period 1975 to 1980 may be attributed in part to the transit service increases and stable transit fares; the stability in operation; and the new equipment provided by the public operation of the transit system initiated in 1975. These factors principally contributed to the transit ridership increases in the years 1976 through 1978. The substantial increase in gasoline prices in the years 1979 and 1980 were the major factors in the transit ridership increases experienced in those years, with service increases being a contributing factor.

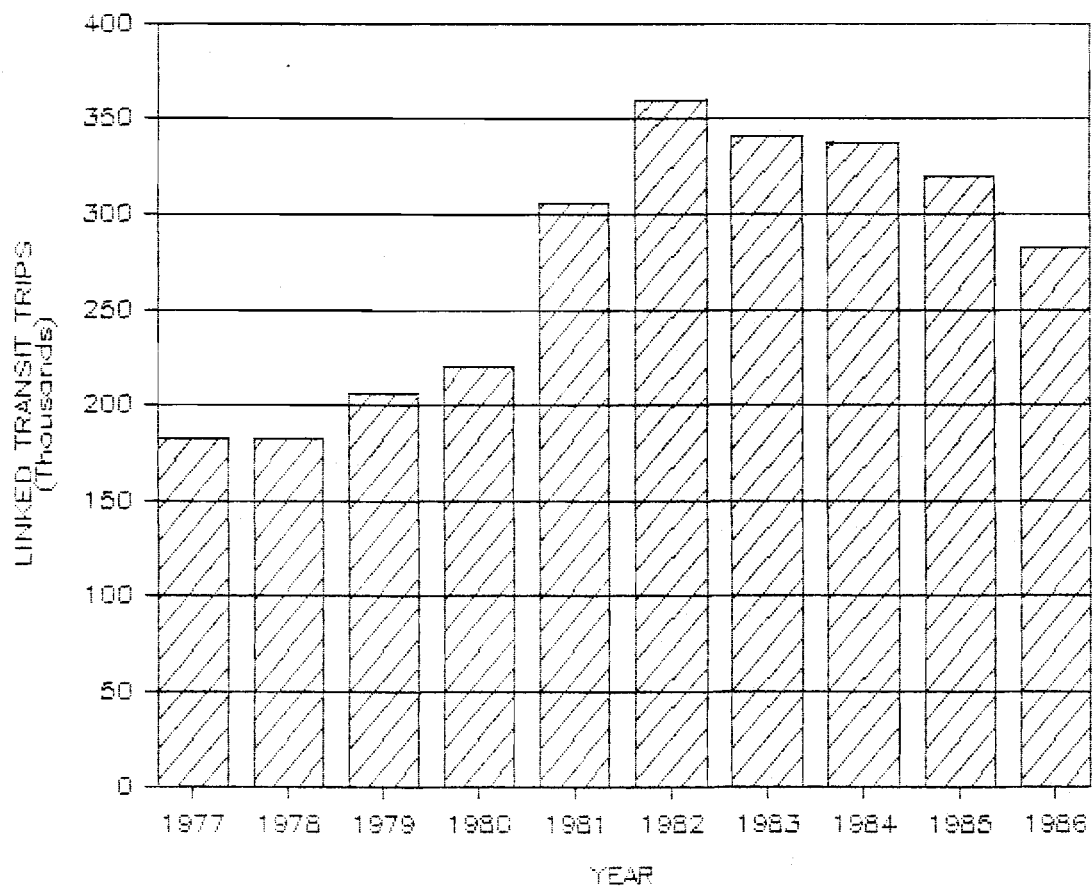
The decline in ridership on the Milwaukee County Transit System for the years 1981 through 1986 may be attributed largely to the substantial fare increases and service reductions implemented over that period. In addition, the economic recession experienced in the Milwaukee area and the attendant high loss of jobs and the continuing loss of resident population in the service area contributed to the decline in ridership, particularly in the first three years of that time period. Another contributing factor was the decline in gasoline price.

WAUKESHA COUNTY TRANSIT SYSTEM

The Waukesha County transit system experienced stable transit ridership in the year 1978, increasing transit ridership for the years 1979 through 1982, and then declining transit ridership for the years 1983 through 1986, as shown in Figures 3 and 4. Table 3 presents transit system ridership, service, financial, and related data for the years 1977 through 1986, and Table 4 identifies the key factors influencing the change in transit ridership from 1977 through 1986. The Waukesha County transit system data are presented beginning for the year 1977, as that was the first year of county operation and subsidy of the service. The Waukesha County transit system provides primarily commuter transit service along the East-West Freeway (IH 94) corridor from western Waukesha County into the Milwaukee central business district. Some limited local service is provided along the Waukesha County portion of that narrow corridor as well.

Figure 3

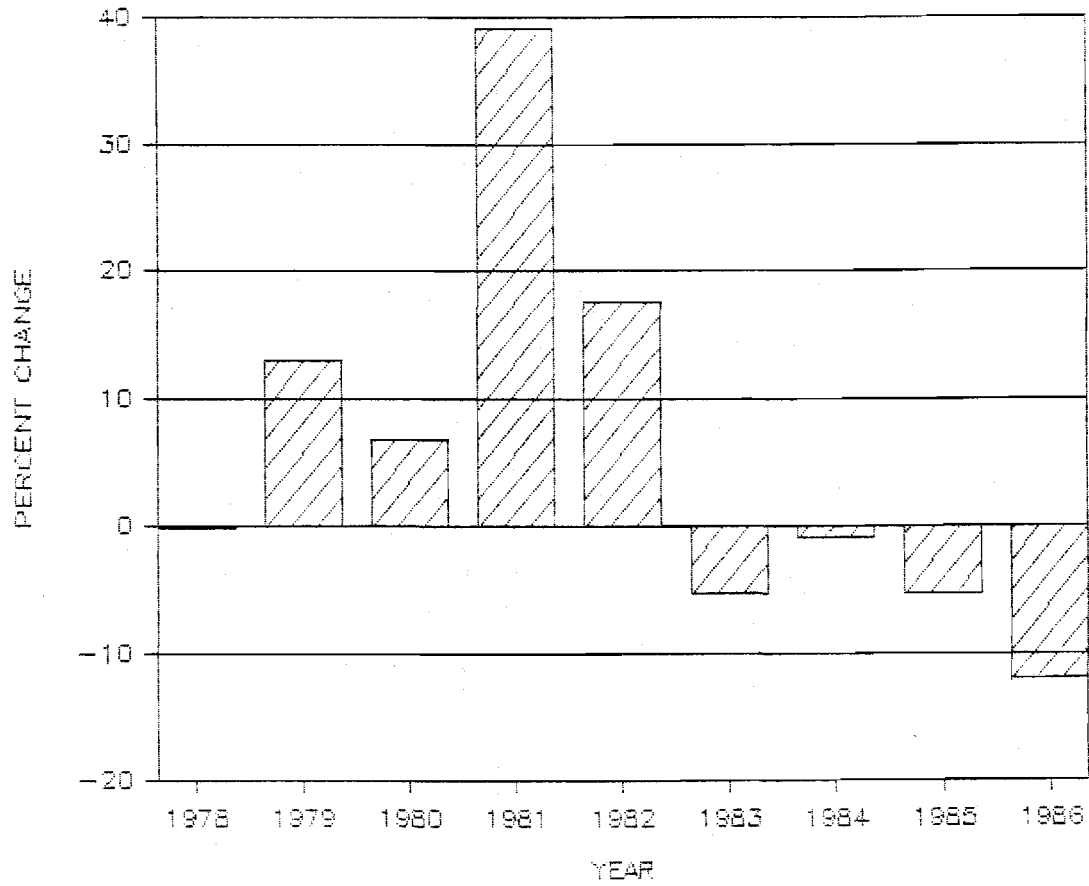
WAUKESHA COUNTY TRANSIT SYSTEM
ANNUAL RIDERSHIP: 1977 TO 1986



Source: SEWRPC.

Figure 4

ANNUAL PERCENTAGE CHANGE IN WAUKESHA
COUNTY TRANSIT SYSTEM RIDERSHIP: 1978 TO 1986



Source: SEWRPC.

Table 3

TRANSIT RIDERSHIP, SERVICE, FINANCIAL, AND RELATED
DATA FOR THE WAUKESHA COUNTY TRANSIT SYSTEM: 1977-1986

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TRANSIT SERVICE CHARACTERISTIC/ EXTERNAL FACTOR	YEAR									
	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986 ^b
Transit Service Levels and Utilization										
Annual Linked Revenue Passenger Trips....	182,700	182,400	206,200	220,200	306,300	360,400	341,400	338,100	320,500	282,100
Annual Revenue Vehicle Miles Operated....	294,200	251,200	255,800	257,400	435,200	440,600	395,800	376,900	367,000	372,300
Transit Service Financial Information										
Total System Operating Expenses.....	\$274,100	\$311,200	\$354,700	\$419,200	\$926,200	\$958,800	\$960,100	\$950,100	\$945,300	\$972,100
Total System Operating Revenues.....	\$176,600	\$174,900	\$198,300	\$236,900	\$348,800	\$439,600	\$456,100	\$439,900	\$409,400	\$359,700
^a										
Base Adult Cash Fare.....	\$0.75-1.85	\$0.75-1.85	\$0.85-2.05	\$0.85-2.25	\$0.95-2.50	\$1.05-2.75	\$1.15-3.05	\$1.15-3.05	\$1.15-3.05	\$1.25-3.35
Total System Operating Deficit.....	\$97,500	\$136,300	\$156,400	\$182,300	\$577,400	\$519,200	\$504,000	\$510,200	\$535,900	\$612,400
Federal Share of Deficit.....	\$48,800	\$68,100	\$78,200	\$91,200	\$281,000	\$259,600	\$252,000	\$183,600	\$167,700	\$199,500
State Share of Deficit.....	\$16,800	\$45,400	\$56,300	\$65,600	\$112,100	\$259,600	\$252,000	\$326,600	\$328,200	\$364,500
Local Share of Deficit.....	\$31,900	\$22,800	\$21,900	\$25,500	\$184,300	\$0	\$0	\$0	\$40,000	\$48,400
Farebox Recovery Ratio.....	64.4	56.2	55.9	56.5	37.7	45.8	47.5	46.3	43.3	37.0
Operating Expense per Revenue Vehicle Mile.....	\$0.93	\$1.24	\$1.39	\$1.63	\$2.13	\$2.18	\$2.43	\$2.52	\$2.58	\$2.61
Other Factors										
Price of Gasoline.....	\$0.613	\$0.659	\$0.919	\$1.237	\$1.395	\$1.364	\$1.317	\$1.298	\$1.293	\$0.901
Waukesha County Population.....	275,600	285,100	293,800	280,200	282,500	283,400	285,900	284,000	285,900	288,200
Waukesha County Employment.....	90,200	92,900	97,200	98,000	97,700	95,500	117,300	123,600	124,100	NA
Consumer Price Index (1975 Base).....	113.2	122.5	140.7	160.1	178.3	190.8	197.0	204.1	210.4	211.1
Heating Degree-days (Annual).....	7281	7702	7503	7537	7387	7493	7203	6846	7310	5683
Days 0 or Below (Annual).....	28	11	21	11	14	22	12	9	24	6
Inches of Snow/Sleet (Annual).....	69	77	52	64	32	60	48	39	71	28
Inches of Rain (Annual).....	24	32	20	25	29	25	27	35	22	35

^a

Distance related.

^b

1986 Weather data available for 11 months.

Source: Wisconsin Dept. of Transportation, Bureau of Transit; Waukesha County Highway Department; and SEMRPC.

FACTORS INFLUENCING CHANGE IN WAUKESHA COUNTY TRANSIT SYSTEM RIDERSHIP: 1977 TO 1986

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion
1978	None.	Decrease -15 percent.	None.	Increase +8 percent.	--	No change in ridership as service eliminated was demonstration service, which was receiving very limited use.
1979	Increase +13 percent.	Increase +2 percent.	Increase +10 to 15 percent.	Increase +39 percent.	--	Ridership increase was principally a result of gas price increase. Fare increase reduced ridership increase.
1980	Increase +7 percent.	None.	Increase +5 percent.	Increase +35 percent.	--	Ridership increase was principally a result of gas price increase. Fare increase reduced ridership increase.
1981	Increase +36 percent.	Increase +69 percent.	Increase +10 percent.	Increase +13 percent.	--	Ridership increase was principally a result of major service expansion in 1981. Some unproductive services introduced were eliminated in late 1981. Continuing gas price increase contributed to ridership increase. Fare increase reduced ridership increase.
1982	Increase +18 percent.	None.	Increase +10 percent.	Decrease -3 percent.	--	Ridership increase was a result of continuing increase use of new services and first full year of their operation. Fare increase reduced ridership increase.
1983	Decrease -5 percent.	Decrease -10 percent.	Increase +10 percent.	Decrease -3 percent.	--	Ridership decrease was principally a result of elimination of selected routes and fare increase.
1984	Decrease -1 percent.	Decrease -5 percent.	None.	Decrease -2 percent.	--	Ridership decrease was principally a result of service modifications.
1985	Decrease -5 percent.	Decrease -3 percent.	None.	Decrease -1 percent.	--	Ridership decrease was principally a result of service modifications.
1986	Decrease -12 percent.	None.	Increase +10 percent.	Decrease -30 percent.	--	Ridership decrease was principally a result of gas price decreases. Fare increase was also an influence. Mild winter may have had effect.

^aService is represented by revenue vehicle miles.

Source: SEWRPC.

The transit ridership increases experienced during the years 1979 and 1980 may be attributed principally to the substantial increases in gasoline prices which occurred in each of those years. The cost of gasoline may be assumed to have a particularly important effect on Waukesha County transit system ridership as the system principally serves long-distance commuter traffic. The ridership increases in 1981 and 1982, however, may be attributed to a major service expansion which was implemented in early 1981 in response to public concern over the rapid increases in gasoline prices in the previous two years, and the potential of a future shortage of motor fuel.

The decreases in transit ridership in the years 1983, 1984, and 1985 may be attributed to the elimination by the County of routes and services considered to be least productive of those provided; and, in 1983, a fare increase. The rather substantial decline in transit ridership in 1986 may be attributed to the decline in gasoline price in that year and, in part, to a fare increase and a mild winter.

Total travel within the Waukesha County transit system service area increased only moderately from 1977 to 1986 and, therefore, was not a major factor in transit ridership trends for that time period. The resident population of Waukesha County increased from 275,600 persons in 1977 to 288,200 persons in 1980, an increase of 12,600 persons, or about 5 percent. Average weekday vehicle traffic counts on selected arterial streets, which comprise commuter routes into Milwaukee County and over which Waukesha County transit system buses operate, are summarized on Map 2. The average weekday traffic volumes on these arterial facilities indicate modest growth from 1977 to 1986 of about 1 to 2 percent per year.

Summary and Conclusions: Waukesha County Transit System

The increase in transit ridership on the Waukesha County transit system over the time period 1977 to 1982 may be attributed in part to the increase in transit service provided over that time period. This was the major reason for transit ridership increases in the years 1981 and 1982. The substantial increase in gasoline prices in the years 1979 and 1980 were major factors in transit ridership increases in those years.

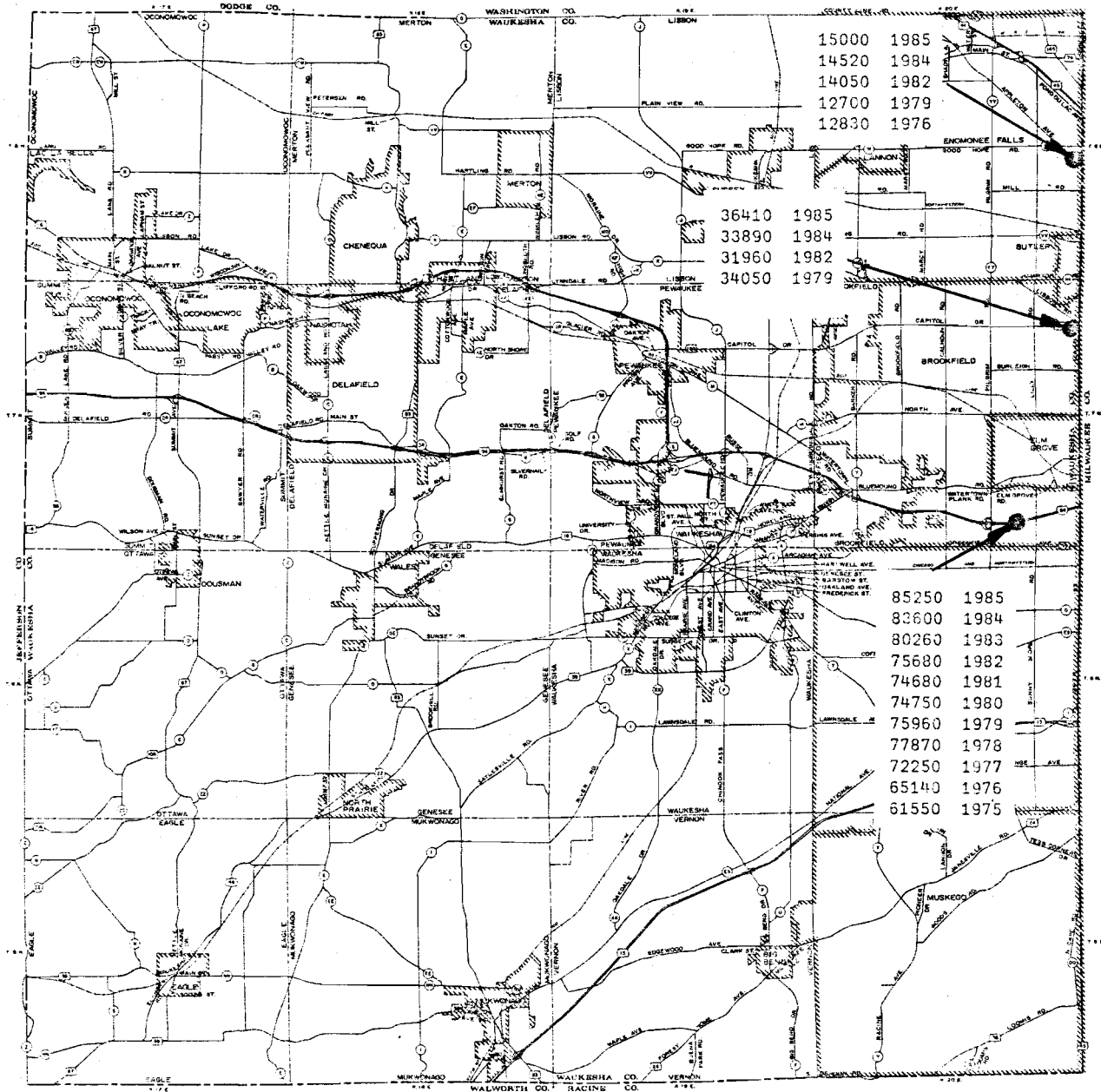
The decline in ridership on the Waukesha County transit system for the years 1983 through 1986 may be attributed largely to the elimination of service; to fare increases; and, in 1986, to the substantial decline in gasoline prices. The cost of gasoline is a particularly important influence on transit ridership on the Waukesha County transit system as it serves the very long-distance commuter.

CITY OF WAUKESHA TRANSIT SYSTEM

The City of Waukesha transit system initiated transit service in late 1981. Transit ridership on the new transit system steadily increased each year until 1986, when a slight decline in ridership was experienced, as shown in Figures 5 and 6. Table 5 presents transit system ridership, service, and financial data for the years 1981 through 1986, and Table 6 identifies the key factors influencing the annual change in transit ridership.

Map 2

AVERAGE WEEKDAY TRAFFIC VOLUMES AT SELECTED LOCATIONS WITHIN
THE WAUKESHA COUNTY TRANSIT SYSTEM SERVICE AREA: 1975-1985



LEGEND

AVERAGE WEEKDAY TRAFFIC VOLUME	YEAR
15000	1985

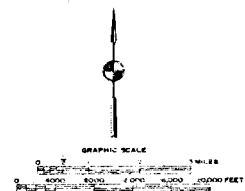
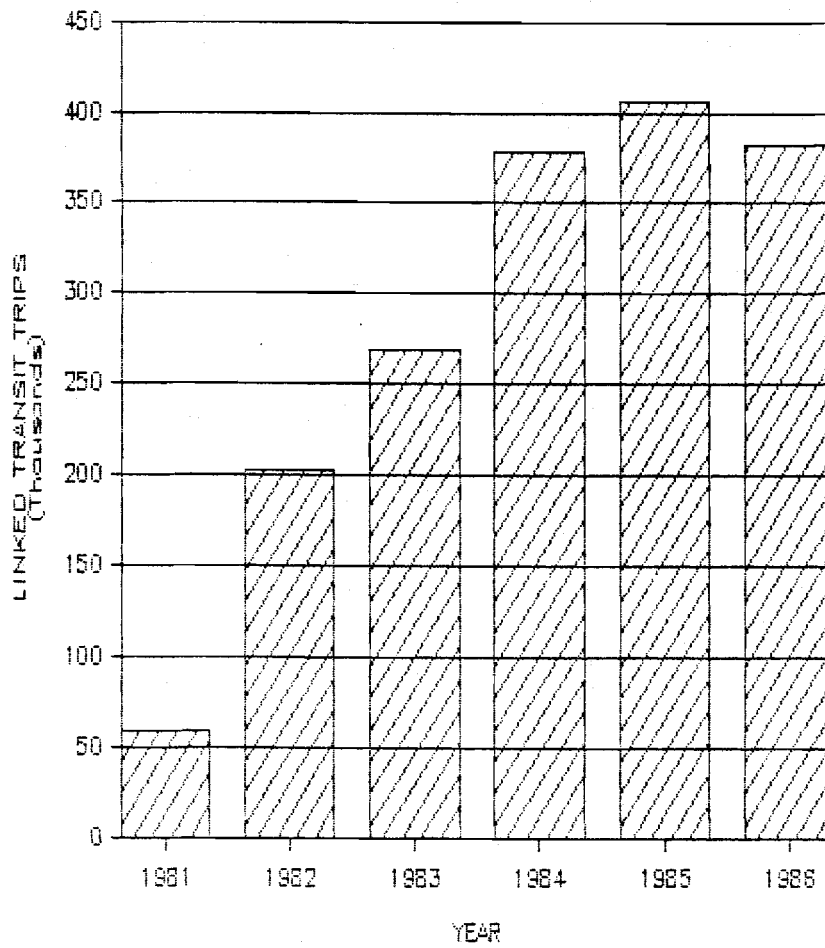


Figure 5

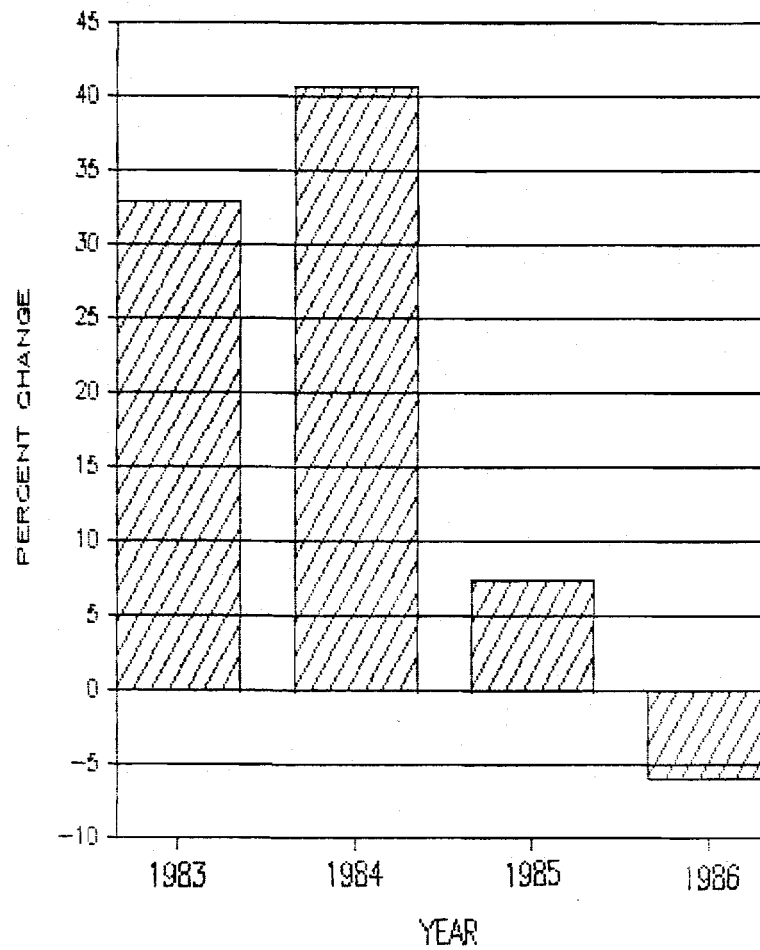
CITY OF WAUKESHA TRANSIT SYSTEM
ANNUAL RIDERSHIP: 1981 TO 1986



Source: SEWRPC.

Figure 6

ANNUAL PERCENTAGE CHANGE IN CITY OF WAUKESHA
TRANSIT SYSTEM RIDERSHIP: 1983 TO 1986



Source: SEWRPC.

Table 5

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TRANSIT RIDERSHIP, SERVICE, FINANCIAL, AND RELATED
DATA FOR THE CITY OF WAUKESHA TRANSIT SYSTEM: 1981-1986

TRANSIT SERVICE CHARACTERISTIC/ EXTERNAL FACTOR	YEAR					
	1981	1982	1983	1984	1985	a,b 1986
Transit Service Levels and Utilization						
Annual Linked Revenue Passenger Trips....	59,500	202,700	269,200	378,500	406,200	381,900
Annual Revenue Vehicle Miles Operated....	88,300	298,700	338,300	368,900	402,900	403,100
Transit Service Financial Information						
Total System Operating Expenses.....	\$291,000	\$706,500	\$732,700	\$774,100	\$858,700	\$922,000
Total System Operating Revenues.....	\$23,400	\$85,700	\$112,000	\$150,100	\$169,200	\$176,000
Base Adult Cash Fare.....	\$0.50	\$0.50	\$0.50	\$0.50	\$0.50/0.60	\$0.60
Total System Operating Deficit.....	\$267,600	\$620,800	\$620,700	\$624,000	\$689,400	\$746,000
Federal Share of Deficit.....	\$127,200	\$267,100	\$275,200	\$313,900	\$267,000	\$206,000
State Share of Deficit.....	\$83,700	\$209,700	\$219,800	\$271,000	\$300,300	\$345,300
Local Share of Deficit.....	\$56,700	\$144,000	\$125,700	\$39,100	\$122,100	\$194,700
Farebox Recovery Ratio.....	8.0	12.1	15.3	19.4	19.7	19.1
Operating Expense per Revenue Vehicle Mile.....	\$3.30	\$2.37	\$2.17	\$2.10	\$2.13	\$2.29
Other Factors						
Price of Gasoline.....	\$1.395	\$1.364	\$1.317	\$1.298	\$1.293	\$0.901
Population						
Waukesha County.....	282,500	283,400	285,900	284,000	285,900	288,200
City of Waukesha.....	51,100	51,100	51,600	51,100	51,800	52,700
Waukesha County Employment.....	97,700	95,500	117,300	123,600	124,100	NA
Consumer Price Index (1975 Base).....	178.3	190.8	197.0	204.1	210.4	211.1
Heating Degree-Days (Annual).....	7387	7493	7203	6846	7310	5683
Days 0 or Below (Annual).....	14	22	12	9	24	6
Inches of Snow/Sleet (Annual).....	32	60	48	39	71	28
Inches of Rain (Annual).....	29	25	27	35	22	35

a

Estimated.

b

1986 Weather data available for 11 months.

Source: Wisconsin Dept. of Transportation, Bureau of Transit; Waukesha Transit System Utility; and SEWRPC.

Table 6

FACTORS INFLUENCING CHANGE IN THE CITY OF WAUKESHA'S TRANSIT SYSTEM RIDERSHIP: 1977 TO 1986

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1983	Increase +33 percent.	Increase +13 percent.	None.	Decrease -3 percent.	Second year of full operation of new system.	Ridership increase was principally a result of continuing increased use of a new service and, as well, the service expansion implemented in 1983.
1984	Increase +41 percent.	Increase +9 percent.	None.	Decrease -2 percent.	Third year of full operation.	Ridership increase was principally a result of continuing increased use of a new service.
1985	Increase +7 percent.	Increase +9 percent.	Increase +20 percent.	Decrease -1 percent.	--	Ridership increase was principally a result of service extension to Saturdays. Fare increase toward end of year reduced the amount of increase.
1986	Decrease -6 percent.	None.	None.	Decrease -30 percent.	--	Ridership decrease was a result of full year of operation under fare increase, mild winter, and reduced gas prices.

^aService is represented by revenue vehicle miles.

Source: SEWRPC.

The transit ridership increases experienced during the years 1981 through 1985 may be attributed to the introduction of the new service and to increases in the extent of service provided over those first few years. In 1985, transit service was extended to Saturdays. Gasoline prices were not a factor in the increase in transit ridership, as gasoline prices had peaked in 1981. In 1986, transit ridership on the City of Waukesha transit system declined slightly. This may be attributed primarily to an increase in transit fare which was implemented in late 1985. In addition, the mild winter and the substantial reduction in gasoline prices in 1986 may also have been contributing factors.

Total travel within the City of Waukesha transit system service area remained relatively stable from 1981 through 1986 and, therefore, was not a major factor in transit ridership trends over that time period. The transit system service area consists primarily of the City of Waukesha, and the central transfer point and focus of the transit system is the City of Waukesha central business district. The resident population in the City of Waukesha increased from 51,100 persons in 1981 to 52,700 persons in 1986, an increase of 1,600 persons, or about 3 percent. The City of Waukesha central business district has experienced a loss of activity, with department stores and several specialty stores ceasing operation. As shown on Map 3, the average weekday vehicle traffic volumes on selected surface arterial streets in the City of Waukesha transit system service area remained relatively stable during the period 1982 to 1985, indicating little increase in total travel.

Summary and Conclusions: City of Waukesha Transit System

The increase in transit ridership on the City of Waukesha transit system over the period 1981 through 1985 may be attributed to the introduction of the new service and increases in service, for example, extension of services to Saturdays in 1985. The slight decline in transit service experienced by the City of Waukesha transit system in 1986 may be attributed principally to the increase in transit fare in late 1985. In addition, the mild winter and reduction in gasoline prices in 1986 are likely contributing factors.

CITY OF RACINE TRANSIT SYSTEM

The City of Racine transit system experienced steadily increasing transit ridership each year for the years 1976 through 1981, and then declining transit ridership for the years 1982 through 1986, with the exception of 1984, when the transit system experienced a modest increase in transit ridership. The trends in transit ridership for the City of Racine transit system between 1975 and 1986 are shown in Figures 7 and 8. Table 7 presents transit system ridership, service, financial, and related data for 1975 through 1986, and Table 8 identifies key factors influencing the change in transit ridership from 1976 through 1986.

The transit ridership increases experienced during the years 1976 through 1981 occurred during a period of major transit service improvement and expansion following the beginning of public ownership and operation of the transit system in 1975. The City implemented in May 1976 an entirely new system of routes and schedules, providing a substantial increase in service along with reduced transit fares and new buses. The growth in transit ridership which occurred between 1975 and 1979 can be directly attributed to these significant

Map 3

AVERAGE WEEKDAY TRAFFIC VOLUMES AT SELECTED
LOCATIONS WITHIN THE CITY OF WAUKESHA TRANSIT SYSTEM
SERVICE AREA: 1973, 1976, 1982, AND 1985

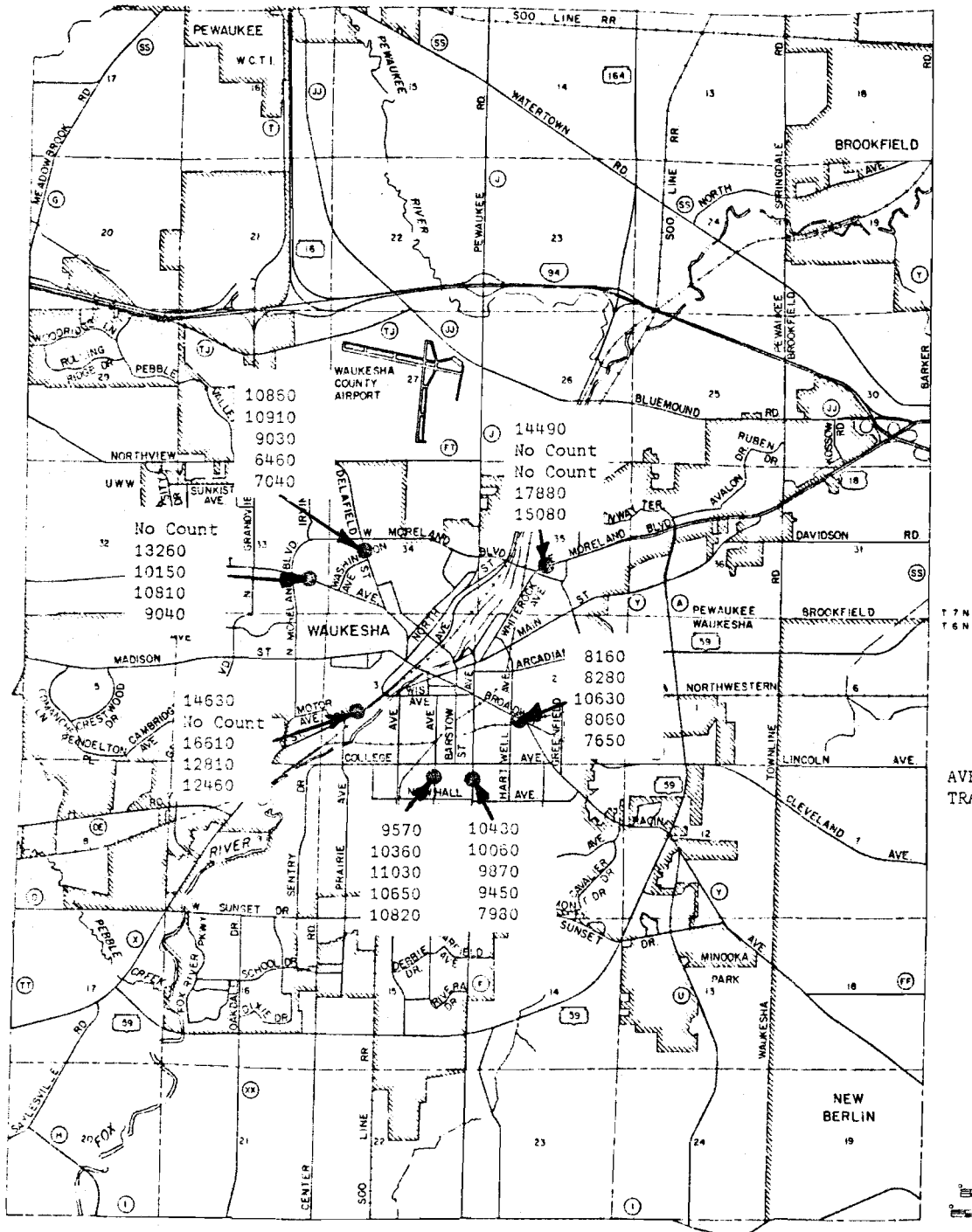
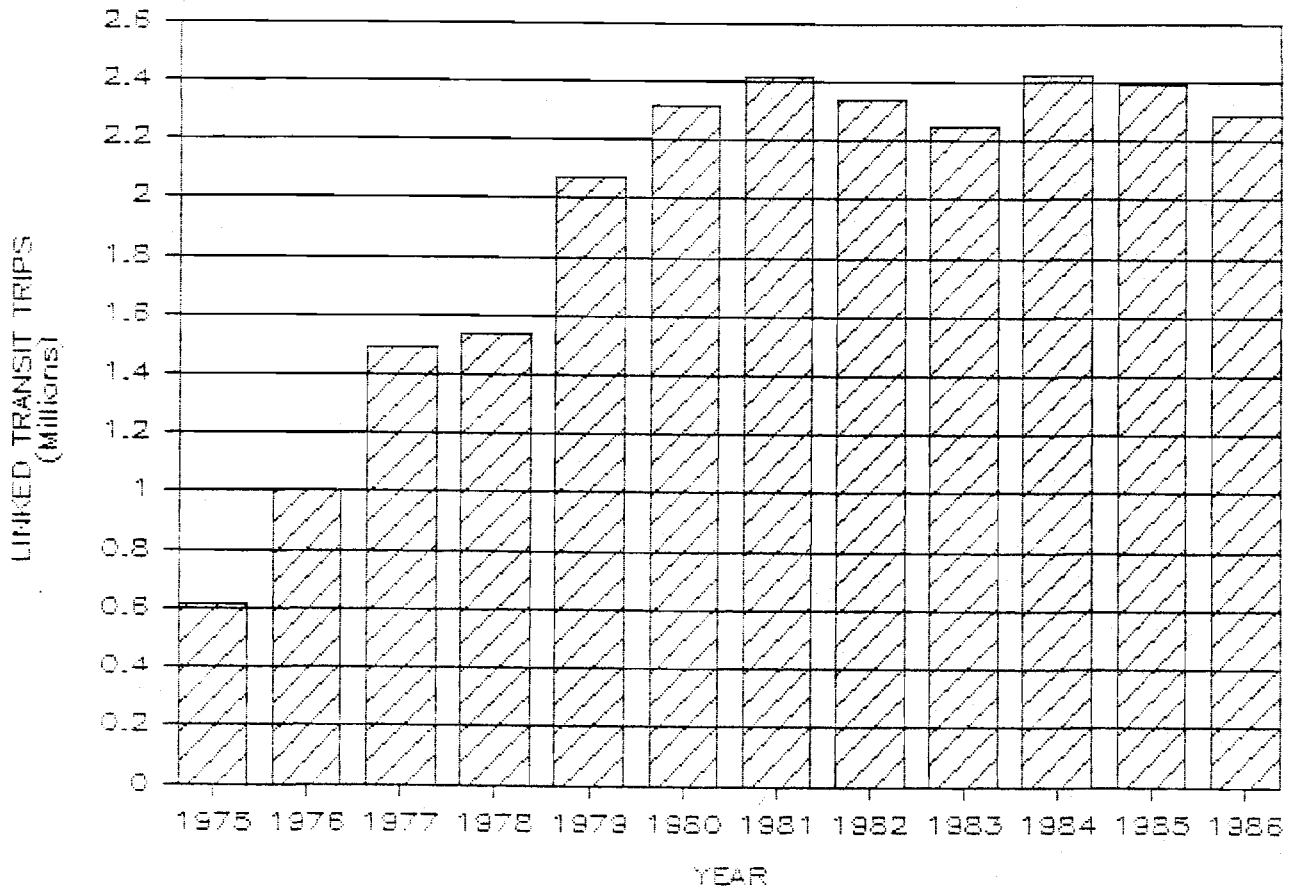


Figure 7

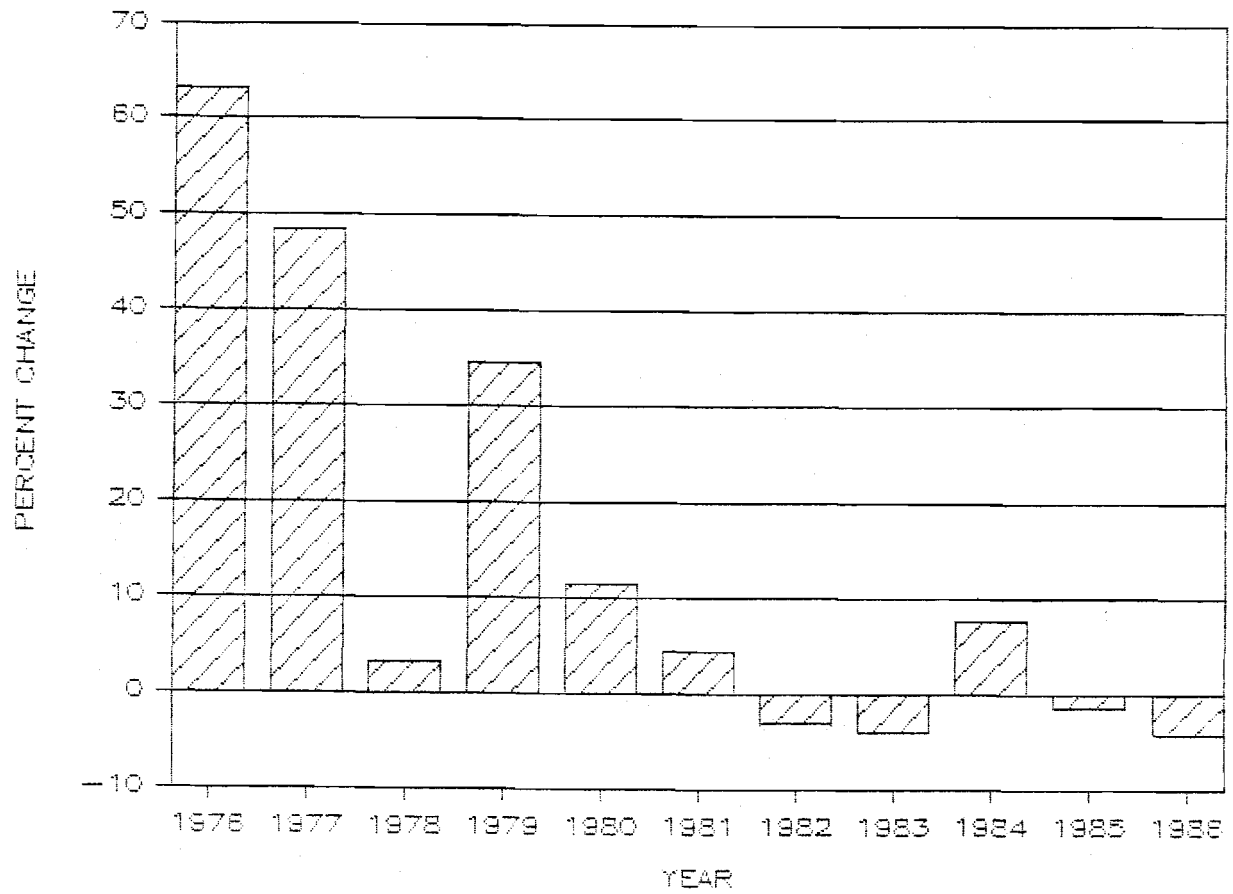
CITY OF RACINE TRANSIT SYSTEM
ANNUAL RIDERSHIP: 1975 TO 1986



Source: SEWRPC.

Figure 8

ANNUAL PERCENTAGE CHANGE IN CITY OF
RACINE TRANSIT SYSTEM RIDERSHIP: 1976 TO 1986



Source: SEWRPC.

Table 7

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TRANSIT RIDERSHIP, SERVICE, FINANCIAL, AND RELATED
DATA FOR THE CITY OF RACINE TRANSIT SYSTEM: 1975-1986

TRANSIT SERVICE CHARACTERISTIC/ EXTERNAL FACTOR	YEAR											
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	a, b 1986
Transit Service Levels and Utilization												
Annual Linked Revenue Passenger Trips.....	616,300	1,005,600	1,491,900	1,541,000	2,072,700	2,313,200	2,418,500	2,341,400	2,250,000	2,422,300	2,390,300	2,287,400
Annual Revenue Vehicle Miles Operated.....	428,900	731,400	992,700	984,100	978,200	1,013,500	1,025,300	1,057,000	1,163,400	1,229,100	1,231,600	1,236,400
Transit Service Financial Information												
Total System Operating Expenses.....	\$405,300	\$734,600	\$963,100	\$1,131,900	\$1,412,800	\$1,610,600	\$1,775,900	\$1,966,900	\$2,357,100	\$2,615,700	\$2,708,300	\$2,926,800
Total System Operating Revenues.....	\$211,200	\$230,400	\$283,300	\$368,500	\$530,000	\$564,300	\$584,000	\$611,900	\$733,100	\$783,300	\$774,600	\$735,500
Base Adult Cash Fare.....	\$0.40	\$0.40/0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25	\$0.25/0.35	\$0.35	\$0.35	\$0.35	\$0.35
Total System Operating Deficit.....	\$194,100	\$504,200	\$679,800	\$763,400	\$882,800	\$1,046,300	\$1,191,900	\$1,355,000	\$1,624,100	\$1,832,400	\$1,933,700	\$2,191,300
Federal Share of Deficit.....	\$98,200	\$252,300	\$359,800	\$394,200	\$481,800	\$574,800	\$646,200	\$730,500	\$881,400	\$991,000	\$1,043,100	\$1,094,200
State Share of Deficit.....	\$60,900	\$167,900	\$149,500	\$246,100	\$288,700	\$339,500	\$392,900	\$589,300	\$707,100	\$841,400	\$947,900	\$1,097,500
Local Share of Deficit.....	\$35,000	\$84,000	\$170,500	\$123,100	\$112,300	\$132,000	\$152,800	\$35,200	\$35,600	\$0	\$0	\$0
Farebox Recovery Ratio.....	52.1	31.4	29.4	32.6	37.5	35.0	32.9	31.1	31.1	29.9	28.6	25.1
Operating Expense per Revenue Vehicle Mile.....	\$0.94	\$1.00	\$0.97	\$1.15	\$1.44	\$1.59	\$1.73	\$1.86	\$2.03	\$2.13	\$2.20	\$2.37
Other Factors												
Price of Gasoline.....	\$0.575	\$0.583	\$0.613	\$0.659	\$0.919	\$1.237	\$1.395	\$1.364	\$1.317	\$1.298	\$1.293	\$0.901
Population												
Racine County.....	178,900	179,300	178,200	177,300	179,500	173,100	173,400	172,200	170,200	170,100	169,200	169,400
City of Racine.....	97,200	96,400	94,600	93,000	92,900	85,700	84,900	83,300	81,700	81,500	81,500	81,600
Racine County Employment.....	68,600	67,200	72,600	74,800	78,500	78,700	76,900	69,900	71,900	75,800	76,100	NA
Consumer Price Index (1975 Base).....	100.0	106.3	113.2	122.5	140.7	160.1	178.3	190.8	197.0	204.1	210.4	211.1
Heating Degree-Days (Annual).....	6589	7272	7057	7486	7634	7309	6920	7509	7257	7076	7202	5567
Days 0 or Below (Annual).....	9	19	27	11	25	13	12	21	12	8	24	8
Inches of Snow/Sleet (Annual).....	48	20	44	68	58	57	21	45	49	34	62	27
Inches of Rain (Annual).....	22	24	21	35	27	29	29	34	26	32	25	31

a
Estimated.

b
1986 Weather data available for 11 months.

Source: Wisconsin Dept. of Transportation, Bureau of Transit; City of Racine Dept. of Transportation; and SEWRPC.

Table 8

FACTORS INFLUENCING CHANGES IN THE CITY OF RACINE TRANSIT SYSTEM RIDERSHIP: 1975-1986

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1976	Increase +63 percent.	Increase +71 percent (new system of routes implemented May 1976)	Decrease -38 percent.	None.	First full year of public operation; new equipment introduced in May 1976.	Ridership increase was principally the result of service improvements made with new route structure and new equipment, and reduction of fares--all occurring in mid-1975.
1977	Increase +48 percent.	Increase +36 percent.	None.	Increase +5 percent.	--	Ridership increase was principally the result of a full year of operation under reduced fare with new routes and equipment
1978	Increase +3 percent.	None.	None.	Increase +8 percent.	--	Ridership increase was principally the result of continuing increased use of new public transit operation.
1979	Increase +35 percent.	None.	None.	Increase +39 percent.	Severe winter.	Ridership increase was principally the result of gas price increase, the severe winter, and continuing increased use of new public transit operation.
1980	Increase +5 percent.	Increase +4 percent (new bus route implemented in April 1980)	None.	Increase +35 percent.	--	Ridership increase was principally the result of gas price increase and service expansion.
1981	Increase +5 percent.	Increase +1 percent.	None.	Increase +13 percent.	--	Ridership increase was principally the result of gas price increases and full year of operation of new bus route.

-continued-

Table 8 (continued)

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1982	Decrease -4 percent.	Increase +3 percent (peak period headways reduced from 30 to 20 minutes on four routes in October 1982).	Increase +40 percent.	Decrease -2 percent.	High unemployment level of 14 percent in Racine County due to economic recession.	Decrease in ridership was principally the result of a fare increase and the economic recession, which resulted in high unemployment levels in the City of Racine.
1983	Decrease -4 percent.	Increase +10 percent (two new bus routes implemented in June 1983).	None.	Decrease -3 percent.	High unemployment level of 13 percent in Racine County due to economic recession.	Decrease in ridership was principally the result of a fare increase implemented in 1982 and the economic recession, which resulted in high unemployment in the City of Racine.
1984	Increase +8 percent.	Increase +6 percent.	None.	Decrease -1 percent.	Upturn in economy reduces unemployment levels in Racine County to below 8 percent.	Increase in ridership reflects full year of new bus routes and upturn in local economic conditions, which lowered unemployment levels in the City of Racine.
1985	Decrease -1 percent.	None.	None.	Decrease -1 percent.	Slowing of economic recovery increases unemployment to over 9 percent.	Decrease in ridership primarily the result of economic conditions.
1986	Decrease -4 percent.	None.	None.	Decrease -31 percent.	Mild winter. Unemployment remains at about 9 percent.	Decrease in ridership was primarily the result of decline in gasoline price and mild winter weather and, as well, continued weak local economy.

^aService is represented by revenue vehicle miles.

Source: SEWRPC.

improvements in the transit system. The transit ridership increases experienced during the years 1979 through 1981 may be attributed primarily to the substantial increases in gasoline prices which occurred in each of these years, and also to the further expansion of the transit system through the operation of one new bus route.

Decreases in transit ridership on the city public transit system occurred in 1982 and 1983, despite actions taken to improve and expand transit service. Key factors in the decline in ridership included the fare increase implemented in late 1982, and the effects of the severe economic recession, which resulted in major losses of jobs and high unemployment rates within the City of Racine, particularly in 1982 and 1983. The modest increase in transit ridership which occurred in 1984 may be attributed to the reduction in unemployment levels in the City of Racine as the economy began to recover. Increases in unemployment levels in the Racine area in 1985, along with declining gasoline prices, again resulted in declining transit ridership. The continued decline in transit ridership in 1986 may be attributed to the decline in gasoline prices in that year and, in part, to a mild winter.

Total travel in the Racine transit service area remained relatively stable from 1975 through 1986 and, therefore, was not a major factor in transit ridership trends. The transit system service area is concentrated in the City of Racine. The resident population of the City of Racine decreased from 97,200 persons in 1975 to 81,600 persons in 1986, a decrease of about 15,600 persons, or 16 percent. Average weekday vehicle traffic counts on selected arterial streets within the City of Racine transit system service area have been summarized on Map 4.

Summary and Conclusions: City of Racine Public Transit System

The increase in transit ridership on the City of Racine transit system over the time period 1975 to 1981 may be attributed in part to the substantial improvements in transit service provided over that time period. Improvements made to the routes, schedules, and operating equipment, and a reduction in transit fares were the major reasons for transit ridership increases in the years 1976 through 1978. The substantial increase in gasoline prices in the years 1979 through 1981 were the major factor in transit ridership increases in those years.

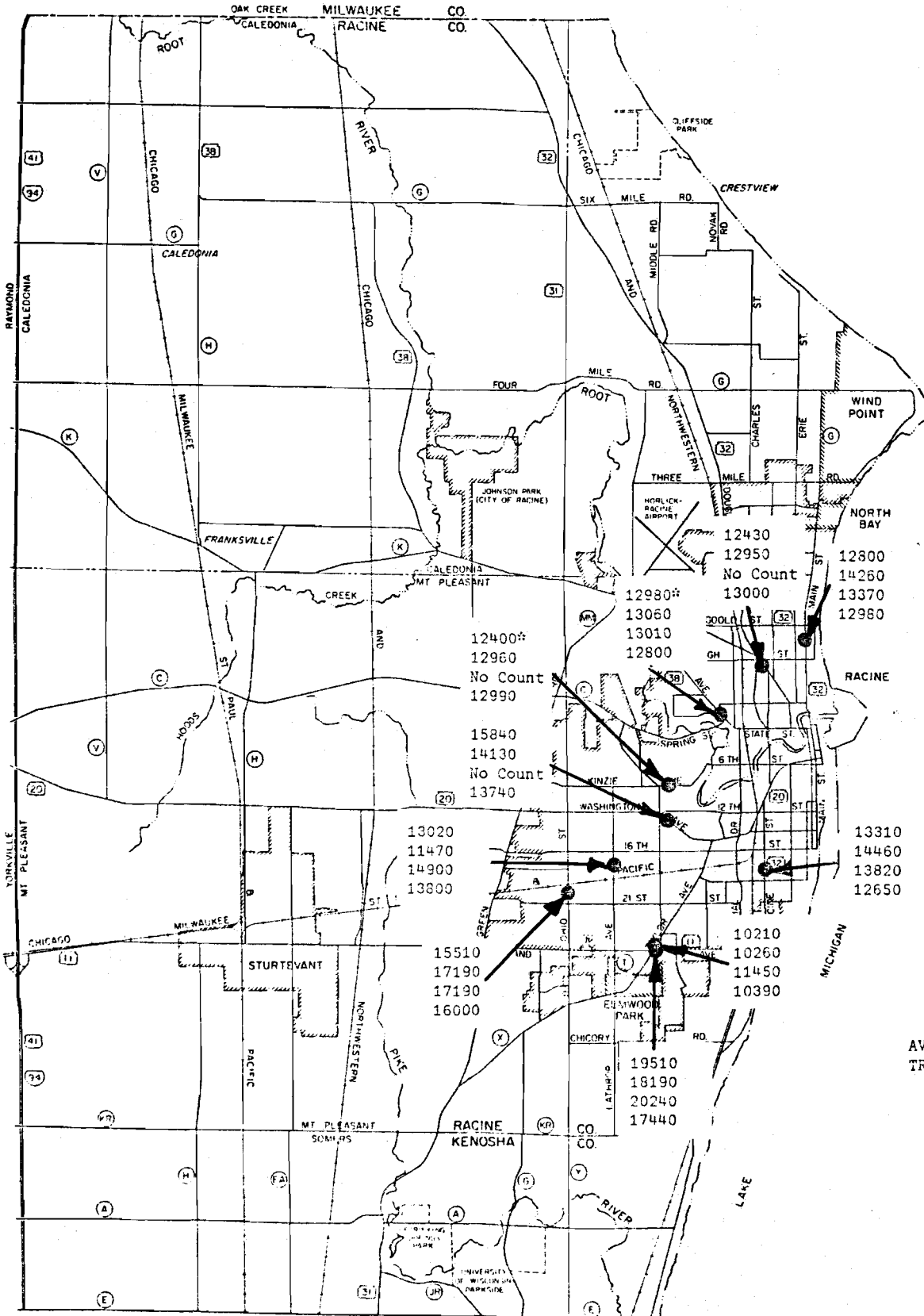
The decline in ridership on the City of Racine transit system for the years 1982 and 1983 may be attributed largely to a fare increase implemented in 1982, and to the severe economic recession which resulted in high unemployment levels within the City of Racine. When the economy began to improve in 1984, and unemployment levels within the City of Racine began to decline, the transit system experienced a modest increase in transit ridership. The decline in ridership on the transit system for the years 1985 and 1986 may be attributed largely to a worsening of the economy in the Racine area in 1985, and the decline in gasoline prices which occurred in 1986.

CITY OF KENOSHA TRANSIT SYSTTEM

The City of Kenosha transit system generally experienced steadily increasing transit ridership each year for the years 1976 through 1980, and experienced steadily declining transit ridership each year for the years 1981 through

Map 4

AVERAGE WEEKDAY TRAFFIC VOLUMES AT SELECTED
LOCATIONS WITHIN THE CITY OF RACINE TRANSIT SYSTEM
SERVICE AREA: 1975, 1978, 1981, AND 1984



1986, except during 1984, when a modest increase in transit ridership occurred. The trends in transit ridership for the City of Kenosha transit system are shown in Figures 9 and 10. Table 9 presents transit system ridership, service, financial, and related data for the years 1975 through 1986, and Table 10 identifies the key factors influencing the change in transit ridership from 1975 through 1986.

The transit ridership increases experienced during the years 1976 through 1980 occurred during a period of transit service improvement and expansion which included the restructuring and addition of bus routes and reduction of headways. Also during this period, transit fares were not increased and new buses were placed in service over the entire transit system. Finally, toward the end of this time period in the years 1979 and 1980, the price of gasoline increased substantially.

The decreases in transit ridership which occurred in the years 1981 through 1983 may be attributed to several factors. During this period, the transit system implemented two fare increases which increased transit fares from \$0.30 in early 1980 to \$0.40 by the end of 1983, an increase of 33 percent. Also contributing to the decline in ridership was the severe economic recession and attendant loss of jobs, which resulted in high unemployment levels within the City of Kenosha, particularly in 1981, 1982, and 1983. In addition, transit service was reduced from about 862,000 revenue bus miles in 1980 to about 697,000 revenue bus miles in 1983, representing a total reduction in service of about 165,000 revenue bus miles, or 19 percent. A modest increase in transit ridership occurred on the transit system in 1984 as a result of an upturn in the economy, which reduced unemployment levels in the Kenosha area. However, transit system ridership declined again in 1985 after fares on the transit system were increased again, from \$0.40 to \$0.45, and the Kenosha area economy declined again. The decline in transit system ridership in 1986 may be attributed to a continuing weak economy, the substantial decline in gasoline prices, and a mild winter.

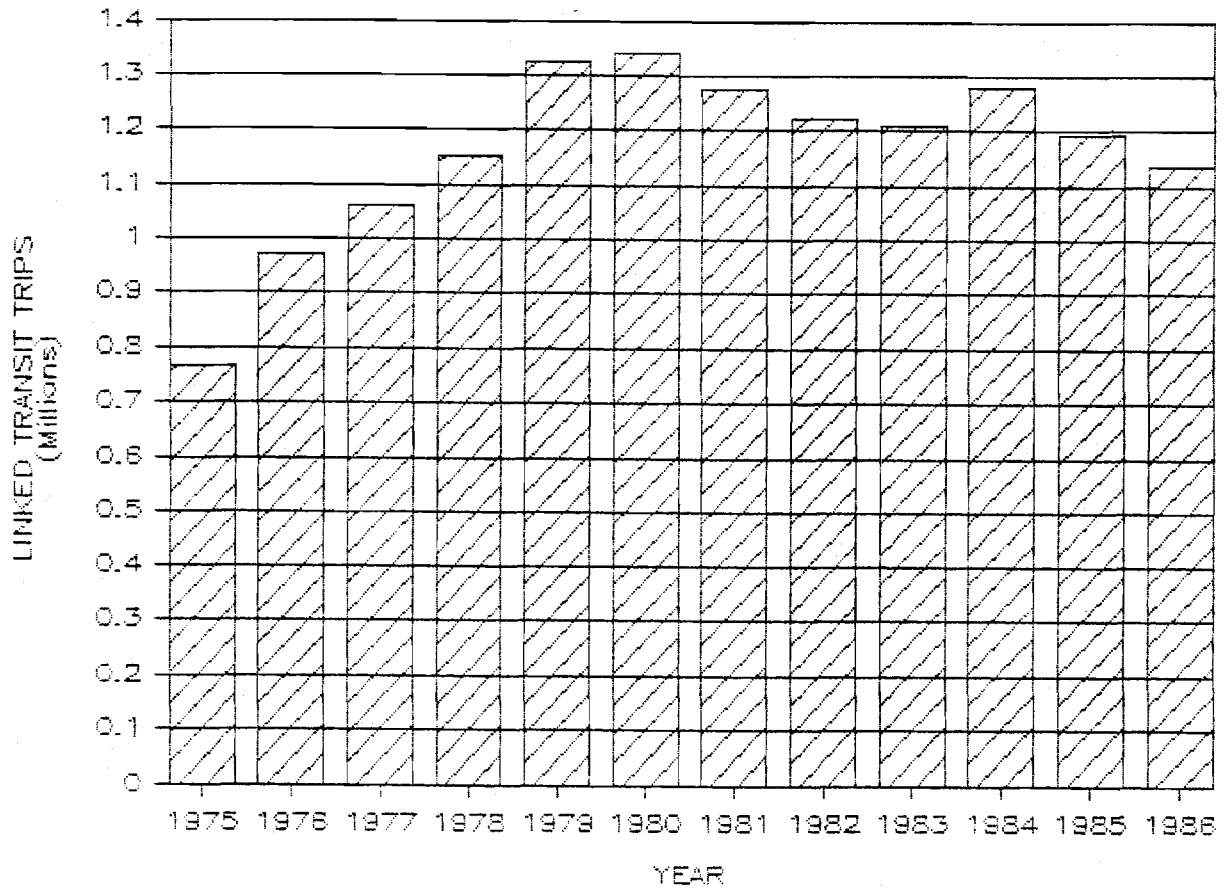
Total travel by both public transit and automobile within the City of Kenosha transit system service area remained relatively stable from 1975 to 1986 and, therefore, was not a major factor in transit ridership trends for that time period. The transit system service area is concentrated in the City of Kenosha. The resident population of the City of Kenosha declined from 83,800 persons in 1975 to about 76,200 persons in 1986, a decline of about 7,600 persons, or about 9 percent. Average weekday vehicle traffic counts on selected arterial streets are summarized on Map 5. The average weekday traffic volumes on these arterial facilities indicate only relatively little growth from 1975 to 1986.

Summary and Conclusions: City of Kenosha Transit System

The increase in transit ridership on the City of Kenosha public transit system for the time period 1975 through 1980 may be attributed in large part to the increase in transit service provided over that time period. Improved and expanded transit service, and new equipment, were the major reasons for transit system ridership increases in the years 1975 through 1978. The substantial increase in gasoline prices in the years 1979 and 1980 were major factors in transit ridership increases in those years.

Figure 9

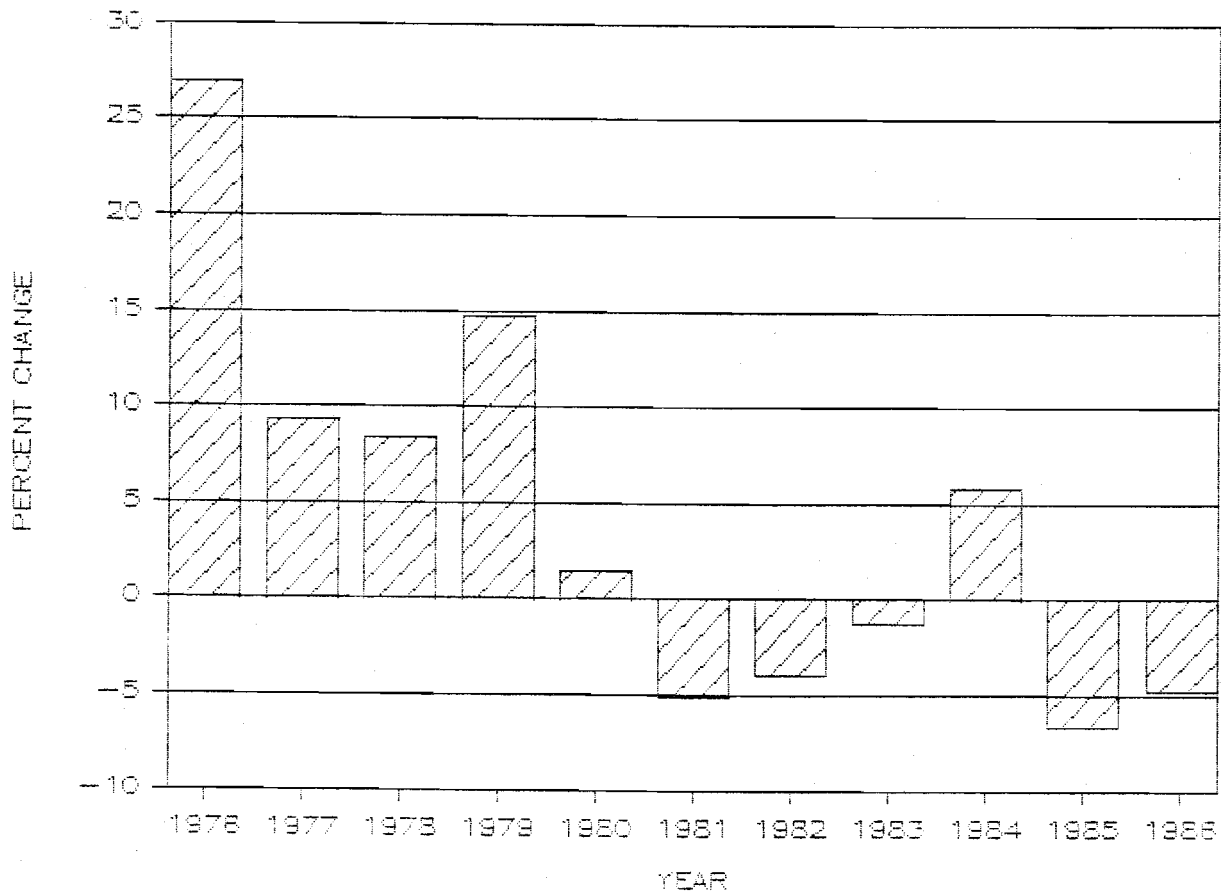
CITY OF KENOSHA TRANSIT SYSTEM
ANNUAL RIDERSHIP: 1975 TO 1986



Source: SEWRPC.

Figure 10

ANNUAL PERCENTAGE CHANGE IN CITY OF
KENOSHA TRANSIT SYSTEM RIDERSHIP: 1976 TO 1986



Source: SEWRPC.

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Table 9
TRANSIT RIDERSHIP, SERVICE, FINANCIAL, AND RELATED
DATA FOR THE CITY OF KENOSHA TRANSIT SYSTEM: 1975-1986

TRANSIT SERVICE CHARACTERISTIC/ EXTERNAL FACTOR	YEAR											
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	^a 1985	^{a, b} 1986
Transit Service Levels and Utilization												
Annual Linked Revenue Passenger Trips....	766,800	973,400	1,064,400	1,154,000	1,323,500	1,342,900	1,274,700	1,224,100	1,209,500	1,279,200	1,194,300	1,137,600
Annual Revenue Vehicle Miles Operated....	391,600	591,300	589,100	635,800	715,000	861,900	751,500	619,600	697,400	696,600	662,000	658,900
Transit Service Financial Information												
Total System Operating Expenses.....	\$479,500	\$660,900	\$751,400	\$921,900	\$1,059,000	\$1,586,000	\$1,707,900	\$1,569,400	\$1,609,700	\$1,712,200	\$1,910,400	\$2,018,100
Total System Operating Revenues.....	\$189,300	\$241,200	\$260,800	\$284,000	\$348,600	\$350,100	\$361,200	\$366,300	\$399,700	\$433,800	\$414,300	\$435,100
Base Adult Cash Fare.....	\$0.25	\$0.25	\$0.25	\$0.25	\$0.30	\$0.30	\$0.35	\$0.35	\$0.40	\$0.40	\$0.45	\$0.45
Total System Operating Deficit.....	\$290,200	\$419,700	\$490,600	\$637,900	\$710,400	\$1,235,900	\$1,346,700	\$1,203,100	\$1,210,000	\$1,278,400	\$1,496,100	\$1,583,000
Federal Share of Deficit.....	\$145,100	\$209,900	\$300,600	\$383,100	\$418,100	\$674,900	\$727,800	\$665,300	\$677,500	\$716,100	\$748,000	\$794,400
State Share of Deficit.....	\$96,700	\$127,100	\$92,700	\$144,400	\$209,700	\$343,200	\$443,600	\$470,800	\$482,900	\$562,300	\$659,300	\$756,800
Local Share of Deficit.....	\$48,400	\$82,700	\$97,300	\$110,400	\$82,600	\$217,800	\$175,300	\$67,000	\$49,600	\$0	\$88,800	\$31,800
Farebox Recovery Ratio.....	39.5	36.5	34.7	30.8	32.9	22.1	21.1	23.3	24.8	25.3	21.7	21.6
Operating Expense per Revenue Vehicle Mile.....	\$1.22	\$1.12	\$1.28	\$1.45	\$1.48	\$1.84	\$2.27	\$2.53	\$2.31	\$2.46	\$2.89	\$3.06
Other Factors												
Price of Gasoline.....	\$0.575	\$0.583	\$0.613	\$0.659	\$0.919	\$1.237	\$1.395	\$1.364	\$1.317	\$1.298	\$1.293	\$0.901
Population												
Kenosha County.....	126,700	127,100	125,700	125,800	126,600	123,100	123,600	122,100	121,300	122,400	121,200	121,200
City of Kenosha.....	83,800	83,500	80,900	80,700	80,800	77,700	77,900	76,800	76,200	76,500	76,300	76,200
Kenosha County Employment.....	46,700	41,400	44,300	44,500	45,400	42,900	38,000	37,600	43,000	45,400	45,500	NA
Consumer Price Index (1975 Base).....	100.0	106.3	113.2	122.5	140.7	160.1	178.3	190.8	197.0	204.1	210.4	211.1
Heating Degree-days (Annual).....	6794	7385	7199	7650	7719	7395	7143	7867	7646	7640	7766	5604
Days 0 or Below (Annual).....	11	18	26	15	24	11	13	22	14	14	31	7
Inches of Snow/Sleet (Annual).....	48	24	49	63	49	56	27	56	29	30	54	26
Inches of Rain (Annual).....	20	23	25	35	26	26	29	31	29	30	31	35

^a
Estimated.

^b
1986 Weather data available for 11 months.

Source: Wisconsin Dept. of Transportation, Bureau of Transit; City of Kenosha Dept. of Transportation; and SEWRPC.

Table 10

FACTORS INFLUENCING CHANGES IN CITY OF KENOSHA TRANSIT SYSTEM RIDERSHIP: 1975-1986

Year	Change in Ridership from Previous Year	Change in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1976	Increase 27 percent.	Increase +51 percent.	None.	None.	First full year of operation with new equipment and new route structure previously implemented in August 1975.	Ridership increase was principally the result of a full year of operation with new routes and equipment.
1977	Increase +9 percent.	None.	None.	Increase +5 percent.	--	Ridership increase was principally the result of continuing increased use of the new public transit operation.
1978	Increase +8 percent.	Increase +8 percent (new bus route implemented in late 1978).	None.	Increase +8 percent.	--	Ridership increase was principally the result of transit service improvements made during the year and the continuing increased use of the new public transit operation.
1979	Increase +15 percent.	Increase +12 percent.	Increase +20 percent.	Increase +39 percent.	--	Ridership increase was principally the result of gas price increase.
1980	Increase +1 percent.	Increase +2 percent (headways on all routes reduced from 60 to 30 minutes between 6:00-9:30 a.m. and 11:30 a.m.-6:00 p.m. in April 1980).	None.	Increase +35 percent.	--	Ridership increase was principally the result of gas price increase and transit service improvements made during the year.
1981	Decrease -5 percent.	Decrease -13 percent (headways on all routes increased from 30 to 60 minutes between 9:00 a.m. and 3:00 p.m. in June 1981).	Increase +17 percent.	Increase +13 percent.	High unemployment level of 10 percent in Kenosha County due to economic recession.	Ridership decrease principally the result of a fare increase; recession in economy, which increased unemployment level in the City of Kenosha.

-continued-

Table 10 (continued)

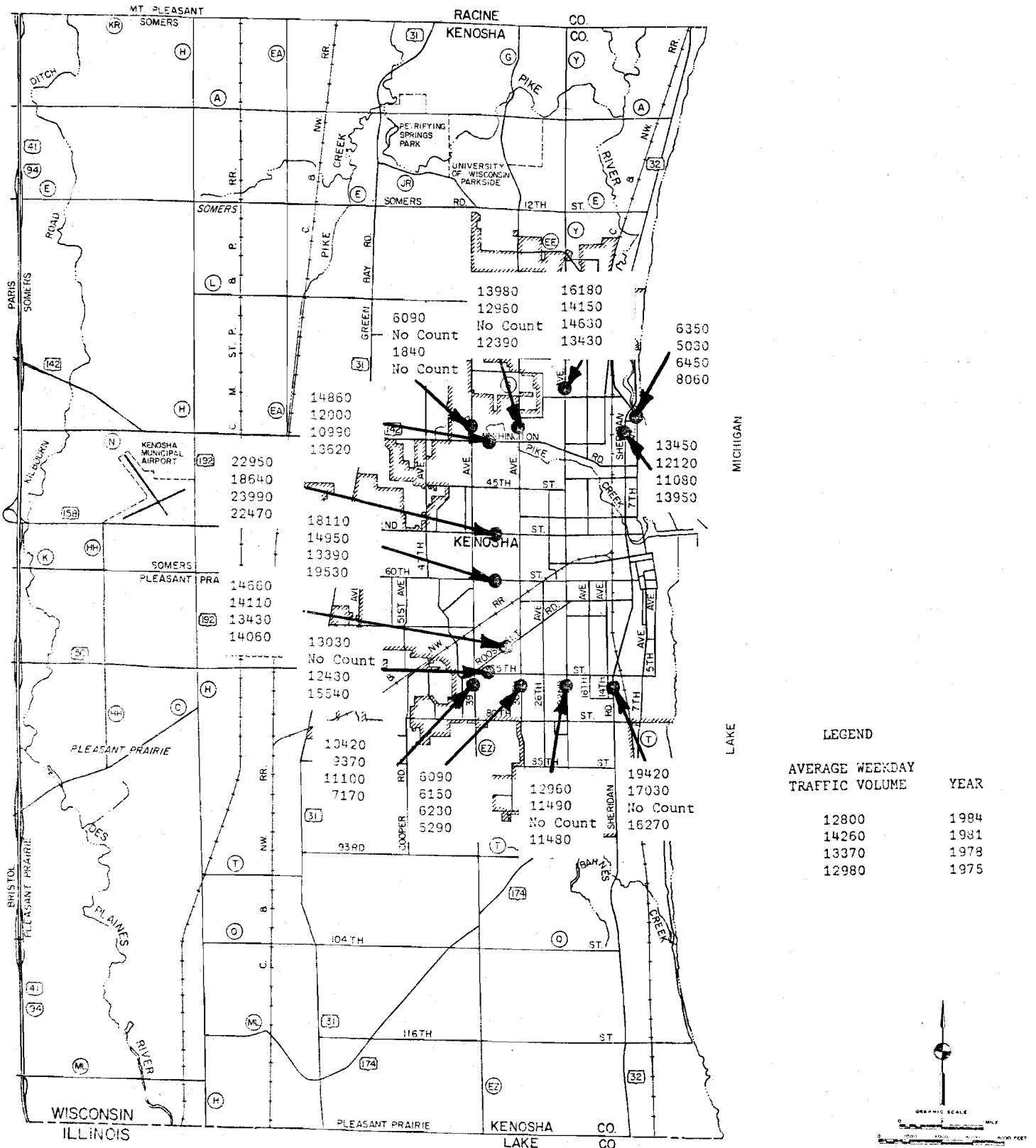
Year	Change in Ridership from Previous Year	Changes in Service Provided ^a from Previous Year	Change in Fare from Previous Year	Change in Gas Price from Previous Year	Other Changes from Previous Year	Conclusion: Factors Influencing Ridership Change
1982	Decrease -5 percent.	Decrease -18 percent.	None.	Decrease -2 percent.	Continued high unemployment in Kenosha County of 11 percent due to recession in economy.	Ridership decrease principally the result of recession in economy which increased unemployment; reductions in transit service made during the previous year; and declining gasoline prices.
1983	Decrease -1 percent.	Increase +13 percent.	Increase +14 percent.	Decrease -3 percent	Continued high unemployment in Kenosha County of 13 percent due to recession in economy.	Ridership decrease was principally the result of a fare increase; the recession in the economy which resulted in high unemployment levels; and declining gasoline prices.
1984	Increase +6 percent.	None.	None.	Decrease -1 percent.	Upturn in economy reduces unemployment level to 7 percent in Kenosha County.	Ridership increase was principally the result of an upturn in local economic conditions which reduced unemployment.
1985	Decrease -7 percent.	Decrease -4 percent. (route and schedule modification made in late December 1984).	Increase +13 percent.	None.	Downturn in economy increases unemployment to 12 percent.	Decrease in ridership principally the result of a fare increase and weakened economy.
1986	Decrease -5 percent.	None.	None.	Decrease -31 percent.	Mild winter and economy remains weak, with unemployment at 12 percent.	Decrease in ridership principally the result of declining gasoline prices, mild winter weather, and weak economy.

^aService is represented by revenue vehicle miles.

Source: SEWRPC.

Map 5

AVERAGE WEEKDAY TRAFFIC VOLUMES AT SELECTED
LOCATIONS WITHIN THE CITY OF KENOSHA TRANSIT SYSTEM
SERVICE AREA: 1975, 1978, 1981, AND 1984



The decline in ridership on the City of Kenosha transit system for the years 1981 through 1983 may be attributed largely to fare increases and service reductions implemented over that period, and to the severe economic recession which resulted in high unemployment levels in the City of Kenosha. The transit system experienced a modest increase in transit ridership in 1984, when an upturn in the economy reduced unemployment levels within the City of Kenosha. However, a fare increase implemented in 1985, a weakening of the local economy, and a significant reduction in gasoline prices in 1986 resulted in a return to the trend of declining transit ridership for the transit system.

SUMMARY AND CONCLUSIONS

This memorandum has presented an analysis of the trends in public transit ridership in southeastern Wisconsin between 1975 and 1986 for each of the five public transit operators in the Region--the City of Kenosha, Milwaukee County, the City of Racine, the City of Waukesha, and Waukesha County. This analysis has indicated that the trends in public transit ridership have generally been similar for all the public transit operators--with the exception of the City of Waukesha--with transit ridership steadily increasing during the mid- to late 1970's and into the early 1980's, peaking in the early 1980's, then generally declining through 1986. The City of Waukesha's public transit system, which began operation late in 1981, experienced a steady increase in public transit ridership through 1985, before ridership on the transit system declined slightly in 1986.

The analysis of transit ridership indicated that several factors have affected public transit ridership on each of the public transit systems. The increases in transit ridership which occurred during the mid- to late 1970's and early 1980's on the four transit systems then in operation were generally the result of major improvements and expansions of public transit services; the introduction of new buses to provide these services; and stable or reduced transit fares. These improvements and expansions came about as a result of the initiation of public ownership and operation of the public transit systems. Also, toward the end of this time period, in the years 1979 and 1980, the price of gasoline increased substantially, thus increasing the relative cost of the principal alternative means of transportation available to public transit--the automobile. The decreases in transit ridership which have occurred on the public transit systems within southeastern Wisconsin, with the exception of the public transit system serving the City of Waukesha, from the early 1980's through 1986 have generally been the result of a combination of factors, including increases in transit fares, reductions in transit service, and the severe economic recession and attendant job losses experienced in southeastern Wisconsin over this period. In addition, gasoline prices, which were relatively stable between 1981 and 1985, dropped approximately 30 percent in 1986, from \$1.29 per gallon in 1985 to \$0.90 per gallon in 1986.

Transit ridership on the City of Waukesha public transit system increased during the years 1981 through 1985--a period during which other transit operators within the Southeastern Wisconsin Region generally experienced decreases in transit ridership. However, the City of Waukesha did not begin operation of its transit system until late 1981. The transit ridership increases experienced between 1981 and 1985 were, thus, the result of the introduction of a new transit service and increases in the extent of transit service provided over those years. The decrease in transit ridership on the City of Waukesha

transit system in 1986 may be attributed principally to an increase in transit fare which was implemented in late 1985, a mild winter, and the substantial reduction in gasoline prices which occurred during 1986.

Total travel--by both public transit and automobile--was found to have been relatively stable or to have grown only modestly between 1975 and 1986 within the service areas of the five public transit operations within southeastern Wisconsin. Changes in total travel, therefore, were not considered to be a major factor in transit ridership over that time period.

The general trend observed in southeastern Wisconsin of substantial increases in transit ridership and service from 1975 to about 1980, followed by modest declines in transit ridership and service, represent a logical response to changing conditions. In the period from 1975 to about 1980, transit ridership increased substantially, with the major service improvements and expansions which were implemented upon initiation of public ownership and operation of the transit systems in southeastern Wisconsin. Further increases in ridership occurred late in that time period in response to significant gasoline price increases and as a result of further service improvement and expansion implemented in response to public concern over those gasoline price increases and, indeed, for a time the availability of motor fuel. The conditions from 1981 to 1986 have been substantially different, with stable and declining gasoline prices. As a result, public interest in transit service improvement and expansion has been very limited or nonexistent. Moreover, during the 1980's, southeastern Wisconsin has experienced a severe economic recession, the most severe since the Great Depression. The severe job losses clearly affected the demand for transit service. The local economy has yet to fully recover. A public desire to control public expenditures has produced fare increases and service reductions, which have been the principal factors in the decline in transit ridership in southeastern Wisconsin since 1981.