

MILWAUKEE COUNTY TRANSIT SYSTEM DEVELOPMENT PLAN

COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 279

MILWAUKEE COUNTY TRANSIT SYSTEM DEVELOPMENT PLAN

Prepared by the

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Chapter I

INTRODUCTION

At the request of Milwaukee County, the Regional Planning Commission has prepared this transit system development plan for the Milwaukee County Transit System recommending service and capital improvements for the next five years. The preparation of the plan includes an evaluation of the performance of the existing transit system; an identification of unmet transit service needs; the design and evaluation of transit system improvement alternatives to address the identified performance deficiencies and unmet transit service needs; and development of a set of recommended operating and capital improvements. The plan also identifies the costs associated with the operating and capital improvements, and provides recommendations with respect to the funding of those costs.

NEED FOR THE STUDY

The conduct of a short-range transit planning study and the preparation of a new short-range plan for the Milwaukee County Transit System is needed to provide:

- An assessment of unmet transit travel needs for Milwaukee County residents using new population data from the 2000 U.S. Census and land use and economic development data collected by the Commission;
- A rigorous evaluation of transit routes and route segments to review their existing performance and to identify areas of good and poor performance;
- Consideration of transit system, individual route, and other alternatives to improve transit system performance and address unmet transit service needs;
- A short-range plan identifying recommended transit system service modifications and improvements and capital projects, thereby guiding annual transit system budget preparation and capital and operating project programming; and
- An estimate of short-term future transit system capital and operating needs, and comparison of those needs to existing and projected available funding, identifying any funding shortfalls, and considering alternatives to address those shortfalls.

The last transit system development plans prepared for the Milwaukee County Transit System were completed in 1996 and 1997 by the Milwaukee County Transit System staff and the Milwaukee County Department of Public Works staff, respectively. The plan completed in 1996 analyzed transit service needs and recommended a service improvement plan for the years 1998 through 2002.¹ The plan completed in 1997 considered and presented the

¹See *Milwaukee Transport Services, Inc., Service Improvement Plan 1998-2002, 1996.*

transit system capital and operating needs and total funding requirements for the years 1997 through 2001². The design years of these plans have been reached and passed, and transit planning considering transit service and capital and operating needs has not been conducted in over 10 years. In addition, population data from the 2000 U.S. Census and land use and economic development data for the year 2000 collected by the Commission should be reviewed for changes that impact the use of, and need for, transit service by Milwaukee County residents.

A management performance audit of the Milwaukee County Transit System was completed by the Wisconsin Department of Transportation (WisDOT) in 2003.³ The audit, which considered transit service and ridership data through the year 2001, recognized the superior efficiency and effectiveness of the Milwaukee County Transit System, particularly when compared to similar transit systems serving urban areas of comparable size, finding that:

- Although the service area population for the transit system was 20 percent less than the average for its peer transit systems, the Milwaukee County Transit System carried almost 80 percent more passengers than the average for its peer transit systems.
- The transit system also carried the most passengers per capita, had the lowest operating cost per passenger, and had the second highest farebox recovery rate among the peer transit systems.
- In terms of trends over the five years since the previous WisDOT performance audit, the transit system improved significantly in the number of performance measures found to be above average and improving, increasing from 37 percent of performance measures in the previous audit to 75 percent in the current audit.
- In terms of the measures used by the WisDOT to evaluate the performance of the transit systems receiving State transit operating assistance (passengers per capita, revenue vehicle hours per capita, passengers per revenue vehicle hour, farebox recovery rate, operating expense per passenger, and operating expense per revenue vehicle hour), the audit determined that the performance of the transit system is outstanding when compared to its peer transit systems.

While citing the superior performance of the Milwaukee County Transit System, the audit identified a deficiency in the area of transit system short-range planning. Specifically, a plan to address short-range service and capital needs and improvements had not been completed in seven years. The audit noted that the Milwaukee County Transit System has undergone fare increases and service reductions in the years since 2000, principally due to overall Milwaukee County budgetary constraints. The WisDOT audit report raised a concern that additional service reductions and fare increases due to such budget constraints could further erode the service quality, ridership, and performance of the system.

The service cuts and higher fares implemented by the Milwaukee County Transit System beginning in the year 2001 stand as evidence of the need to carry out long-standing recommendations for a dedicated source of funding to replace Milwaukee County property taxes as the local funds financing the costs of transit system operations, equipment, and facilities. Since 2002, there has been great pressure on Milwaukee County officials to effectively reduce the level of property taxes. Initially, transit system officials were able to use Federal transit aids carried forward from previous years to avoid the need for increases in County tax levy funding and to limit the extent of service reductions and fare increases. By 2010, those Federal carryover funds were fully exhausted. As significant capital investments will be needed in the short-term future to replace the aging bus fleet and maintain existing system facilities, more service cuts and additional fare increases are likely to be needed if property taxes cannot be increased to finance the transit system. Milwaukee County is unique when compared to its peer transit systems serving urban areas of similar size in its reliance on property taxes to fund transit expenditures. The preparation of an

²See *Milwaukee County Department of Public Works, Transit System Development Program for the Milwaukee County Transit System, Milwaukee County, Wisconsin, 1997-2001, 1997.*

³See *Wisconsin Department of Transportation, Transit System Management Performance Audit of the Milwaukee County Transit System, Performance Audit Summary, Abrams-Cherwony and Associates, April 2003.*

updated transit system development plan will enable the County to examine and document the need for a dedicated local source of transit funds. The study will identify the required County public funding levels needed to maintain the existing system and implement the recommended program of operating and capital improvements, compare the required funding to historic and existing County funding levels, and identify the anticipated funding shortfall. The study will also identify the consequences of continuing to fund the local costs of the transit system principally through County property taxes by identifying the service reductions, fare increases, and other actions that likely will be needed assuming the continued reliance on County property taxes.

The long-range regional transportation system plan for Southeastern Wisconsin for the year 2035⁴ was prepared in June 2006. The Commission completed an interim review and update of the year 2035 regional transportation plan in June 2010⁵ which re-examined the forecasts, measured transportation system performance, assessed the implementation to date of the regional transportation plan recommendations, and made minor modifications and updates to the year 2035 plan. The year 2035 transportation system plan includes a public transit element (see Map 1) that recommends a doubling of transit service in southeastern Wisconsin over the next 25 years. The implementation of all elements of the regional transportation plan—including improvement and expansion of public transit, arterial streets and highways including freeways, and transportation systems management—is essential to meeting the future travel needs of Southeastern Wisconsin. The improvement and expansion of public transit is recommended, in particular, to meet the travel needs of the transit dependent-population by providing a means of access to jobs, essential services, and other activities; provide additional capacity in major travel corridors and at major activity centers where it is not possible or desirable to accommodate all travel by automobile or to provide adequate parking; and contribute to the reduction of vehicle air pollutant emissions and fuel consumption.

In summary, the long-range regional transportation system plan for Southeastern Wisconsin recommends improving and expanding rapid transit bus connections to downtown Milwaukee and through Milwaukee to the other urban centers of Southeastern Wisconsin; developing an overlay of express bus routes with frequent service in the major travel corridors in Milwaukee County that will provide connections to the planned rapid transit routes and to the County's major activity centers; increasing the frequency of service on local bus routes serving the central portion of Milwaukee County; and improving and expanding local bus service to serve commercial and industrial development in the northern and southern portions of the County. The Milwaukee County Transit System short-range development plan may be considered an initial stage in the implementation of the transit element of the regional transportation plan. Implementing this recommended short-range transit plan, as well as the long-range transit plan, will require dedicated local transit funding.

STUDY PURPOSE

This transit system development plan is intended to serve the following purposes:

1. To evaluate the performance of the existing transit system, including the effectiveness of the existing bus route structure and services and the financial performance of the system and its component bus routes so as to identify areas of effective and efficient transit service operation, along with areas of ineffective and/or inefficient operation;
2. To identify those transit service needs of Milwaukee County residents which are not being met, or are not being met well, by the existing transit system, including travel which cannot be made within reasonable travel times on the existing system, or cannot be made on the existing system at all;
3. To design and evaluate transit system improvement alternatives that address the service problems and deficiencies of the existing system identified in the performance evaluation and the identified unmet transit service needs. The potential improvements considered will include:

⁴See *SEWRPC Planning Report No. 49, A Regional Transportation System for Southeastern Wisconsin: 2035, June 2006*.

⁵See *SEWRPC Memorandum Report No.197, Review, Update, and Reaffirmation of the Year 2035 Regional Transportation Plan, June 2010*.

Map 1

**PUBLIC TRANSIT ELEMENT OF
THE RECOMMENDED YEAR 2035
REGIONAL TRANSPORTATION PLAN**

RAPID/EXPRESS BUS ROUTE

- RAPID BUS ROUTE - FREEWAY PORTION
- - - RAPID BUS ROUTE - NONFREEWAY PORTION
- EXPRESS BUS ROUTE

FIXED GUIDEWAY ROUTE

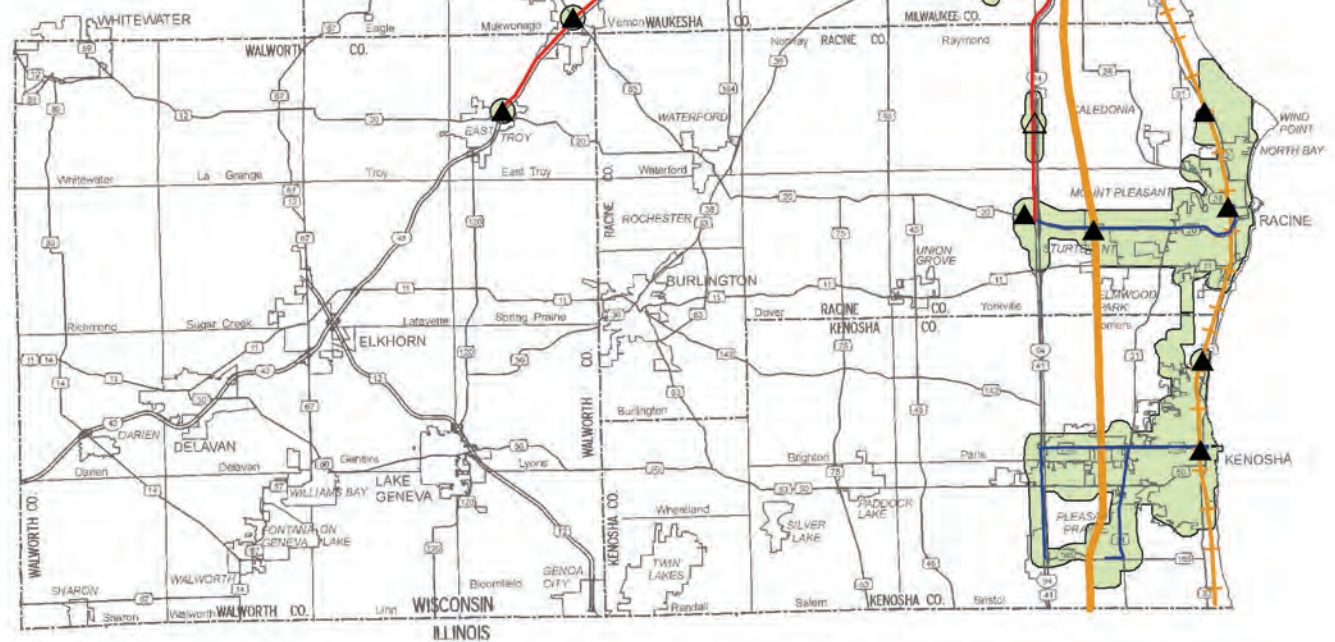
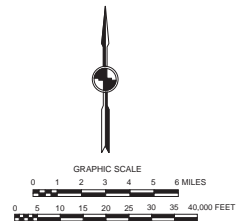
- HIGH SPEED RAIL
- + + + COMMUTER RAIL
- - - STREETCAR

TRANSIT STATIONS

- ▲ WITH PARKING
- △ WITHOUT PARKING

SERVICE AREA

- WALK ACCESS
TRANSIT
SERVICE AREA



Source: SEWRPC.

- a. Modifying, consolidating, or eliminating the routes, or route segments, identified in the performance evaluation as experiencing very poor performance;
 - b. Restoring some of the bus service that has been eliminated by the transit system in the recent past, and restructuring other existing routes and services;
 - c. Initiating additional routes or improving and expanding service to include new arterial express and freeway flyer bus routes, extensions of bus service to provide access to jobs, improving service frequencies, and expanding service periods;
 - d. Providing for improved connections with other public transit services that interface with the Milwaukee County Transit System;
 - e. Consideration of an initial stage of implementation of the transit element of the long-range regional transportation system plan for Southeastern Wisconsin, thereby promoting incremental plan implementation;
4. To recommend a five year plan of operating and capital improvements that address the service needs and performance deficiencies identified; and
 5. To identify the potential funding shortfall attendant to implementing the plan recommendations, and to consider alternatives to address this shortfall including dedicated funding.

SCOPE OF WORK

The scope of the work for preparing the new transit system development plan involved the following:

1. Study organization, including the appointment by the Milwaukee County Executive of an advisory committee to guide the study effort;
2. The formulation of appropriate transit service development objectives and supporting performance standards;
3. The collation and collection of the socioeconomic, land use, and travel habit and pattern information pertinent to the evaluation of the existing and proposed transit services;
4. The analysis of the operation of the existing transit system, including the identification of any potential problems and deficiencies in that system and the unmet transit service needs;
5. The design of transit system improvement alternatives to address the identified problems and deficiencies in the existing transit services and any unmet transit service needs;
6. The evaluation of the proposed transit system improvement alternatives;
7. The selection and documentation of a recommended plan;
8. The identification of the potential funding shortfall attendant to implementing the plan recommendations, and the consideration of alternatives to address this funding gap; and
9. The identification of the actions to be taken by Milwaukee County to implement the recommended program of transit operating and capital improvements and transit funding mechanisms in an orderly and timely manner.

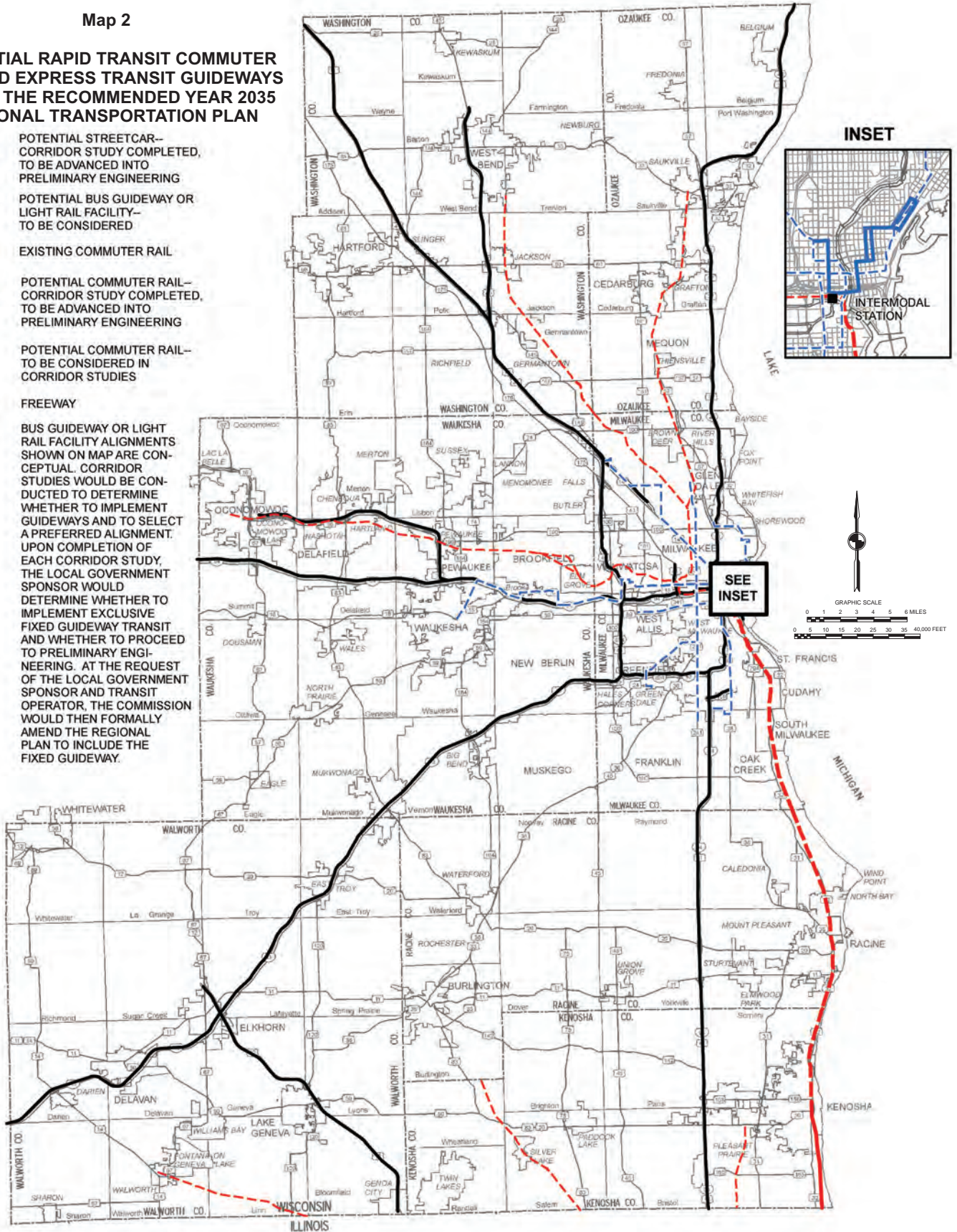
The study to prepare this new Milwaukee County Transit System development plan was undertaken to develop and recommend service changes and improvements for the fixed-route bus services provided by the Milwaukee County Transit System. Service options that included fixed-guideway transit services, including light rail, bus on exclusive guideway (facilities on existing freeways and arterial streets that are separated from adjacent traffic lanes or new facilities in their own right-of-way), and guided electric buses, were not considered under this study. The Commission's adopted regional transportation system plan for the year 2035 identifies potential corridors in Milwaukee County (see Map 2) which may support such improved transit facilities and upgrading from bus transit in mixed traffic. However, these fixed-guideway transit alternatives are to be considered in corridor transit

Map 2

**POTENTIAL RAPID TRANSIT COMMUTER
RAIL AND EXPRESS TRANSIT GUIDEWAYS
UNDER THE RECOMMENDED YEAR 2035
REGIONAL TRANSPORTATION PLAN**

- POTENTIAL STREETCAR-CORRIDOR STUDY COMPLETED, TO BE ADVANCED INTO PRELIMINARY ENGINEERING
- - - POTENTIAL BUS GUIDEWAY OR LIGHT RAIL FACILITY-TO BE CONSIDERED
- EXISTING COMMUTER RAIL
- - - POTENTIAL COMMUTER RAIL-CORRIDOR STUDY COMPLETED, TO BE ADVANCED INTO PRELIMINARY ENGINEERING
- - - POTENTIAL COMMUTER RAIL-TO BE CONSIDERED IN CORRIDOR STUDIES
- FREEWAY

NOTE: BUS GUIDEWAY OR LIGHT RAIL FACILITY ALIGNMENTS SHOWN ON MAP ARE CONCEPTUAL. CORRIDOR STUDIES WOULD BE CONDUCTED TO DETERMINE WHETHER TO IMPLEMENT GUIDEWAYS AND TO SELECT A PREFERRED ALIGNMENT. UPON COMPLETION OF EACH CORRIDOR STUDY, THE LOCAL GOVERNMENT SPONSOR WOULD DETERMINE WHETHER TO IMPLEMENT EXCLUSIVE FIXED GUIDEWAY TRANSIT AND WHETHER TO PROCEED TO PRELIMINARY ENGINEERING. AT THE REQUEST OF THE LOCAL GOVERNMENT SPONSOR AND TRANSIT OPERATOR, THE COMMISSION WOULD THEN FORMALLY AMEND THE REGIONAL PLAN TO INCLUDE THE FIXED GUIDEWAY.



Source: SEWRPC.

alternatives analysis studies which consider both short- and long-range transit service needs. One such study has recently been completed for the extension of commuter rail from Kenosha to Racine and Milwaukee (see Map 3). A second study, known as the Milwaukee Connector Transit Study Alternatives Analysis proposed the construction and operation of a Streetcar line in downtown Milwaukee. The Milwaukee County Executive has also identified two proposals for providing Bus Rapid Transit (BRT) service in the County over two potential routes. The proposed Streetcar and BRT services are shown on Map 4. The implementation of commuter rail service in the Kenosha-Racine-Milwaukee corridor may be expected to have relatively minor impacts on Milwaukee County Transit System bus routes. However, if either the BRT or streetcar services being considered within Milwaukee County proceed to fruition within the five-year planning period, some changes to the alignments and schedules of the Milwaukee County bus routes will need to be considered to integrate bus services with the connector service, and this short-range plan will require appropriate amendment.

The transit system development plan also identifies the changes to the service area and operating characteristics of the paratransit service for disabled individuals provided through the Milwaukee County Transit Plus service, and the actions needed to keep these aspects of the paratransit service in compliance with Federal regulations. Where changes are considered to the bus system which could result in a reduction in service for the Transit Plus paratransit service or an increase in the user fares for the paratransit service, the potential impacts of such service changes on the Transit Plus service and its disabled users have been identified. The plan also identifies potential enhancements to the County's fixed-route bus services that could assist and encourage disabled individuals and the County's elderly population in making use of the bus system. However, a comprehensive analysis of the Transit Plus service that would include a performance evaluation identifying areas of efficient and inefficient service operation and the potential unmet service needs of the County's disabled population was not undertaken during the preparation of this transit system development plan. Such an analysis would best be undertaken through the conduct of a separate study under the guidance of a separate advisory committee with representatives from a broad spectrum of the disabled community and organizations serving the disabled population.

STUDY AREA

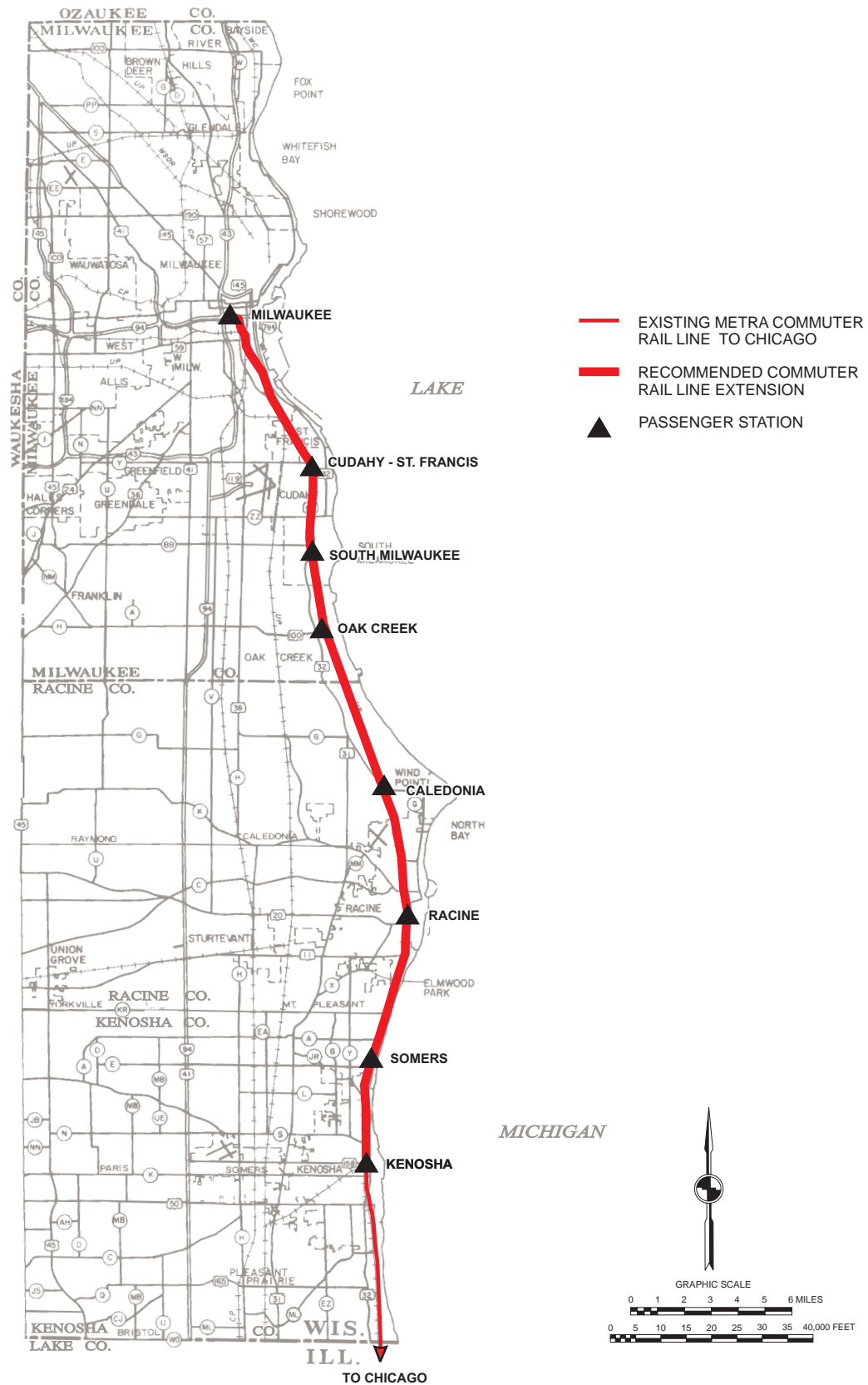
The focus of this Milwaukee County Transit System development plan is on the transit service needs of Milwaukee County residents. The plan will, therefore, principally focus on the fixed-route bus services provided by the Milwaukee County Transit System within Milwaukee County, that is, those services that are sponsored by Milwaukee County and funded in part with Milwaukee County property tax dollars. This transit system development plan, however, will also review existing intercounty commuter bus services connecting Milwaukee County to adjacent counties, identify service deficiencies and unmet travel needs with respect to travel by Milwaukee County residents, and design and evaluate potential service changes and improvements to existing routes and new or expanded bus services to meet the intercounty travel needs of Milwaukee County residents. Existing intercounty transit service is sponsored by local governments other than Milwaukee County—Ozaukee, Washington, and Waukesha Counties and the City of Racine—and any local funds needed to support service operation are provided by these local governments.

STUDY ORGANIZATION

The preparation of this transit system development plan was a joint effort of the staffs of Milwaukee County and the Southeastern Wisconsin Regional Planning Commission. To provide guidance to the technical staffs in the preparation of this plan, and to involve concerned and affected public officials and citizen leaders more directly and actively in the design and evaluation of transit improvement proposals, the Milwaukee County Executive created a 12-member Milwaukee County Transit Development Program Advisory Committee. The full membership of this Committee is listed on the inside front cover of this report.

Map 3

RECOMMENDED COMMUTER RAIL LINE IN THE
KENOSHA-RACINE-MILWAUKEE CORRIDOR



Source: SEWRPC.

POTENTIAL BUS RAPID TRANSIT (BRT) ROUTES AND STREETCAR LINE UNDER CONSIDERATION IN MILWAUKEE COUNTY

FONDY-NATIONAL BRT ROUTE

COUNTY GROUNDS-UWM BRT ROUTE

STATION STOP

MILWAUKEE COUNTY GROUND'S

SUMMIT PLACE BUSINESS PARK

WOOD VETERANS CENTER

STATE FAIR PARK

MIDTOWN CENTER

MCTS ADMINISTRATIVE OFFICES

DOWNTOWN TRANSIT CENTER

UWM

GRAPHIC SCALE

0 15 1 MILE

0 4000 8000 FEET

The map displays the proposed streetcar route in Madison, Wisconsin. The preferred alignment is shown as a solid green line, starting from the Intermodal Station and running north along the Wisconsin River. A potential extension is indicated by a dashed green line. The map includes a legend, a north arrow, and a graphic scale (0 to 4,000 feet).

Legend:

- Solid green line: PREFERRED ALIGNMENT FOR STREETCAR LINE
- Dashed green line: POTENTIAL EXTENSION

Map Features:

- Intermodal Station:** Located at the southern end of the preferred alignment.
- Streets:** Labeled streets include 13TH ST, 8TH ST, 6TH ST, 4TH ST, JUNEAU AVE, WISCONSIN AVE, MICHIGAN ST, CLYBOURN ST, JAMES ST, LOVELL BLVD, BROADWAY, OGDEN ST, VAN BUREN ST, JACKSON ST, MASON ST, and RYAN ST.
- Rivers and Waterways:** The Wisconsin River and Menomonee Canal are shown.
- Highways:** Highways 43, 94, and 794 are marked.
- Other Landmarks:** The Lincoln Memorial Dr and Royall Pl are also visible.

9

SCHEME OF PRESENTATION

After this introductory chapter, seven chapters present the findings of the major inventories and analyses conducted under the planning effort, and describe the plan recommendations. The specific chapters consist of:

- Chapter II, “Land Use and Travel Patterns,” which describes the land use, demographic, and economic characteristics of, and the resident travel habits and patterns in, the County.
- Chapter III, “Existing Transit Services,” which provides a detailed description of the transit service improvement alternatives developed for the Milwaukee County Transit System for the characteristics of the Milwaukee County Transit System, as well as a summary of other public transit services currently available within the County.
- Chapter IV, “Public Transit Service Objectives and Standards,” which provides a set of transit service objectives and supporting performance standards and design criteria.
- Chapter V, “Evaluation of the Existing Transit System,” which describes how well the existing transit system met the objectives and standards, thereby identifying service-related problems and deficiencies and unmet transit service needs.
- Chapter VI, “Transit Service Improvement Alternatives,” which identifies, describes, and evaluates the transit service improvement alternatives developed for the Milwaukee County Transit System for the five-year planning period.
- Chapter VII, “Recommended Transit System Development Plan,” which details the transit system improvements for the five-year planning period that have been recommended by the Advisory Committee. The chapter also identifies the actions needed to finance the recommended transit system improvements and the actions to be taken by the concerned units and agencies of government to implement the new plan.
- Chapter VIII, “Summary and Conclusions,” which provides a brief overview of the significant findings and recommendations of the study.

Chapter II

LAND USE AND TRAVEL PATTERNS

INTRODUCTION

This chapter presents information on the historic and current population, households, and employment levels in Milwaukee County and on the growth and changes that have occurred in these socioeconomic data to the year 2003. The chapter also identifies the areas of urban development in the County in 2000 that should be most capable of supporting the fixed route bus services operated by the Milwaukee County Transit System and the major land use activity centers in the County and in adjacent Ozaukee, Washington, and Waukesha Counties which attract significant total person or transit person trips or which may be desirable destinations for Milwaukee County residents. In addition, the travel habits and patterns associated with the resident population, employment, and land uses of Milwaukee County are identified.

POPULATION

General Population Characteristics

The resident population levels in Milwaukee County and the other counties in the Southeastern Wisconsin Region from 1960 through 2003 are set forth in Table 1. Table 2 sets forth population data for Milwaukee County by municipality for the same period. Map 5 shows the distribution of the resident population of the County in 2000 by U.S. Public Land Survey one-quarter section. Tables 3 and 4 indicate the historic changes in the number of households in the County and the other counties in the Southeastern Wisconsin Region from 1960 through 2003. The following observations relevant to transit service may be made on the basis of an examination of this information:

- Between 1960 and 2003, the resident population of Milwaukee County decreased by about 94,700 persons, or about 9 percent, compared with an overall increase in population in the Region of about 386,200 persons, or about 25 percent, and a total increase in the population of adjacent Ozaukee, Washington, and Waukesha Counties of about 334,800 persons, or about 138 percent. Milwaukee County was the only county in the Region to experience a decrease in total population over this period with most of the decrease occurring between 1970 and 1980 and again between 1990 and 2000. The declining population of Milwaukee County reduced the size of the market for the public transit service offered by the Milwaukee County Transit System, while the population growth experienced in the adjacent Counties generated interest in new and expanded transit services.
- The decrease in Milwaukee County total population between 1960 and 2003 occurred largely as a result of declining population in the City of Milwaukee and other communities in the central portion of the County. The City of Milwaukee experienced a population decrease of about 20 percent over this period,

Table 1

HISTORIC POPULATION LEVELS FOR MILWAUKEE COUNTY AND THE SOUTHEASTERN WISCONSIN REGION: 1960-2003

County	Total Population											
	1960		1970		1980		1990		2000		2003 ^a	
	Number	Percent of Region	Number	Percent of Region	Number	Percent of Region	Number	Percent of Region	Number	Percent of Region	Number	Percent of Region
Kenosha	100,615	6.4	117,917	6.7	123,137	7.0	128,181	7.1	149,577	7.7	154,200	7.9
Milwaukee	1,036,027	65.9	1,054,069	60.0	964,988	54.7	959,275	53.0	940,164	48.6	941,300	48.0
Ozaukee	38,441	2.4	54,461	3.2	66,981	3.8	72,831	4.0	82,317	4.3	84,500	4.3
Racine	141,781	9.0	170,838	9.7	173,132	9.8	175,034	9.7	188,831	9.8	191,100	9.8
Walworth	52,368	3.3	63,444	3.6	71,507	4.0	75,000	4.1	93,759	4.8	95,600	4.9
Washington	46,119	2.9	63,839	3.6	84,848	4.8	95,328	5.3	117,493	6.1	121,900	6.2
Waukesha	158,249	10.1	231,335	13.2	280,203	15.9	304,715	16.8	360,767	18.7	371,200	18.9
Region	1,573,600	100.0	1,755,903	100.0	1,764,796	100.0	1,810,364	100.0	1,932,908	100.0	1,959,800	100.0

County	Change in Population											
	1960 – 1970		1970 – 1980		1980 – 1990		1990 – 2000		2000 – 2003		1960 – 2003	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Kenosha	17,302	17.2	5,220	4.4	5,044	4.1	21,369	16.7	4,657	3.1	53,585	53.3
Milwaukee	18,042	1.8	-89,081	-8.5	-5,713	-0.6	-19,111	-2.0	1,137	0.1	-94,726	-9.1
Ozaukee	16,020	41.7	12,520	23.0	5,850	8.7	9,486	13.0	2,199	2.7	46,059	119.8
Racine	29,057	20.5	2,294	1.3	1,902	1.1	13,797	7.9	2,248	1.2	49,319	34.8
Walworth	11,076	21.2	8,063	12.7	3,493	4.9	18,759	25.0	1,871	2.0	43,232	82.6
Washington	17,720	38.4	21,009	32.9	10,480	12.4	22,165	23.3	4,436	3.8	75,781	164.3
Waukesha	73,086	46.2	48,868	21.1	24,512	8.7	56,052	18.4	10,444	2.9	212,951	134.6
Region	182,303	11.6	8,893	0.5	45,568	2.6	122,544	6.8	26,992	1.4	386,200	24.5

^aEstimated

Source: U.S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC.

from about 741,300 persons in 1960 to about 595,200 persons in 2003, and from about 72 percent of the total County population in 1960 to about 63 percent in 2003. Other communities with significant population losses include the Cities of Wauwatosa and West Allis and the Village of Whitefish Bay in which the combined population declined by about 15 percent, from about 143,500 persons in 1960 to about 121,700 persons in 2003. All of these areas are in the core of the service area for the Milwaukee County Transit System.

- Most of the recent population growth that has occurred in Milwaukee County since 1960 has been in the southern one-third of Milwaukee County in the Cities of Franklin, Greenfield, Oak Creek, and Greendale. The total population of these communities increased from about 48,900 persons in 1960 to about 112,600 persons in 2003, an increase of about 130 percent. While Greendale and Greenfield are currently served by several County bus routes, bus service in Franklin and Oak Creek is far more limited as most of the population growth in these communities has been at low densities that generally are not supportive of fixed-route bus service.
- While the population of Milwaukee County decreased, the number of households in the County increased by about 20 percent from 1960 to 2000. Total households in the County are estimated to have increased by another 1 percent by 2003. The average household size within the County, consequently, decreased from about 3.2 persons per household in 1960 to about 2.4 persons per household in 2003. These trends mirrored those for the Region as a whole. No community in the County experienced a decrease in households between 1960 and 2000. The City of Milwaukee experienced a slight increase in households from 1960 to 2000 of 1,200 households, or 0.5 percent, despite decreases in its total population. However, between 1990 and 2000, the number of households in the City of Milwaukee

Table 2

RESIDENT POPULATION OF MILWAUKEE COUNTY BY CIVIL DIVISION: 1960-2003

Civil Division	Population					
	1960	1970	1980	1990	2000	2003 ^a
Cities						
Cudahy.....	17,975	22,078	19,547	18,659	18,429	18,300
Franklin	10,006	12,247	16,871	21,855	29,494	31,500
Glendale.....	9,537	13,246	13,882	14,088	13,367	13,100
Greenfield.....	17,636	24,424	31,353	33,403	35,476	36,000
Milwaukee	741,324	717,372	636,295	628,088	596,974	595,200
Oak Creek	9,372	13,928	16,932	19,513	28,456	30,900
St. Francis	10,065	10,489	10,095	9,245	8,662	8,800
South Milwaukee	20,307	23,297	21,069	20,958	21,256	21,400
Wauwatosa	56,903	58,676	51,308	49,366	47,271	46,800
West Allis	68,157	71,649	63,982	63,221	61,254	60,900
Villages						
Bayside	3,078	4,338	4,612	4,681	4,415	4,200
Brown Deer	11,280	12,582	12,921	12,236	12,170	12,000
Fox Point	7,315	7,939	7,649	7,238	7,012	7,000
Greendale	6,843	15,089	16,928	15,128	14,405	14,200
Hales Corners	5,549	7,771	7,110	7,623	7,765	7,700
River Hills	1,257	1,561	1,642	1,612	1,631	1,600
Shorewood	15,990	15,576	14,327	14,116	13,763	13,600
West Milwaukee	5,043	4,405	3,535	3,973	4,201	4,100
Whitefish Bay	18,390	17,402	14,930	14,272	14,163	14,000
Total	1,036,027	1,054,069	964,988	959,275	940,164	941,300

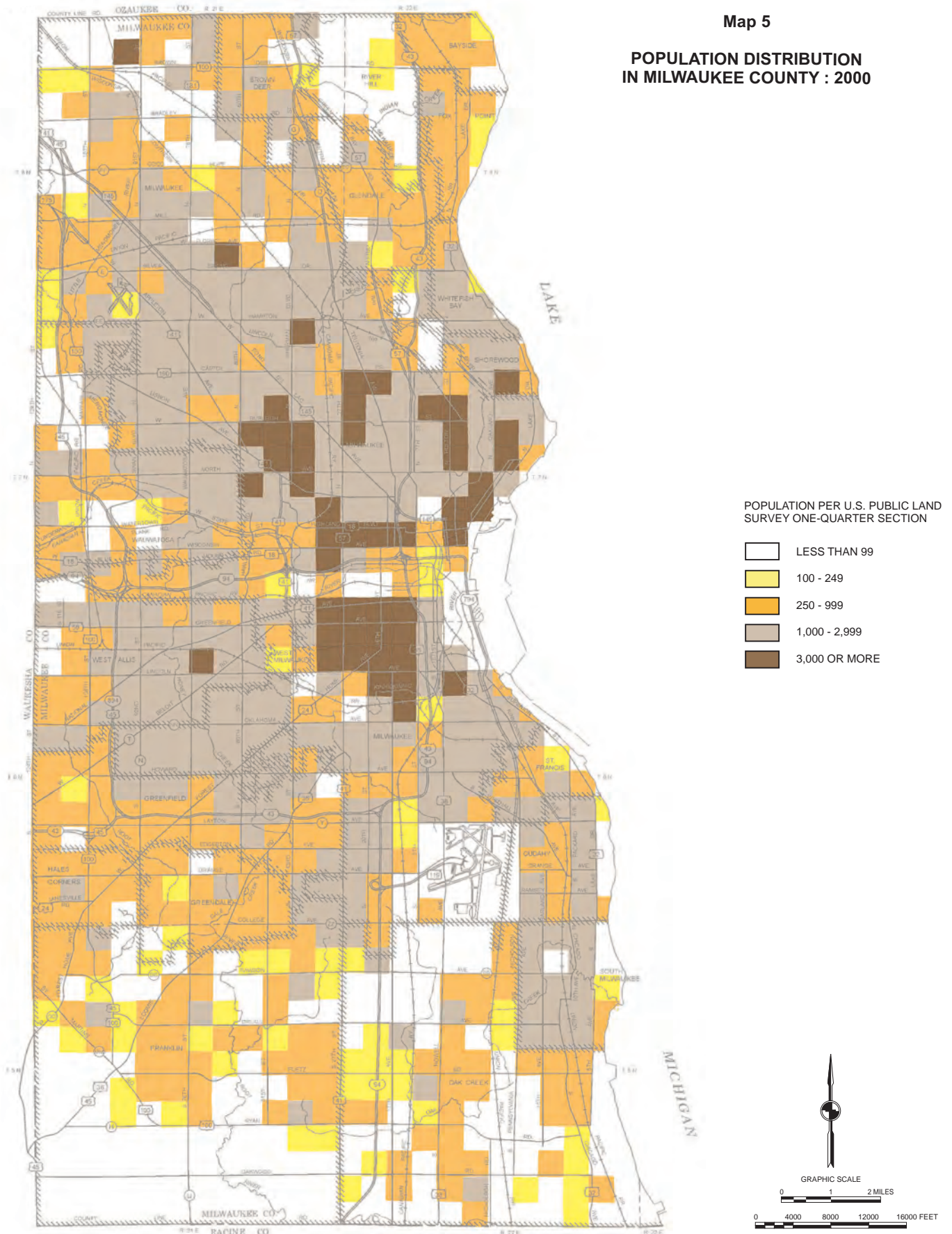
Civil Division	Change in Population											
	1960-1970		1970-1980		1980-1990		1990-2000		2000-2003		1960-2003	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cities												
Cudahy.....	4,103	22.8	-2,531	-11.5	-888	-4.5	-230	-1.2	-129	-0.6	348	1.9
Franklin	2,241	22.4	4,624	37.8	4,984	29.5	7,639	35.0	2,006	6.7	21,461	214.5
Glendale.....	3,709	38.9	636	4.8	206	1.5	-721	-5.1	-267	-2.2	3,534	37.1
Greenfield.....	6,788	38.5	6,929	28.4	2,050	6.5	2,073	6.2	524	1.5	18,364	104.1
Milwaukee	-23,952	-3.2	-81,077	-11.3	-8,207	-1.3	-31,114	-5.0	-1,774	-0.3	-146,079	-19.7
Oak Creek	4,556	48.6	3,004	21.6	2,581	15.2	8,943	45.8	2,444	8.4	21,484	229.2
St. Francis	424	4.2	-394	-3.8	-850	-8.4	-583	-6.3	138	1.1	-1,310	-13.0
South Milwaukee	2,990	14.7	-2,228	-9.6	-111	-0.5	298	1.4	144	0.6	1,067	5.3
Wauwatosa	1,773	3.1	-7,368	-12.6	-1,942	-3.8	-2,095	-4.2	-471	-1.0	-10,101	-17.8
West Allis	3,492	5.1	-7,667	-10.7	-761	-1.2	-1,967	-3.1	-354	-0.5	-7,234	-10.6
Villages												
Bayside	1,260	40.9	274	6.3	69	1.5	-266	-5.7	-215	-5.0	1,115	36.2
Brown Deer	1,302	11.5	339	2.7	-685	-5.3	-66	-0.5	-170	-1.0	764	6.8
Fox Point	624	8.5	-290	-3.7	-411	-5.4	-226	-3.1	-12	-0.3	-323	-4.4
Greendale	8,246	120.5	1,839	12.2	-1,800	-10.6	-723	-4.8	-205	-1.6	7,326	107.1
Hales Corners	2,222	40.0	-661	-8.5	513	7.2	142	1.9	-65	-0.8	2,150	38.7
River Hills	304	24.2	81	5.2	-30	-1.8	19	1.2	-31	-0.7	363	28.9
Shorewood	-414	-2.6	-1,249	-8.0	-211	-1.5	-353	-2.5	-163	-1.3	-2,412	-15.1
West Milwaukee	-638	-12.7	-870	-19.8	438	12.4	228	5.7	-101	-1.2	-894	-17.7
Whitefish Bay	-988	-5.4	-2,472	-14.2	-658	-4.4	-109	-0.8	-163	-0.9	-4,349	-23.6
Total	18,402	1.7	-89,081	-8.5	-5,713	-0.6	-19,111	-2.0	1,136	-0.3	-94,726	-9.1

^aEstimated

Source: U.S. Bureau of the Census, Wisconsin Department of Administration, and SEWRPC

Map 5

**POPULATION DISTRIBUTION
IN MILWAUKEE COUNTY : 2000**



Source: SEWRPC.

Table 3

TOTAL NUMBER OF HOUSEHOLDS AND AVERAGE HOUSEHOLD SIZE IN MILWAUKEE COUNTY: 1960-2000

Year	Total Households				Average Number of Persons per Household			
	Milwaukee County		Region		Milwaukee County		Region	
	Number	Percent Change from Previous Date	Number	Percent Change from Previous Date	Number	Percent Change from Previous Date	Number	Percent Change from Previous Date
1960	314,875	--	465,913	--	3.2	--	3.3	--
1970	338,605	7.5	536,486	15.1	3.0	-5.3	3.2	-3.0
1980	363,653	7.4	627,955	17.0	2.6	-14.8	2.8	-12.5
1990	373,048	2.6	676,107	7.7	2.5	-3.5	2.6	-7.1
2000	377,729	1.3	749,055	10.8	2.4	-4.0	2.5	-3.8
2003 ^a	381,000	0.9	770,900	2.9	2.4	--	2.5	--

^aEstimated

Source: U.S. Bureau of the Census and SEWRPC.

decreased by 8,300 households, or about 3 percent. The Cities of Wauwatosa and West Allis and the Village of Whitefish Bay, which also saw declines in total population, experienced increases in households ranging from about 3 to 35 percent. The Cities of Franklin, Greenfield, Oak Creek, and Greendale, which had the largest absolute population increases between 1960 and 2000, also experienced the highest increases in households, ranging from about 228 to 375 percent.

Minority Population Characteristics

Census information was compiled and examined for the various minority populations in the County. This information will facilitate the identification of the impacts, both adverse and beneficial, of the recommendations of the Milwaukee County Transit System development plan on the County's minority populations. Tables 5 and 6 set forth the historic levels of the County minority populations—Black/African American, American Indian or Alaska Native, Asian or Pacific Islander, other minority, and Hispanic—in 1980, 1990, and 2000. The principal minority populations in the County in 2000 were Black/African American persons constituting about 240,100 persons, or about 25 percent of the total County population, and Hispanic persons constituting about 82,400 persons, or about 9 percent of the County population. Both minority groups have increased in size since 1980, with the Black/African American population increasing by about 61 percent, and the Hispanic population increasing by about 180 percent.

The 2000 minority population data was reviewed at the Census block level to identify those blocks wherein the percentage of the total block population that was in a minority population group was determined to be above the county-wide average percentage for that minority population group. Such areas are shown in the maps in Appendix A for each minority population group. Map 6 shows the areas with above average concentrations for the total combined minority population in the County. The highest residential concentrations of the combined minority population occur in the east-central and northwestern portions of the County, primarily in the City of Milwaukee and largely represent high concentrations of Black/African American and Hispanic persons.

Transit-Dependent Population Characteristics

Certain segments of the population may be expected to have a greater dependence on, and make more extensive use of, public transit than the population as a whole because they have more limited access to the automobile as a mode of travel. Five such typically "transit-dependent" population groups were identified for this study: school-age children (ages 12-16), elderly persons (age 65 and older), persons in low-income families, disabled persons, and households with no vehicle available. The number of persons in these groups in the County was compiled from U.S. Census data. Table 7 sets forth the historic levels of these groups within the County in 1980, 1990, and

Table 4

HOUSEHOLDS IN MILWAUKEE COUNTY BY CIVIL DIVISION: 1960-2000

Civil Division	Households				
	1960	1970	1980	1990	2000
Cities					
Cudahy.....	5,288	6,807	7,080	7,440	7,888
Franklin	2,327	2,941	5,360	7,434	10,602
Glendale.....	2,793	3,710	4,827	5,513	5,772
Greenfield.....	4,626	6,897	12,123	13,785	15,697
Milwaukee	230,987	236,981	241,817	240,540	232,188
Oak Creek	2,367	3,585	5,565	7,081	11,239
St. Francis	2,434	2,952	3,795	3,883	4,050
South Milwaukee	5,698	6,650	7,329	8,221	8,694
Wauwatosa	15,820	17,927	19,260	19,848	20,388
West Allis	20,397	23,546	25,668	26,797	27,604
Villages					
Bayside	823	1,186	1,458	1,666	1,732
Brown Deer	2,832	3,465	4,511	4,838	5,134
Fox Point.....	2,009	2,263	2,817	2,840	2,825
Greendale	1,833	3,939	5,370	5,575	6,011
Hales Corners	1,474	2,169	2,496	3,063	3,260
River Hills	336	438	525	566	590
Shorewood	5,675	5,913	6,376	6,240	6,539
West Milwaukee	1,837	1,845	1,761	1,971	2,059
Whitefish Bay	5,319	5,391	5,515	5,447	5,457
Total	314,875	338,605	363,653	373,048	377,729

Civil Division	Change in Households									
	1960-1970		1970-1980		1980-1990		1990-2000		1960-2000	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Cities										
Cudahy.....	1,519	28.7	273	4.0	360	5.1	448	6.0	2,600	49.2
Franklin	614	26.4	2,419	82.3	2,074	38.7	3,168	42.6	8,275	355.6
Glendale.....	917	32.8	1,117	30.1	686	14.2	259	4.7	2,979	106.7
Greenfield.....	2,271	49.1	5,226	75.8	1,662	13.7	1,912	13.9	11,071	239.3
Milwaukee	5,994	2.6	4,836	2.0	-1,277	-0.5	-8,352	-3.5	1,201	0.5
Oak Creek	1,218	51.5	1,980	55.2	1,516	27.2	4,158	58.7	8,872	374.8
St. Francis	518	21.3	843	28.6	88	2.3	167	4.3	1,616	66.4
South Milwaukee	952	16.7	679	10.2	892	12.2	473	5.8	2,996	52.6
Wauwatosa	2,107	13.3	1,333	7.4	588	3.1	540	2.7	4,568	28.9
West Allis	3,149	15.4	2,122	9.0	1,129	4.4	807	3.0	7,207	35.3
Villages										
Bayside	363	44.1	272	22.9	208	14.3	66	4.0	909	110.4
Brown Deer	633	22.4	1,046	30.2	327	7.2	296	6.1	2,302	81.3
Fox Point.....	254	12.6	554	24.5	23	0.8	-15	-0.5	816	40.6
Greendale	2,106	114.9	1,431	36.3	205	3.8	436	7.8	4,178	227.9
Hales Corners	695	47.2	327	15.1	567	22.7	197	6.4	1,786	121.2
River Hills	102	30.4	87	19.9	41	7.8	24	4.2	254	75.6
Shorewood	238	4.2	463	7.8	-136	-2.1	299	4.8	864	15.2
West Milwaukee	8	0.4	-84	-4.6	210	11.9	88	4.5	222	12.1
Whitefish Bay	72	1.4	124	2.3	-68	-1.2	10	0.2	138	2.6
Total	23,730	7.5	25,048	7.4	9,395	2.6	4,681	1.3	62,854	20.0

Source: U.S. Bureau of the Census and SEWRPC

Table 5**POPULATION BY RACE IN MILWAUKEE COUNTY: 1980 - 2000**

Year	Total Population	Nonwhite ^a									
		White		Black / African American		American Indian and Alaska Native		Asian and Pacific Islander ^b		Other Race	
		Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population
1980	964,988	788,729	81.7	149,435	15.5	5,838	0.6	5,745	0.6	15,244	1.6
1990	959,275	718,918	74.9	195,470	20.4	6,994	0.7	15,308	1.6	22,585	2.4
2000 ^a	940,164	633,446	67.4	240,113	25.5	11,907	1.3	28,930	3.1	48,227	5.1

^aFor the 2000 Federal census, individuals could report that they were of more than one race. The figures on this table indicate the number of persons reported as being of a given race (as indicated by the column heading), including those who were reported as that race exclusively and those who were reported as that race and one or more other races. Accordingly, the population figures by race sum to more than the total population.

^bThe population reported under this category includes persons identified as "Asian" and as "Native Hawaiian and Other Pacific Islander" in the 2000 Census.

Source: U.S. Bureau of the Census and SEWRPC.

Table 6**HISPANIC OR LATINO POPULATION IN MILWAUKEE COUNTY: 1980 - 2000**

Year	Total Population	Hispanic or Latino Population ^a	
		Number	Percent of Total Population
1980	964,988	29,343	3.0
1990	959,275	44,671	4.7
2000	940,164	82,406	8.8

^aPersons of Hispanic or Latino origin may be of any race.

Source: U.S. Bureau of the Census and SEWRPC.

2000. For this study, low-income families include those with a total family income less than 200 percent of the Federal poverty level (see Table 8) which is a threshold for qualifying for State public assistance programs. The largest transit-dependent population groups in the County in 2000 in terms of absolute numbers were persons in low-income families constituting about 297,600 persons, or about 32 percent of the total County population, and elderly persons who constituting about 121,400 persons, or about 13 percent of the total County population. While the County's elderly population in 2000 is about the same size as it was in 1980, the low-income population increased by about 24 percent between 1980 and 2000. Zero-auto households, which represent a major market for the Milwaukee County

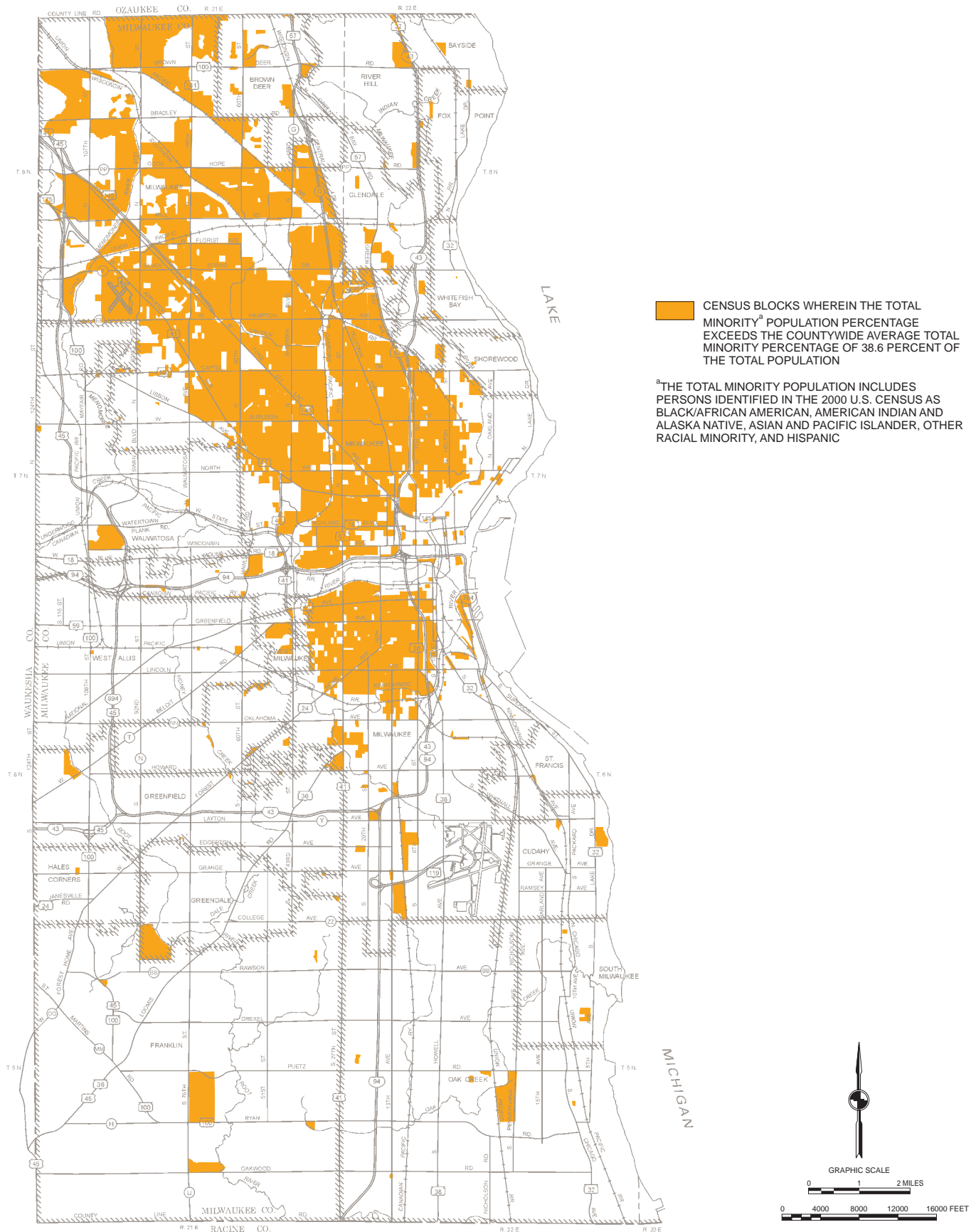
Transit System, constituted 61,600 households in 2000, or about 16 percent of all households in the County, and were down somewhat from about 68,200 households, or 19 percent of County households, in 1980.

To facilitate identification of the areas in the County with concentrations of transit-dependent persons, the 2000 Census data were examined by the Census block groups. The block groups within the County wherein the percentage of the total population in a transit-dependent population group was determined to be above the county-wide average percentage for that transit-dependent population group were identified and are shown on the maps in Appendix A. The block groups with transit-dependent person concentrations that were above the county-wide average for at least three of the five transit-dependent groups were identified and are shown on Map 7. The highest residential concentrations of transit-dependent persons occur in the east-central and northwestern portions of the County, primarily in the City of Milwaukee, in the census block groups with the highest concentrations of persons in low-income families and zero-automobile households. In addition to residential data from the 2000 Census, 180 multi-family apartment facilities in Milwaukee County which serve elderly and disabled persons and low-income families were identified from various sources. The locations of these facilities (see Map 8) generally coincide with the concentrations of persons in low-income families and zero-automobile households identified on the maps in Appendix A.

To supplement the 2000 Census data on disabled persons, information was obtained from the Milwaukee County Transit System on the number of disabled persons that are registered with the Transit Plus paratransit service. As of February 2005, approximately 17,600 persons were registered as eligible users of the paratransit service. The

Map 6

LOCATIONS OF CONCENTRATIONS OF THE TOTAL MINORITY
POPULATION WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Table 7

TRANSIT-DEPENDENT POPULATION GROUPS IN MILWAUKEE COUNTY 1980 - 2000

Year	Total Population	Total Households	Transit-Dependent Population Group ^a									
			School-Age Children (ages 12 through 16)		Elderly Persons (65 years and older)		Persons in Low-Income Families ^b		Disabled Persons ^c		Households with No Vehicle Available	
			Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Population	Number	Percent of Total Households
1980	964,988	363,653	76,301	7.9	121,547	12.6	239,352	24.8	24,336	2.5	68,230	18.8
1990	959,275	373,048	60,686	6.3	130,502	13.6	302,186	31.5	34,039	3.5	69,098	18.5
2000	940,164	377,729	68,376	7.3	121,413	12.9	297,565	31.7	64,166	6.8	61,631	16.3

^aAll figures are based upon Census information derived from sample data.

^bIncludes persons residing in households with a total family income less than 200 percent of the Federal poverty level (See Table 8) which is the threshold for qualifying for State public assistance through the Temporary Assistance for Needy Families (TANF) Program.

^cThe definition of "disabled persons" used in compiling information for this Table varied for the 1980, 1990, and 2000 Census. For the 1980 Census, disabled persons include those having a public transportation disability if they had a health condition which had lasted six or more months and which made it difficult or impossible for them to use buses, trains, subways, or other forms of public transportation. For the 1990 Census, disabled persons include those persons age 15 and older having a mobility limitation if they had a health condition that had lasted for six or more months and which made it difficult to go outside the home alone for such activities as visiting the doctor's office. For the 2000 Census, disabled persons include those persons age 16 and older having a physical, mental, or emotional condition lasting for six or more months that made it difficult to go outside the home to shop or visit a doctor's office. The different definitions for disabled persons used by the Census should be considered when reviewing the disabled population figures in this table.

Source: U.S. Bureau of the Census and SEWRPC.

Table 8

FEDERAL POVERTY THRESHOLDS FOR FAMILIES: 1999

Size of Family Unit	Weighted Average Thresholds	Related Children Under 18 Years								
		None	1	2	3	4	5	6	7	8 or More
One Person (Unrelated Individual)	\$ 8,501	--	--	--	--	--	--	--	--	--
Under 65 Years	8,667	\$ 8,667	--	--	--	--	--	--	--	--
65 Years and Older	7,990	7,990	--	--	--	--	--	--	--	--
Two Persons	10,869	--	--	--	--	--	--	--	--	--
Householder Under 65 Years	11,214	11,156	\$11,483	--	--	--	--	--	--	--
Householder 65 Years and Older	10,075	10,070	11,440	--	--	--	--	--	--	--
Three Persons	13,290	13,032	13,410	\$13,423	--	--	--	--	--	--
Four Persons	17,029	17,184	17,465	16,895	\$16,954	--	--	--	--	--
Five Persons	20,127	20,723	21,024	20,380	19,882	\$19,578	--	--	--	--
Six Persons	22,727	23,835	23,930	23,436	22,964	22,261	\$21,845	--	--	--
Seven Persons	25,912	27,425	27,596	27,006	26,595	25,828	24,934	\$23,953	--	--
Eight Persons	28,967	30,673	30,944	30,387	29,899	29,206	28,327	27,412	\$27,180	--
Nine Persons or More	34,417	36,897	37,076	36,583	36,169	35,489	34,554	33,708	33,499	\$32,208

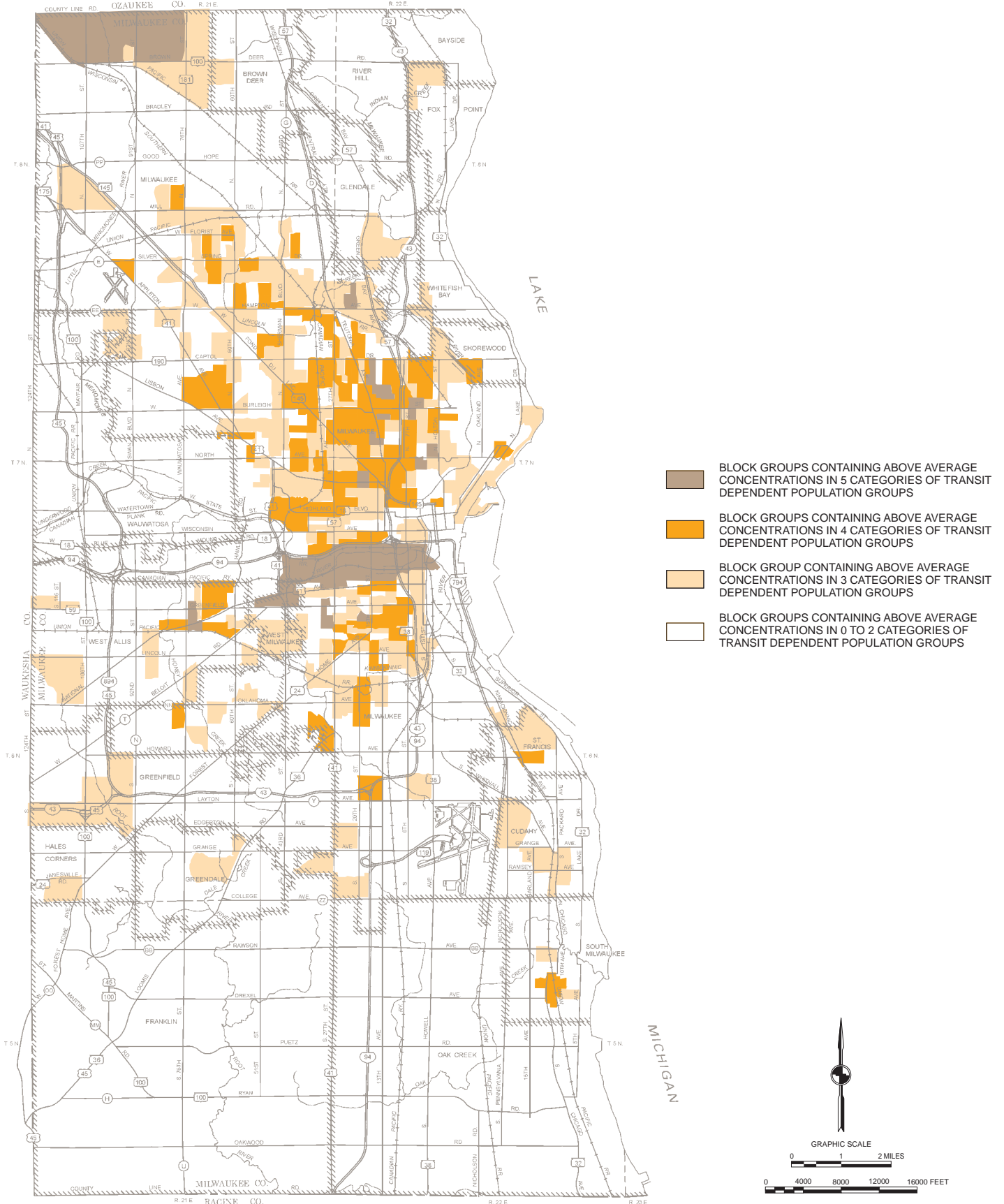
Source: U.S. Bureau of the Census and SEWRPC.

residential locations of these registered paratransit users are shown on Map 9. About 7,400, or about 42 percent, of the registered users make at least one trip on the Transit Plus service each month, and about 2,700, or about 15 percent, of the registered users use the paratransit service at least 20 times per month.

Historically, a significant portion of the low-income population and zero-auto households in the County have been part of the Black/African American and the Hispanic minority communities. Data supporting this observation is shown in Table 9.

Map 7

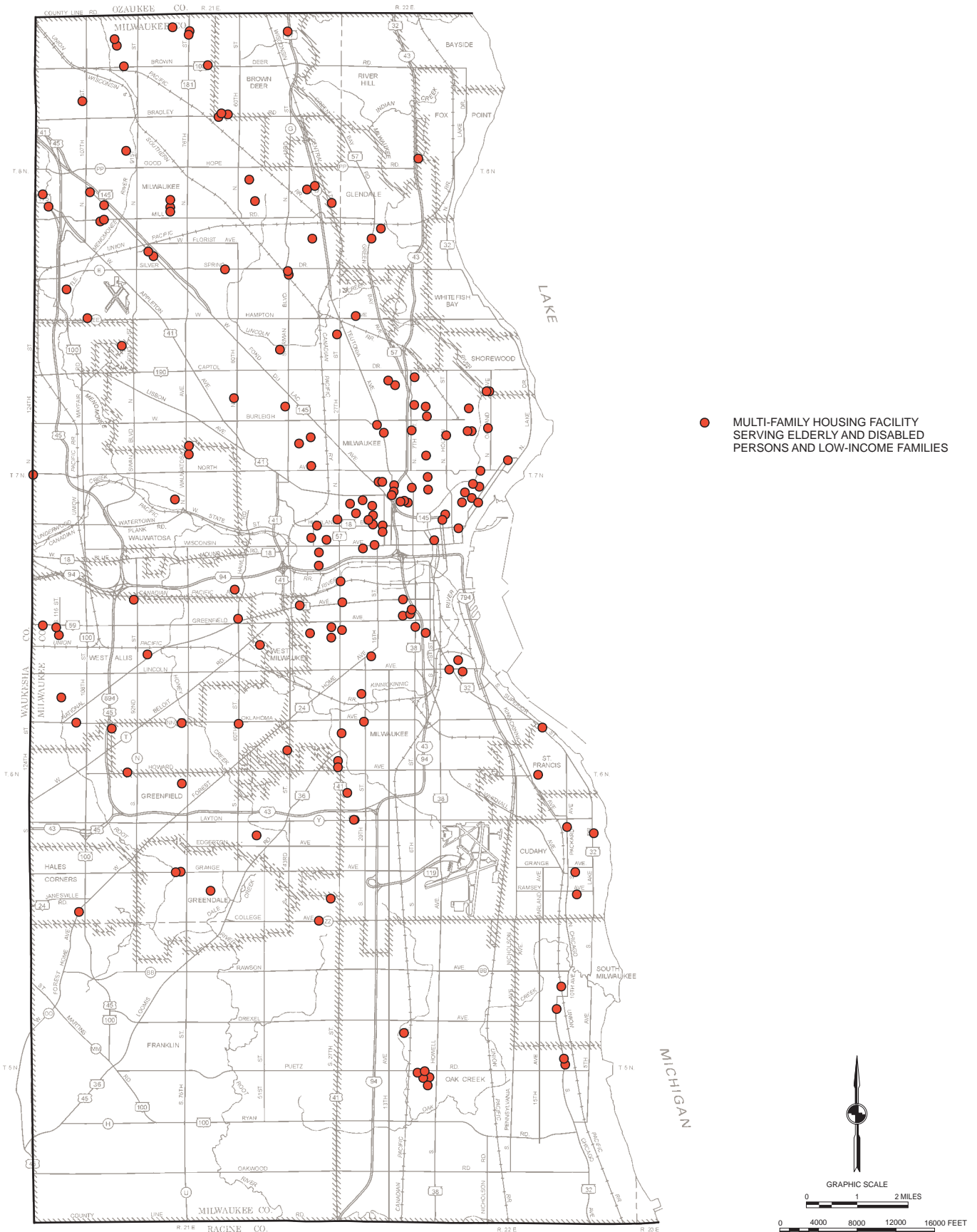
RESIDENTIAL CONCENTRATIONS OF TRANSIT-DEPENDENT POPULATION GROUPS IN MILWAUKEE COUNTY: 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map 8

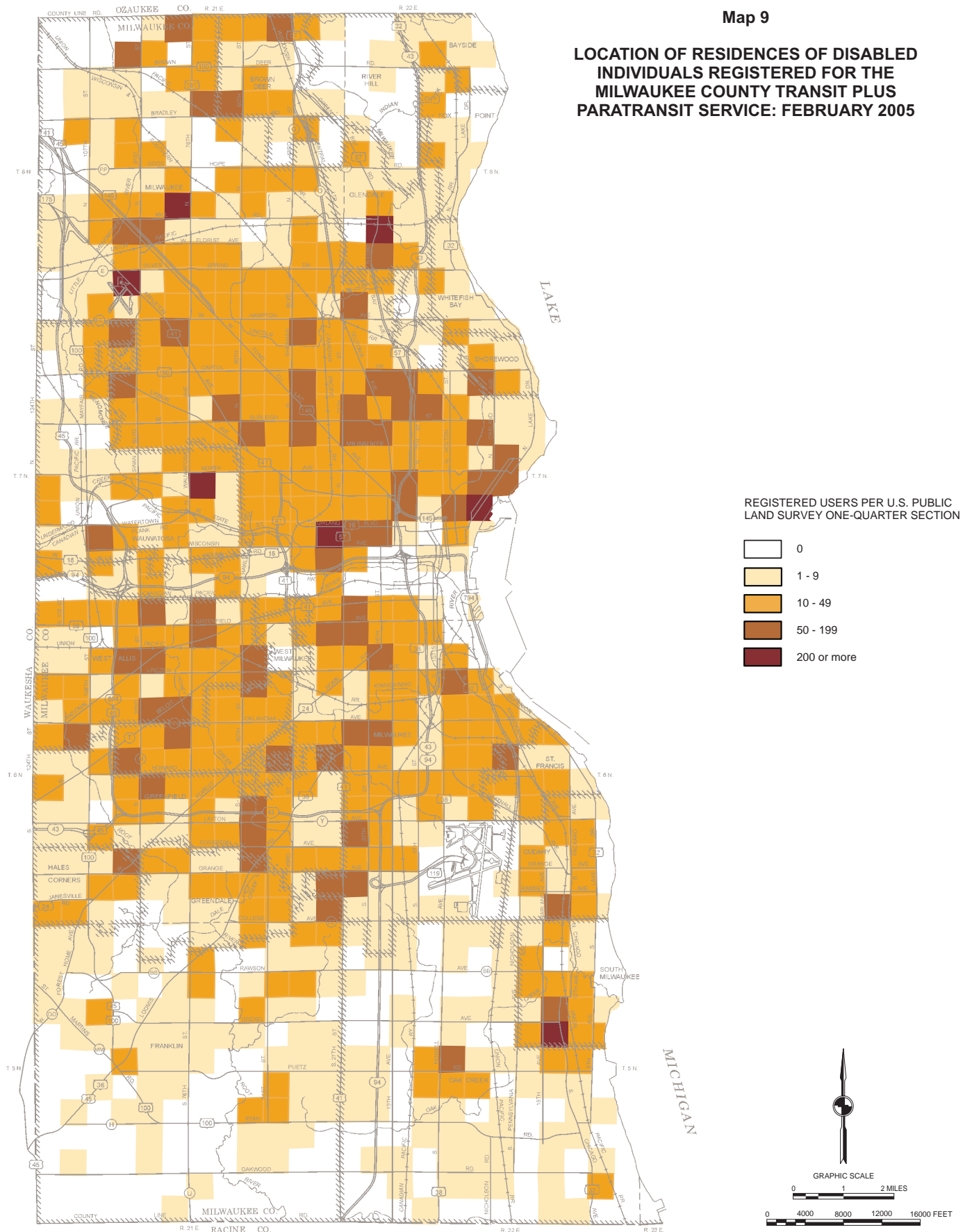
LOCATIONS OF MULTI-FAMILY HOUSING FACILITIES SERVING ELDERLY AND DISABLED PERSONS AND LOW-INCOME FAMILIES IN MILWAUKEE COUNTY : 2004



Source: U.S. Department of Housing and Urban Development, Wisconsin Housing and Economic Development Authority, Milwaukee County Department of Aging and SEWRPC.

Map 9

**LOCATION OF RESIDENCES OF DISABLED
INDIVIDUALS REGISTERED FOR THE
MILWAUKEE COUNTY TRANSIT PLUS
PARATRANSIT SERVICE: FEBRUARY 2005**



Source: Milwaukee County Transit System and SEWRPC.

Table 9

**LOW-INCOME PERSONS AND ZERO AUTO HOUSEHOLDS
IN THE MINORITY POPULATION IN MILWAUKEE COUNTY: 1980-2000**

Year	Total Population	Persons in Low-Income Families ^a							
		Total		White		Minority			
						Black/African American	Other Race ^b	Hispanic or Latino ^c	Black/African American
		Number	Percent of Low-Income Population	Number	Percent of Low-Income Population	Number	Percent of Low-Income Population	Number	Percent of Low-Income Population
1980	964,988	239,352	100.0	143,155	61.5	78,965	33.0	10,487	4.4
1990	959,275	302,186	100.0	163,309	50.2	121,776	40.3	39,973	13.2
2000	940,164	297,565	100.0	105,860	35.6	133,970	45.0	57,735	19.4

Year	Total Population	Persons in Low-Income Families ^a							
		Total		White		Minority			
						Black/African American	Other Race ^b	Hispanic or Latino ^c	Black/African American
		Number	Percent of Zero-Auto Households	Number	Percent of Low-Income Population	Number	Percent of Zero-Auto Households	Number	Percent of Zero-Auto Households
1980	363,653	68,230	100.0	50,062	71.2	18,055	26.5	2,235	3.3
1990	373,048	69,098	100.0	40,421	59.2	23,814	34.5	4,015	5.8
2000	377,729	61,631	100.0	30,705	49.8	25,093	40.7	5,863	9.5

^aIncludes persons residing in households with a total family income less than 200 percent of the Federal poverty level (see Table 8) which is the threshold for qualifying for State public assistance through the Temporary Assistance for Needy Families (TANF) Program.

^bOther race includes all persons who identified themselves as American Indian or Alaska Native, Asian, Native Hawaiian and Other Pacific Islander, or some other minority race.

^cPersons of Hispanic or Latino origin may be of any race. Accordingly, the low-income population and zero-auto household figures for white, Black/African American, Other Race, and Hispanic or Latino persons shown in this table will sum to more than the total figures shown for low-income persons and zero-auto households.

Source: U.S. Bureau of the Census and SEWRPC.

EMPLOYMENT

Employment Characteristics

Employment trends in Milwaukee County and the other counties in the Southeastern Wisconsin Region from 1960 through 2003 are set forth in Table 10. The distribution of jobs in Milwaukee County in 2000 by U.S. Public Land Survey one quarter-section is shown on Map 10. The map also displays the distribution of jobs in Ozaukee, Washington, and Waukesha Counties as many of the jobs in these counties are currently filled by, or have the potential to be filled by, Milwaukee County residents. The following observations can be drawn from this table and map:

- Milwaukee County experienced an overall increase in employment between 1960 and 2003 of about 17 percent—less than one-half percent annually—from about 503,300 jobs in 1960 to about 589,800 jobs in 2003. This compares with an increase in employment of about 75 percent—about 1.3 percent annually—from about 673,000 jobs in 1960 to about 1,179,000 jobs in 2003 for the Region as a whole. Since 1980, the growth of jobs in Milwaukee County has continued to be less than one-half percent annually, with the total Milwaukee County 2003 employment representing an increase of about 6 percent from the 1980 employment level in the County of about 581,600 jobs. At the same time, employment at the regional level has grown at twice the rate for the period from 1960, with the total 2003 regional employment level representing an increase of about 80 percent—about 2.6 percent annually—from the 1980 regional employment level of about 945,200 jobs.

Table 10

**HISTORIC EMPLOYMENT LEVELS IN MILWAUKEE COUNTY
AND THE SOUTHEASTERN WISCONSIN REGION: 1960-2003**

County	Employment					
	1960	1970	1980	1990	2000	2003 ^a
Kenosha	42,200	42,000	54,000	50,900	68,700	69,500
Milwaukee	503,300	524,900	581,600	613,300	624,600	589,800
Ozaukee	10,200	21,200	28,100	36,400	50,800	49,200
Racine	49,900	64,500	80,900	88,800	94,400	90,000
Walworth	19,600	26,300	33,400	40,200	51,800	52,300
Washington	15,200	24,300	35,000	46,100	61,700	61,800
Waukesha	32,600	80,900	132,200	191,500	270,800	266,400
Region	673,000	784,100	945,200	1,067,200	1,222,800	1,179,000

County	Change in Employment											
	1960-1970		1970-1980		1980-1990		1990-2000		2000-2003		1960-2003	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Kenosha												
Milwaukee	-200	-0.5	11,900	28.3	-3,100	-5.7	17,800	35.0	800	1.2	27,300	64.7
Ozaukee	21,600	4.3	56,800	10.8	31,700	5.5	11,300	1.8	-34,800	-5.6	86,500	17.2
Racine	11,000	107.8	6,900	32.5	8,300	29.5	14,400	39.6	-1,600	-3.1	39,000	382.4
Walworth	14,600	29.3	16,400	25.4	7,900	9.8	5,600	6.3	-4,400	-4.7	40,100	80.4
Washington	6,700	34.2	7,100	27.0	6,800	20.4	11,600	28.9	500	1.0	32,700	166.8
Waukesha	9,100	59.9	10,700	44.0	11,100	31.7	15,600	33.8	100	0.2	46,600	306.6
Region	48,300	148.2	51,300	63.4	59,300	44.9	79,300	41.4	-4,400	-1.6	233,800	717.2

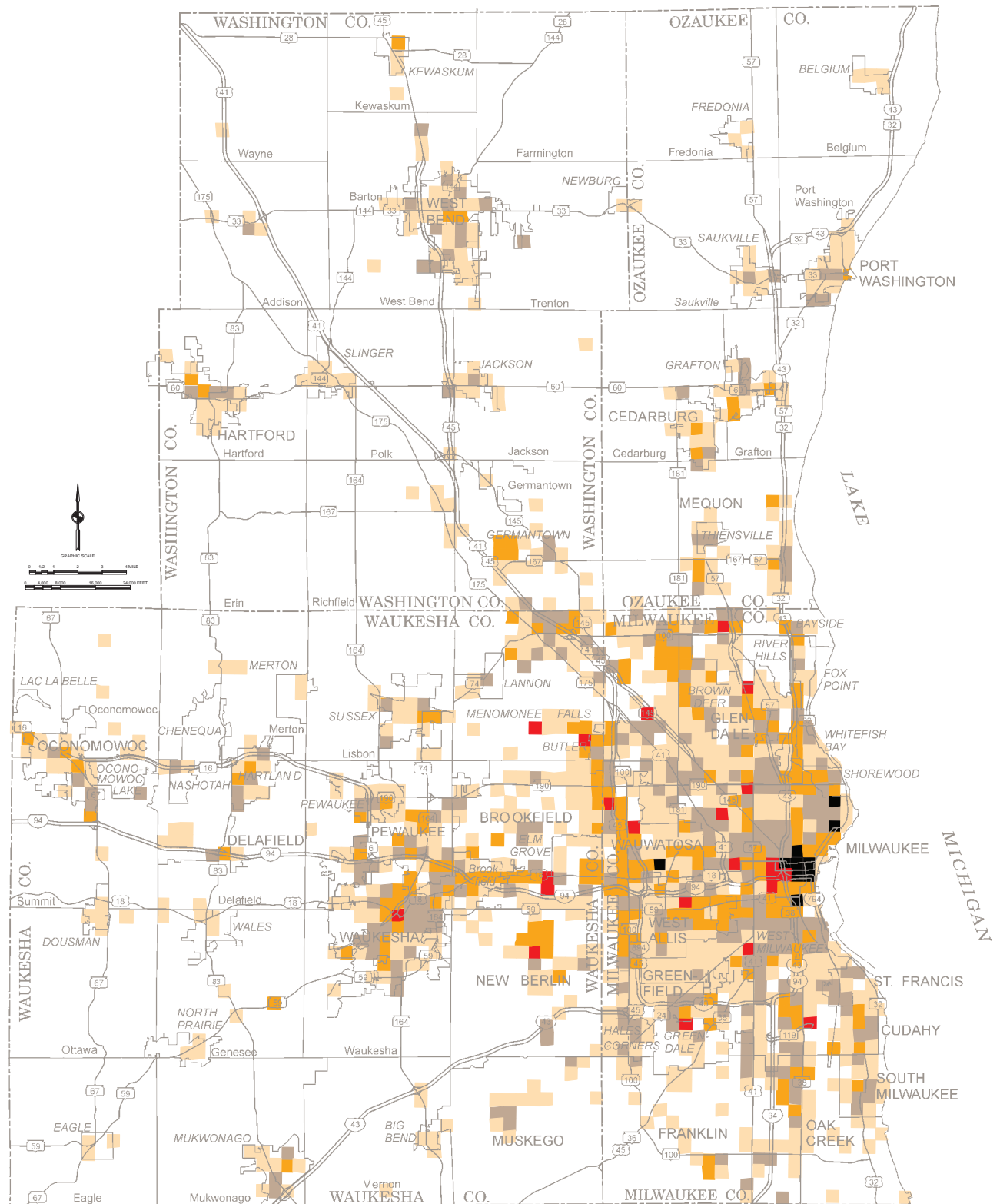
^aEstimated

Source: Wisconsin Department of Workforce Development and SEWRPC.

- The growth of jobs in Milwaukee County has been significantly slower than the growth of jobs in adjacent Ozaukee, Washington, and Waukesha Counties. The number of jobs in these counties has increased from about 58,000 jobs in 1960 to about 377,400 jobs in 2003, or by about 551 percent, compared with a 17 percent increase in the number of jobs in Milwaukee County over this period. The 2003 job level in Ozaukee, Washington, and Waukesha Counties represents a 93 percent increase over the 195,300 jobs that existed in these counties in 1980, compared with a 6 percent increase in the number of jobs in Milwaukee County between 1980 and 2003. The significant job growth in the counties adjacent to Milwaukee County has resulted in the creation of new transit services, some operated by the Milwaukee County Transit System, that have been specifically designed to transport Milwaukee County residents to jobs in the adjacent counties.
- Significant numbers of jobs are dispersed throughout Milwaukee County. At present, the largest concentrations of jobs in the County occur within the Milwaukee Central Business District (CBD) and the area around the CBD, in the area including the University of Wisconsin-Milwaukee, and in the area including the Milwaukee County Regional Medical Center. Other significant job concentrations are in the central portion of the County along National and Greenfield Avenues; in the northeast portion along N. 27th Street and along N. Port Washington Road; in the western portion along N. Mayfair Road and S. 108th Street; in the northern and northwestern portions along W. Fond du Lac Avenue, N. 76th Street, and W. Brown Deer Road; and in the southern portion in the areas around General Mitchell International Airport, the Oak Creek Industrial Park, and the area around the Southridge Shopping Center. The number of jobs is lowest in the far northeastern and southwestern corners of the County.

Map 10

EMPLOYMENT DISTRIBUTION IN THE MILWAUKEE AREA: 2000



JOB PER U. S. PUBLIC LAND SURVEY ONE-QUARTER SECTION



Source: SEWRPC.

- Outside of Milwaukee County, the highest number of jobs occur in eastern Waukesha County where major concentrations of jobs can be observed in the New Berlin Industrial Park; along W. Bluemound Road between N. 124th Street and Springdale Road, particularly in the Executive Drive office development, the Bishop's Woods Office Park, and the Brookfield Square Shopping Center; in the City of Waukesha, particularly in its CBD and industrial areas on the northeast and southwest sides of the City; in the Butler-Menomonee Falls industrial area along N. 124th Street, W. Silver Spring Drive, and Lilly Road; in the northern Menomonee Falls industrial area; and in the City of Pewaukee immediately north of IH 94 between STH 164 and CTH J. A smaller number of areas with significant job concentrations occur in Ozaukee County in the Mequon Business Park, in the commercial development around the intersection of Mequon Road and N. Port Washington Road, and in the City of Cedarburg and the Village of Grafton; and in Washington County in the Germantown Industrial Park, and in the Cities of Hartford and West Bend. Notably, there are significant portions of Ozaukee, Washington, and Waukesha Counties in which there are few or no jobs.
- The density of employment in Milwaukee County and the surrounding counties is shown on Map 11. The map indicates that the highest employment densities in the four-county area are in Milwaukee County, and specifically, in the Milwaukee CBD. Further, the map shows that no areas in Ozaukee, Washington, or Waukesha Counties approach the densities of employment reached in the Milwaukee CBD or elsewhere in the central city. Research has suggested that an employment density of at least four jobs per total acre is needed to support bus service operated with hourly headways¹. Map 11 displays the quarter-sections in Milwaukee County and the surrounding counties in the Milwaukee area that have this employment density. Extensive areas with these densities that could potentially support fixed-route bus service² can be found throughout most of Milwaukee County except for the far southern portion. Areas with such employment densities are far more limited in the surrounding counties with the most extensive areas found in eastern Waukesha County.

EXISTING LAND USE

Urban Development

Fixed-route bus systems, like the Milwaukee County Transit System, typically need to limit the areas that are served to those urban developed lands where bus service can be provided in the most economical and cost-efficient manner. Using aerial photographs, the Regional Planning Commission has assembled information that documents the historic growth and the pattern of urban development of the Southeastern Wisconsin Region. The historic increase in the developed urban land area of the four-county Milwaukee area is quantitatively summarized in Table 11. The extent of urban development in the Milwaukee area in 2000 is shown on Map 12.

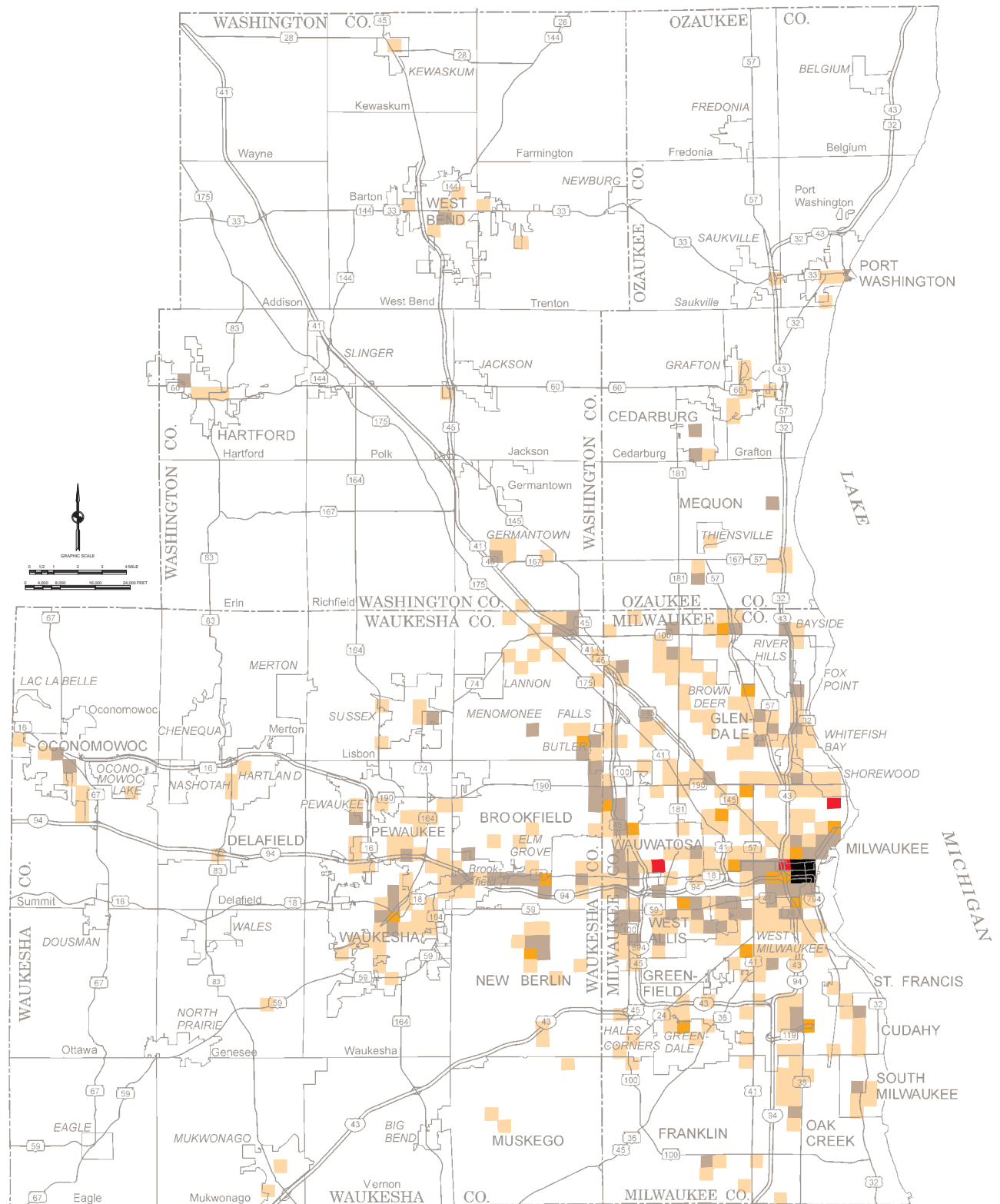
From 1850 to 1900, development in the Milwaukee area was largely confined to settlements within the now incorporated places in Milwaukee, Ozaukee, Washington, and Waukesha Counties. From 1900 to 1950, additional development occurred in more or less concentric rings around the existing centers, resulting in a relatively compact regional settlement pattern. After 1950, the development pattern in Milwaukee County and the adjacent counties changed, becoming more discontinuous and diffused. About one-half of the new urban development in the four-county Milwaukee area that occurred between 1950 and 1963 was in Milwaukee County. After 1963,

¹See *TCRP Report No. 100, Transit Capacity and Quality of Service Manual, 2nd Edition, Part 3-Quality of Service, Chapter 3: Fixed-Route Transit Service Measures*.

²A density of four jobs per total acre still may not justify extending County bus service to a particular area. Other factors would also need to be considered, including proximity of the area to existing County bus routes, the total number of jobs that would be served, and the costs of extending bus service, in particular, the County funds required.

Map 11

EMPLOYMENT DENSITY IN THE MILWAUKEE AREA: 2000



JOBS PER TOTAL ACRE BY U. S. PUBLIC LAND SURVEY ONE-QUARTER



Source: SEWRPC.

Table 11

HISTORIC URBAN GROWTH IN THE MILWAUKEE AREA: 1850-2000

Year	Urban Development ^a in Milwaukee County				
	Total Area (square miles)	Change from Previous Date		Average Annual Change from Previous Date (square miles)	Percent of Total Area ^b
		Square Miles	Percent		
1850	6.33	--	--	--	2.6
1900	18.93	12.60	199.1	0.25	7.9
1950	81.41	62.48	330.1	1.25	33.8
1963	136.19	54.78	67.3	4.21	56.6
1970	149.89	13.70	10.1	1.96	62.3
1980	162.45	12.56	8.4	1.26	67.5
1990	170.82	8.37	5.2	0.84	71.0
2000	178.18	7.36	4.3	0.74	74.0

Year	Urban Development ^a in Ozaukee, Washington and Waukesha Counties				
	Total Area (square miles)	Change from Previous Date		Average Annual Change from Previous Date (square miles)	Percent of Total Area ^c
		Square Miles	Percent		
1850	0.64	--	--	--	0.1
1900	3.28	2.64	412.5	0.05	0.3
1950	28.33	25.05	763.7	0.50	2.3
1963	76.87	48.54	171.3	3.73	6.3
1970	105.45	28.58	37.2	4.08	8.7
1980	176.91	71.46	67.8	7.15	14.6
1990	218.03	41.12	23.2	4.11	17.9
2000	265.01	46.98	21.5	4.70	21.8

Year	Urban Development ^a in the Four-County Milwaukee Area				
	Total Area (square miles)	Change from Previous Date		Average Annual Change from Previous Date (square miles)	Percent of Total Area ^d
		Square Miles	Percent		
1850	6.97	--	--	--	0.5
1900	22.21	15.24	218.7	0.30	1.5
1950	109.74	87.53	394.1	1.75	7.5
1963	213.06	103.32	94.1	7.95	14.6
1970	255.34	42.28	19.8	6.04	17.5
1980	339.36	84.02	32.9	8.40	23.3
1990	388.85	49.49	14.6	4.95	26.7
2000	443.19	54.34	14.0	5.43	30.5

^aUrban development as defined for the purposes of this analysis includes those areas wherein houses or other buildings have been constructed in relatively compact groups, thereby indicating a concentration of residential, commercial, industrial, governmental, or institutional land uses. The continuity of such development was considered interrupted if a quarter-mile area or more of nonurban type land uses such as agriculture, woodlands, or wetlands prevailed in which the above conditions were generally absent.

^bThe total land area of Milwaukee County is 240.7 square miles.

^cThe total land area of Ozaukee, Washington and Waukesha Counties is 1,214.7 square miles.

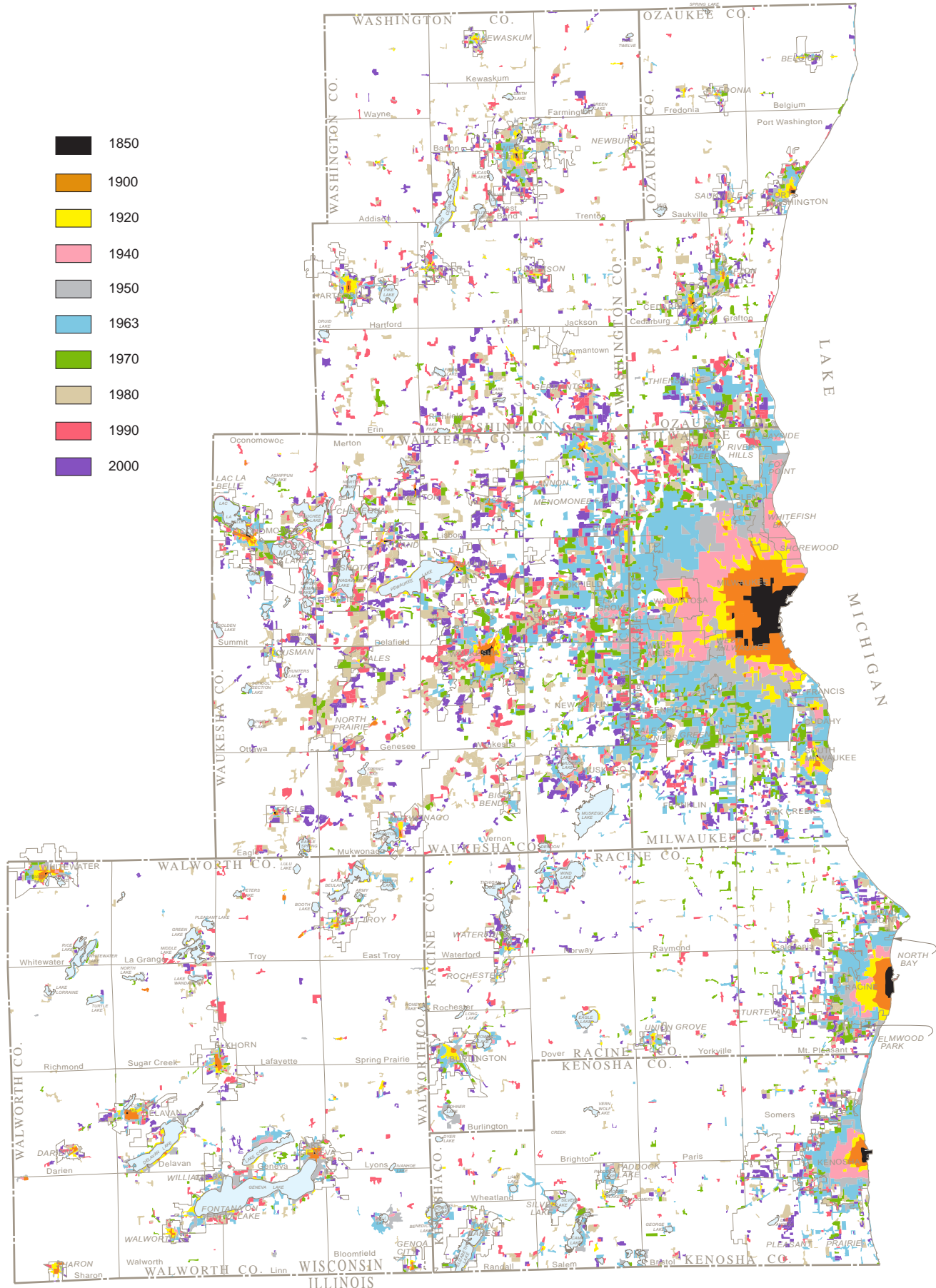
^dThe total land area of the four-county Milwaukee area is 1,455.4 square miles.

Source: SEWRPC.

about 82 percent of the new urban development in the Milwaukee area occurred in Ozaukee, Washington, and Waukesha Counties. Over the last 20 years since 1980, the urban developed land in Milwaukee County has increased by about 10 percent while the developed areas in Ozaukee, Washington, and Waukesha Counties have increased by about 50 percent. The new development that has occurred since 1980 in Milwaukee County has principally been in the northwestern corner of the County and in the Cities of Franklin and Oak Creek.

Map 12

HISTORIC URBAN GROWTH IN THE REGION: 1850-2000



Source: SEWRPC.

Residential development is the predominant type of land use within the developed urban portion of the Milwaukee area. Research has suggested that a residential density of at least four dwelling units per net acre is needed to support efficient and effective fixed-route bus service operated with hourly headways³. A density of at least seven dwelling units per acre is needed to support fixed-route bus service operated with 30-minute headways, a more desirable minimum service level for bus service in Milwaukee County. The residential land uses within Milwaukee County in 2000 with such densities are displayed on Map 13. Substantial areas with densities of at least seven dwelling units per acre exist throughout the central portions of the County, that is, the areas between Silver Spring Drive and Layton Avenue and east of 91st Street that were largely developed by 1963. Small areas with these densities were also scattered through the northern and southern portions of the County and often reflect the locations of multi-family housing in these areas.

Major Activity Centers

The major land use activity centers that were identified for this study included land uses and facilities that currently attract or have the potential to attract significant total person or transit person trips. Other centers were identified which may be desirable destinations for Milwaukee County residents. Consequently, the activity centers identified for the study included not only those located in Milwaukee County, but also some located in adjacent portions of Ozaukee, Washington, and Waukesha Counties. The types of land uses which were identified as major activity centers included: 1) major retail shopping malls; 2) the principal colleges and universities; 3) the principal hospitals and medical centers, 4) the major Federal, State, and local governmental offices and institutions; 5) employers with 500 or more employees at one location; 6) office and industrial parks/areas; 7) the major public and private recreational centers hosting high attendance events; and 8) the major passenger terminals for intercity bus, passenger rail, airline, and ferry carriers. The specific activity centers identified in 2004 are presented in Tables 12 through 19 and their locations shown on Maps 14 through 16.

Conclusions Concerning Existing Land Use

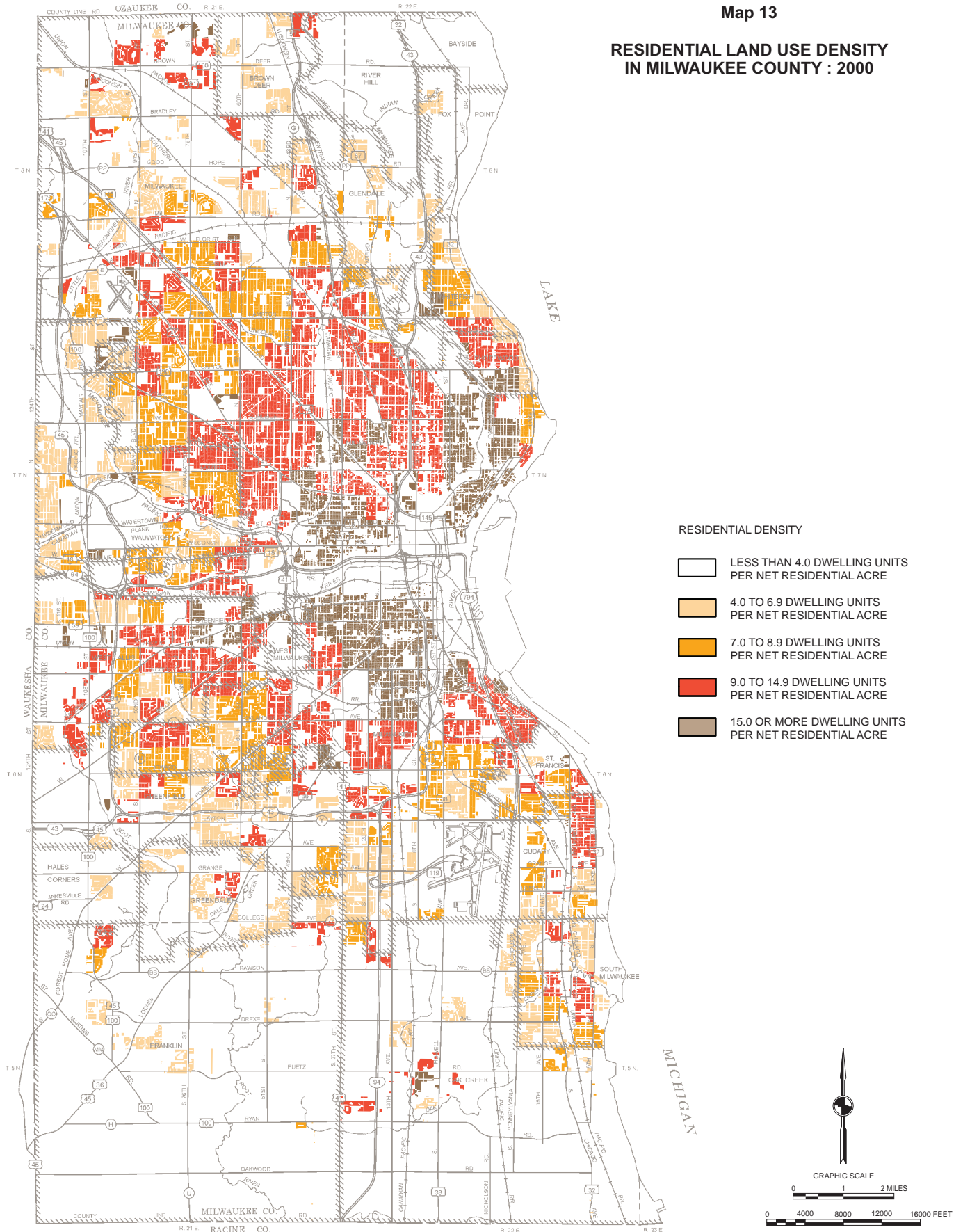
The following observations relevant to transit service may be made upon review of the preceding information on urban development and major activity centers:

- The vast majority of the new urban development in the four-county Milwaukee area that has occurred over the last 40 years has been located in Ozaukee, Washington, and Waukesha Counties. Since 1980, the developed areas in Ozaukee, Washington, and Waukesha Counties have increased by about 50 percent while urban development in Milwaukee County has increased by about 10 percent. The pattern of the recent urban development has been discontinuous and diffused, which makes it difficult to serve effectively or efficiently with conventional fixed-route transit service.
- Substantial areas exist in central Milwaukee County with the residential densities needed to support fixed-route bus service operating with headways of 30 minutes or less. These areas are located between Silver Spring Drive on the north and Layton Avenue on the south and east of 91st Street—areas that were largely developed by 1963. The bus service provided by the Milwaukee County Transit System operates most effectively and efficiently in these areas. The new residential development that has occurred in Milwaukee County since 1980 has principally been in the far northwest side in the City of Milwaukee and in the far southern portion in the Cities of Franklin and Oak Creek. The development patterns in these areas, however, have been similar to those in the surrounding Counties and, consequently, present challenges for serving with fixed-route bus service.
- The vast majority of the major activity centers for medical, school, shopping, government, recreation, and intercity travel that may be desirable destinations for Milwaukee County residents are located

³See *Transit Cooperative Research Program Report No. 16*, Transit and Urban Form, Volume I-Part I; Transit, Urban Form, and the Built Environment: A Summary of Knowledge; *Transportation Research Board*, 1996.

Map 13

**RESIDENTIAL LAND USE DENSITY
IN MILWAUKEE COUNTY : 2000**



Source: SEWRPC.

Table 12

PRINCIPAL HOSPITALS IN THE MILWAUKEE AREA: 2004

Number on Map 14	Name ^a	Address	Civil Division
1	Aurora Sinai Medical Center	945 N. 12th Street	Milwaukee
2	Children's Hospital of Wisconsin	9000 W. Wisconsin Avenue	Wauwatosa
3	Columbia St. Mary's		
4	Columbia Campus	2025 E. Newport Avenue	Milwaukee
5	Milwaukee Campus	2350 N. Lake Drive	Milwaukee
6	Community Memorial Hospital	W180 N8085 Town Hall Road	Menomonee Falls
7	Froedtert Memorial Lutheran Hospital	9200 W. Wisconsin Avenue	Wauwatosa
8	St. Francis Hospital	3237 S. 16th Street	Milwaukee
9	St. Joseph's Regional Medical Center	5000 W. Chambers Street	Milwaukee
10	St. Luke's Medical Center	2900 W. Oklahoma Avenue	Milwaukee
11	St. Luke's South Shore	5900 S. Lake Drive	Cudahy
12	St. Mary's Hospital	13111 N. Port Washington Rd	Ozaukee
13	St. Michael Hospital	2400 W. Villard Avenue	Milwaukee
14	Waukesha Memorial Hospital	725 American Avenue	Waukesha
15	West Allis Memorial Hospital	8901 W. Lincoln Avenue	West Allis
	Zablocki Veteran's Administration Medical Center	5000 W. National Avenue	Milwaukee

^aIncludes hospitals having at least 100 beds and providing in-patient and out-patient facilities and laboratory and clinical services.

Source: SEWRPC.

Table 13

PRINCIPAL COLLEGES AND UNIVERSITIES IN THE MILWAUKEE AREA: 2004

Number on Map 14	Name ^a	Address	Civil Division
1	Alverno College	3400 S. 43rd Street	Milwaukee
2	Cardinal Stritch University	6801 N. Yates Road	Glendale
3	Carroll College	100 N. East Avenue	Waukesha
4	Medical College of Wisconsin	8701 Watertown Plank Road	Wauwatosa
5	Marquette University	1212 W. Wisconsin Avenue	Milwaukee
	Milwaukee Area Technical College		
6	Mequon Campus	5555 W Highland Road	Mequon
7	Milwaukee Campus	700 W. State Street	Milwaukee
8	West Campus	1200 S. 71st Street	Milwaukee
9	South Campus	6665 S. Howell Avenue	Oak Creek
10	Milwaukee School of Engineering	1025 N. Broadway	Milwaukee
11	Mount Mary College	2900 N. Menomonee River Parkway	Milwaukee
12	Waukesha County Technical College	800 Main Street	Pewaukee
13	University of Wisconsin-Milwaukee	2200 E. Kenwood Boulevard	Milwaukee
14	University of Wisconsin-Waukesha	1500 N University Drive	Waukesha

^aSchools listed have a total enrollment of at least 1,000 students.

Source: SEWRPC.

Table 14

MAJOR SHOPPING MALLS IN THE MILWAUKEE AREA: 2000

Number on Map 14	Name ^a	Address	Civil Division
1	Bay Shore Mall	5900 N. Port Washington Road	Glendale
2	Brookfield Square	95 N. Moorland Road	Brookfield
3	Mayfair Mall	2500 N. Mayfair Road	Wauwatosa
4	The Shops of Grand Avenue	275 W. Wisconsin Avenue	Milwaukee
5	Southridge Mall	5300 S. 76th Street	Greendale

^aThe shopping malls identified have at least 75 stores.

Source: SEWRPC.

within Milwaukee County. Many of these centers, therefore, are currently served by the Milwaukee County Transit System. The major activity centers related to employment—major employers and major office and industrial parks/areas—are more widely dispersed throughout the four-county Milwaukee area. Of the 134 Milwaukee area employers with 500 or more employees, 48 are located in surrounding Ozaukee, Washington, or Waukesha Counties. Of the 89 major office and industrial parks/areas identified in the Milwaukee area, 64 are located in the surrounding counties.

TRAVEL HABITS AND PATTERNS

The quantity and characteristics of person travel and transit travel in Milwaukee County and between the County and the surrounding counties in the Southeastern Wisconsin Region were reviewed using data collected from a household travel survey and a survey of Milwaukee County Transit System passengers, both conducted by the Regional Planning Commission in 2001. The 2001 surveys were part of a comprehensive inventory of travel, which also included a truck and taxi survey, an external cordon survey, and a household personal opinion survey. Inventories of travel using similar surveys were also conducted by the Commission in 1963, 1972, and 1991. The findings of the 2001 household and transit passenger surveys that are relevant to the preparation of this transit system development plan area are summarized below.

Total Person Travel Characteristics

The Commission's household home interview survey was conducted in the autumn of 2001 and was based on a sample of about 17,000 households regionwide, or over 2 percent of the total number of households in the Region. The Milwaukee County person trips⁴ reported in the survey were reviewed for this transit system development plan. These trips included intracounty trips, which had both ends of the trip located in Milwaukee County, and intercounty-intraregional trips, which had one trip end in Milwaukee County and the other trip end within one of the other six counties in the seven-county Southeastern Wisconsin Region. The distributions of such Milwaukee County person trips in 1963, 1972, 1991, and 2001 are shown in Table 20 by trip purpose. The volumes of intracounty person trips made in 2001 between Milwaukee County and the other counties in the Region are illustrated graphically on Map 17. Trips are shown on the map in produced-attracted format – that is, from area of production to area of attraction. The production county for a trip having one end at “home”, that is either beginning at or ending at home, is the county location of the “home” and the attraction county is the “non-home” end county

⁴A person trip was defined as a one-way journey between a point of origin and a point of destination made by a person five years of age or older by walking or traveling as the driver of, or a passenger in, an auto, taxi, truck, motorcycle, bicycle, school bus, or public transit vehicle. To be considered, the trip must have been at least the equivalent of one full city block in length.

Table 15

**PRINCIPAL FEDERAL, STATE, AND LOCAL GOVERNMENTAL OFFICES
AND INSTITUTIONS IN THE MILWAUKEE AREA: 2004**

Number on Map 14	Name	Address	Civil Division
	<u>Federal Government</u>		
1	Federal Building	517 E. Wisconsin Avenue	Milwaukee
2	Reuss Federal Plaza	310 W. Wisconsin Avenue	Milwaukee
	Social Security Administration Offices ^a		
3	Mitchell Street Area	1710 S. 7th Street	Milwaukee
4	North	6300 W. Fond du Lac Avenue	Milwaukee
5	South	6521 W. Forest Home Avenue	Greenfield
6	West	3716 W. Wisconsin Avenue	Milwaukee
7	Vet Center	5401 N. 76th Street	Milwaukee
	<u>State Government</u>		
8	State Office Building - Milwaukee	819 N. 6th Street	Milwaukee
9	Lee Sherman Dreyfuss State Office Building	141 NW Barstow Street	Waukesha
10	Wisconsin Department of Justice, Court of Appeals	633 W. Wisconsin Avenue	Milwaukee
	Wisconsin Department of Health and Human Services, Division of Vocational Rehabilitation		
11	Northeast Office	429 W. North Avenue	Milwaukee
12	Northwest Office	6830 W. Villard Avenue	Milwaukee
13	Southeast Office	555 W. Layton Avenue	Milwaukee
14	Southwest Office	9401 W. Beloit Road	Milwaukee
	Wisconsin Department of Workforce Development, Job Centers		
15	Job Center Hartford	666 Grand Avenue	Hartford
16	Job Center North	4030 N. 29th Street	Milwaukee
17	Job Center Northwest	6550 N. 76th Street	Milwaukee
18	Job Center Ozaukee County	5555 W. Highland Road	Mequon
19	Job Center South	910 W. Mitchell Street	Milwaukee
20	Job Center Southwest	1304 S. 70th Street	Milwaukee
21	Job Center Sullivan	2947 N. Martin Luther King Drive	Milwaukee
22	Job Center Teutonia	6091 N. Teutonia Avenue	Milwaukee
23	Job Center Waukesha County	892 Main Street	Pewaukee
24	Job Center West Bend	2200 Green Tree Road	West Bend
25	Job Center YWCA	1915 N. Martin Luther King Drive	Milwaukee
	<u>County Government</u>		
26	Milwaukee County Courthouse	901 N. 9th Street	Milwaukee
27	Milwaukee County Courthouse Annex	907 N. 10th Street	Milwaukee
28	Milwaukee County Children's Court Center	10201 W. Watertown Plank Road	Wauwatosa
29	Milwaukee County Criminal Justice Facility	821 W. State Street	Milwaukee
30	Milwaukee County Department of Aging and Department of Health and Human Services	235 W. Galena Street	Milwaukee
31	Milwaukee Mental Health Complex	9455 W. Watertown Plank Road	Wauwatosa
32	Milwaukee County House of Correction	8885 S. 68th Street	Franklin
	<u>Other Local</u>		
33	Milwaukee City Hall	200 E. Wells Street	Milwaukee
34	City of Milwaukee Municipal Building	841 N. Broadway	Milwaukee
35	Milwaukee Public Library	814 W. Wisconsin Avenue	Milwaukee

^aThe downtown office of the Social Security Administration is in the Reuss Federal Plaza.

Source: SEWRPC.

Table 16

EMPLOYERS WITH 500 OR MORE EMPLOYEES IN THE MILWAUKEE AREA: 2004

Number on Map 14	Name	Address	Civil Division
	<u>Milwaukee County</u>		
1	Advanced Healthcare, S.C.	3003 W. Good Hope Road	Milwaukee
2	Aldrich Chemical Company, Inc.	1001 W. St. Paul Avenue	Milwaukee
3	Alverno College	3400 S. 43rd Street	Milwaukee
4	Ameritech Services, Inc. (SBC)	918 N. 26th Street	Milwaukee
5	Astral Aviation, Inc.	1190 W. Rawson Avenue	Milwaukee
6	Aurora Health Care, Inc.	3000 W. Montana Avenue	Milwaukee
7	Aurora Health Care, Inc.	8901 W. Lincoln Avenue	Milwaukee
8	Aurora Sinai Medical Center, Inc.	945 N. 12th Street	Milwaukee
9	Badger Meter, Inc.	4545 W. Brown Deer Road	Milwaukee
10	Bank One Wisconsin	111 E. Wisconsin Avenue	Milwaukee
11	Blood Center of Southeastern Wisconsin	638 N. 18th Street	Milwaukee
12	Blue Cross and Blue Shield United of Wisconsin	401 W. Michigan Street	Milwaukee
13	Blue Cross and Blue Shield United of Wisconsin	1515 N. River Center Drive	Milwaukee
14	Bradley Center Sports & Entertainment	1001 N. Fourth Street	Milwaukee
15	Brady Worldwide, Inc.	6555 W. Good Hope Road	Milwaukee
16	Briggs & Stratton Corporation	3300 N. 124th Street	Wauwatosa
17	Bucyrus International, Inc.	1100 Milwaukee Avenue	South Milwaukee
18	Cardinal Stritch University, Inc.	6801 N. Yates Road	Milwaukee
19	Children's Hospital of Wisconsin	9000 W. Wisconsin Avenue	Milwaukee
20	City of Milwaukee Administration Building	5225 W. Vilet Street	Milwaukee
21	City of Milwaukee Police Administration Municipal Court	951 N. James Lovell Street	Milwaukee
22	Clear Channel Inc.	12100 W. Howard Avenue	Milwaukee
23	Columbia St. Mary's - Columbia Campus	2025 E. Newport Avenue	Milwaukee
24	Columbia St. Mary's - Milwaukee Campus	2323 N. Lake Drive	Milwaukee
25	Compuware Corporation	732 N. Jackson Street	Milwaukee
26	Cooper Power Systems	2800 9th Avenue	South Milwaukee
27	Delphi Energy and Engine Systems	7929 S. Howell Avenue	Oak Creek
28	Efunds Corporation	400 W. Deluxe Parkway	Glendale
29	Emmpak Foods, Inc.	200 S. Emmer Lane	Milwaukee
30	Falk Corporation	3001 W. Canal Street	Milwaukee
31	Foley and Lardner	777 E. Wisconsin Avenue	Milwaukee
32	Fortis Insurance Company	501 W. Michigan Street	Milwaukee
33	Froedtert Memorial Lutheran Hospital	9200 W. Wisconsin Avenue	Milwaukee
34	Gardner Bender	4855 W. Electric Avenue	Milwaukee
35	GE Medical Systems Information	8200 W. Tower Avenue	Milwaukee
36	Grunau Company, Inc.	1100 W. Anderson Road	Oak Creek
37	Harley-Davidson Motor Co. Group, Inc.	3700 W. Juneau Avenue	Milwaukee
38	Harley-Davidson Motor Co. Group, Inc.	11700 W. Capitol Drive	Milwaukee
39	J.C. Penny's Logistics	11800 W. Burleigh Street	Wauwatosa
40	JDC Logistics, Inc.	9809 S. Franklin Drive	Franklin
41	Johnson Controls Inc.	507 E. Michigan Street	Milwaukee
42	Krones, Inc.	9600 S. 58th Street	Franklin
43	Ladish Co. Inc.	5481 S. Packard Avenue	Cudahy
44	Marquette University	915 N. 11th Street	Milwaukee
45	Marshall & Isley Trust Co.	770 N. Water Street	Milwaukee
46	Master Lock Co.	2600 N. 32nd Street	Milwaukee
47	Miller Brewing Company	4000 W. State Street	Milwaukee
48	Milwaukee Area Technical College	700 W. State Street	Milwaukee

Table 16 (continued)

Number on Map 14	Name	Address	Civil Division
	<u>Milwaukee County</u> (continued)		
49	Milwaukee Brewers Baseball Club	1 Brewers Way	Milwaukee
50	Milwaukee City Hall / Frank Ziedler Municipal Building	200 E. Wells Street	Milwaukee
51	Milwaukee County Courthouse / Milwaukee County Courthouse Annex	901 N. 9th Street	Milwaukee
52	Milwaukee County Human Services Center	235 W. Galena Street	Milwaukee
53	Milwaukee County Mental Health Complex	9455 W. Watertown Plank Road	Wauwatosa
54	Milwaukee County Transit System	1942 N. 17th Street	Milwaukee
55	Milwaukee Journal Sentinel	333 W. State Street	Milwaukee
56	Milwaukee School of Engineering	1025 N. Broadway Street	Milwaukee
57	Mount Carmel, LLC	5700 W. Layton Avenue	Milwaukee
58	Northwestern Mutual Life Insurance	720 E. Wisconsin Avenue	Milwaukee
59	P & H Mining Equipment	4400 W. National Avenue	Milwaukee
60	Patrick Cudahy, Inc.	1 Sweet Apple-Wood Lane	Cudahy
61	Potawatomi Bingo Casino	1721 W. Canal Street	Milwaukee
62	PPG Industries, Inc.	10800 S. 13th Street	Oak Creek
63	Quad/Graphics, Inc.	555 S. 108th Street	West Allis
64	Quarles and Brady, LLP	411 E. Wisconsin Avenue	Milwaukee
65	Robert W. Baird & Company	777 E. Wisconsin Avenue	Milwaukee
66	Rockwell Automation – Allen Bradley Corporation	1201 S. 2nd Street	Milwaukee
67	Shur-Line	4051 S. Iowa Avenue	Milwaukee
68	Signicast Corporation	9000 N. 55th Street	Milwaukee
69	St. Camillus Campus	10100 W. Blue Mound Road	Wauwatosa
70	St. Francis Hospital	3237 S. 16th Street	Milwaukee
71	St. Joseph Regional Medical Center, Inc.	5000 W. Chambers Street	Milwaukee
72	St. Luke's Medical Center, Inc.	2900 W. Oklahoma Avenue	Milwaukee
73	St. Michael Hospital	2400 W. Villard Avenue	Milwaukee
74	Time Warner Cable	1610 N. 2nd Street	Milwaukee
75	Tower Automotive	3533 N. 27th Street	Milwaukee
76	United Lutheran Program for the Aging, Inc.	4545 N. 92nd Street	Milwaukee
77	United Parcel Service, Inc.	6800 S. 6th Street	Oak Creek
78	United States Postal Service – Milwaukee Main Office	345 W. St. Paul Avenue	Milwaukee
79	United States Postal Service – Oak Creek	200 E. Centennial Drive	Oak Creek
80	University of Wisconsin - Milwaukee	Kenwood and Downer	Milwaukee
81	Veterans Administration Center	5000 W. National Avenue	Milwaukee
82	Washington Mutual, Inc.	11200 W. Parkland Avenue	Milwaukee
83	West Allis Memorial Hospital, Inc.	8901 W. Lincoln Avenue	Milwaukee
84	State Office Building	819 N. 6th Street	Milwaukee
85	WE Energies	231 W. Michigan	Milwaukee
86	Wisconsin State Fair Park	8100 W. Greenfield Avenue	Milwaukee
	<u>Ozaukee County</u>		
87	Allen-Edmonds Shoe Corporation	201 Seven Hills Road	Port Washington
88	Charter Steel Company	1658 Cold Springs Road	Saukville
89	Columbia St. Mary's Hospital	13111 N. Port Washington Road	Mequon
90	Concordia University Wisconsin, Inc.	12800 N. Lake Shore Drive	Mequon
91	Leggett & Pratt, Inc. - EST Division	1600 7th Avenue	Grafton
92	Leeson Electric Corporation	2100 Washington Street	Grafton
93	Rockwell Automation - Allen Bradley Corporation	6400 W. Enterprise Drive	Mequon
94	Simplicity Manufacturing, Inc.	500 N. Spring Street	Port Washington
	<u>Washington County</u>		
95	Broan-Nutone, LLC	926 W. State Street	Hartford

Table 16 (continued)

Number on Map 14	Name	Address	Civil Division
	<u>Washington County</u> (continued)		
96	Regal Ware, Inc.	1675 Reigle Drive	Kewaskum
97	Serigraph, Inc.	3801 Decorah Road	West Bend
98	Signicast Corporation	1800 Innovation Way	Hartford
99	St. Joseph's Community Hospital	551 S. Silverbrook Drive	West Bend
100	Sysco Corporation	1 Sysco Drive	Jackson
101	Weasler Engineering	7801 USH 45 North	West Bend
102	West Bend Company	400 Washington Street	West Bend
103	West Bend Mutual Insurance	1900 S. 18th Avenue	West Bend
	<u>Waukesha County</u>		
104	Arandell Corporation	N82 W13118 Leon Road	Menomonee Falls
105	Beta Systems, Inc.	350 N. Sunny Slope Road	Brookfield
106	Citation Custom Products Corporation	W139 N5470 Oak Lane	Menomonee Falls
107	Community Memorial Hospital of Menomonee Falls	W180 N8085 Town Hall Road	Menomonee Falls
108	Cooper Power Systems, Inc.	1900 E. North Street	Waukesha
109	Elmbrook Memorial Hospital	19333 W. North Avenue	Brookfield
110	Fiserv, Inc.	235 Fiserv Drive	Brookfield
111	GE Medical CP Division	16800 W. Ryerson Road	New Berlin
112	GE Medical Magnetic Resonance Center	3000 N. Grandview Boulevard	Waukesha
113	Generac Power Systems, Inc.	STH 59 and Hillside Drive	Genesee Depot
114	Harley-Davidson Motor Company	N156 N9000 Pilgrim Road	Menomonee Falls
115	Husco International, Inc.	W239 N218 Pewaukee Road	Waukesha
116	Kohl's Distribution Center	N54 W13901 Woodale Drive	Menomonee Falls
117	Medical Associates of Menomonee Falls	W180 N7950 Town Hall Road	Menomonee Falls
118	Milwaukee Electric Tool Corporation	13135 W. Lisbon	Brookfield
119	Oconomowoc Memorial Hospital	791 Summit Avenue	Oconomowoc
120	Quad/Graphics, Inc.	N63 W23075 Highway 74	Sussex
121	Quad/Graphics, Inc.	W224 N3322 Duplainville Road	Pewaukee
122	Quad/Tech International, Inc.	N64 W23110 Main Street	Sussex
123	Strong Capital Management, Inc.	100 Heritage Reserve	Menomonee Falls
124	Target Distribution Center	1100 Valley Road	Oconomowoc
125	United Parcel Service, Inc.	12400 W. Bluemound Road	Elm Grove
126	Wacker Corporation	N92 W15000 Anthony Avenue	Menomonee Falls
127	Waukesha County Technical College	800 Main Street	Pewaukee
128	Waukesha County Courthouse and Administration Center	515 W. Moreland Boulevard	Waukesha
129	Waukesha Electric Systems	400 S. Prairie Avenue	Waukesha
130	Waukesha Engine - Dresser, Inc.	1000 W. St. Paul Avenue	Waukesha
131	Waukesha Health Care, Inc.	N17 W24100 Riverwood Drive	Waukesha
132	Waukesha Memorial Hospital, Inc.	725 American Avenue	Waukesha
133	Western States Envelope Company	4480 N. 132nd Street	Butler
134	Wisconsin Centrifugal, Inc.	905 E. St. Paul Avenue	Waukesha

Source: SEWRPC.

location for that trip. The production county for trips having neither end at “home” is the county location of the trip origin and the attraction county is the county location of the trip destination. Thus, the trips shown on Map 17 largely indicate the trips made on an average weekday to and from Milwaukee County by residents of the six counties of the Region outside Milwaukee County. The following observations relevant to Milwaukee County person travel may be made on the basis of an examination of this information:

Table 17

MAJOR OFFICE AND INDUSTRIAL PARKS/AREAS IN THE FOUR-COUNTY MILWAUKEE AREA: 2004

Number on Map 15	Major ^a Office and Industrial Park/Area	Civil Division	Approximate Total Acres			
			50-99	100-499	500-999	1,000 or more
	<u>Milwaukee County</u>					
1	Brown Deer Industrial and Office Areas ^b	City of Brown Deer		X		
2	Cudahy Industrial Area	City of Cudahy		X		
3	Franklin Industrial Park (Phases I and II) and the Franklin Business Park	City of Franklin			X	
4	Glendale Industrial Park	City of Glendale		X		
5	Menomonee Valley-East	Cities of Milwaukee and Wauwatosa				X
6	Menomonee Valley-West	Cities of Milwaukee and Wauwatosa		X		
7	Mill Road Industrial Area	City of Milwaukee		X		
8	Mitchell International Business Park	City of Cudahy	X			
9	Milwaukee Central Business District	City of Milwaukee				X
10	Milwaukee County Research Park	City of Wauwatosa		X		
11	Milwaukee-Glendale Industrial Area ^c	Cities of Milwaukee and Glendale			X	
12	Milwaukee Near Southside Industrial Area	City of Milwaukee		X		
13	Milwaukee Northwest Industrial Park ^d	City of Milwaukee				X
14	Milwaukee Southside Industrial Area	City of Milwaukee		X		
15	N. 33rd Street Railroad Corridor Industrial Area	City of Milwaukee		X		
16	N. 124th Street Industrial Area	Cities of Wauwatosa and Milwaukee		X		
17	Northbranch Industrial Park	City of Oak Creek				X
18	Park Place	City of Milwaukee		X		
19	St. Francis Airport Industrial Park	City of St. Francis		X		
20	Southbranch Industrial Park	City of Oak Creek		X		
21	South Milwaukee Industrial Area	City of South Milwaukee		X		
22	Towne Corporate Park of Granville	City of Milwaukee	X			
23	West Allis-East Industrial Area	City of West Allis		X		
24	West Allis-West Industrial Area	City of West Allis		X		
25	West Milwaukee Industrial Area	Village of West Milwaukee		X		
	<u>Ozaukee County</u>					
26	Belgium Industrial Park-North	Village of Belgium		X		
27	Belgium Industrial Park-South	Village of Belgium				
28	Cedarburg Business Park - North	City of Cedarburg	X			
29	Dekora Woods Business Park and Saukville Industrial Park	Village of Saukville		X		
30	Fredonia Industrial Park	Village of Fredonia	X			
31	Grafton Business Park	Village of Grafton	X			
32	Grafton Business Park-North	Village of Grafton	X			
33	Grafton Corporate Park	Village of Grafton	X			
34	Lake of Mequon Park	City of Mequon		X		
35	Mequon Business Park	City of Mequon		X		
36	Port Washington Industrial Park	City of Port Washington		X		
	<u>Washington County</u>					
37	Dodge Industrial Park	City of Hartford			X	
38	Donges Bay Industrial Park	Village of Germantown		X		
39	Maple Road Industrial Park	Village of Germantown		X		
40	Hartford Industrial and Western Industrial Parks	City of Hartford		X		
41	Jackson Northwest Business Park	Village of Jackson		X		
42	Seven Hills Business Park	Village of Slinger	X			
43	Slinger Business Park	Village of Slinger	X			
44	Slinger Crossroads Center	Village of Slinger	X			
45	West Bend Corporate Center	City of West Bend		X		
46	West Bend Industrial Park-East	City of West Bend	X			
47	West Bend Industrial Park-South	City of West Bend		X		
48	Wingate Creek Business Center	City of West Bend	X			

Table 17 (continued)

Number on Map 15	Major ^a Office and Industrial Park/Area	Civil Division	Approximate Total Acres			
			50-99	100-499	500-999	1,000 or more
	<u>Waukesha County</u>					
49	Bahl Business Park	Town of Vernon		X		
50	Bark River and Geason Commerce Centers	Village of Hartland		X		
51	Big Bend Industrial Park	Village of Big Bend	X			
52	Bishop's Woods Office Park	City of Brookfield		X		
53	Blue Mound and Blue Mound East Industrial Parks	City of Pewaukee		X		
54	Bowling Green Industrial Park	Village of Menomonee Falls		X		
55	Butler-Brookfield Industrial Area ^e	City of Brookfield and Village of Butler		X		
56	Brookfield Industrial Park	City of Brookfield		X		
57	Brookfield Lakes Corporate Center	City of Brookfield		X		
58	Butler-Menomonee Falls Industrial Areas ^f	Village of Butler		X		
59	Eagle Industrial Park	Village of Eagle	X			
60	Executive Drive Office Park	City of Pewaukee		X		
61	Gateway West Commerce Center	City of Brookfield		X		
62	Hartland/Lake Country Business Park	Village of Hartland		X		
63	Hillcrest Business Center	City of Waukesha	X			
64	Kettle Moraine Business Park	City of Delafield	X			
65	Mukwonago Industrial Park	Village of Mukwonago		X		
66	Muskego Industrial Park	City of Muskego		X		
67	New Berlin Industrial Park ^g	City of New Berlin				X
68	Nor-X-Way Industrial Park	Village of Menomonee Falls	X			
69	Nor-X-Way II and III Industrial Parks	Village of Menomonee Falls		X		
70	Oconomowoc Corporate Center and Target Distribution Center	City of Oconomowoc		X		
71	Oconomowoc West Industrial Park	City of Oconomowoc	X			
72	Pabst Farms Commerce Center	City of Oconomowoc		X		
73	Pewaukee and Quail Ridge Industrial and Business Parks	Village of Pewaukee		X		
74	Pewaukee Northcentral Office and Industrial Area ^h	City of Pewaukee		X		
75	Pewaukee Southcentral Office and Industrial Area ⁱ	City of Pewaukee		X		
76	Pheasant Drive Industrial District	City of Brookfield	X			
77	River Bend Industrial Park	City of Oconomowoc	X			
78	Silver Spring Corporate Park	Village of Menomonee Falls		X		
79	Sussex Business Park	Village of Sussex	X			
80	Sussex Corporate Center	Village of Sussex		X		
81	Tess Corners Industrial Park	City of Muskego	X			
82	Waukesha Corporate Center	City of Waukesha	X			
83	Waukesha Airport Industrial Park	City of Waukesha		X		
84	Waukesha Industrial Park	City of Waukesha		X		
85	Waukesha Industrial Park-South	City of Waukesha	X			
86	Westbrook Corporate Center	Village of Menomonee Falls		X		
87	Westridge and Towne Business Parks	City of New Berlin		X		
88	Westwood Commerce Center	City of Pewaukee	X			
89	Woodland Prime at Heritage Reserve	Village of Menomonee Falls		X		

^aOnly office and industrial parks with a total area of 50 or more acres are listed.

^bIncludes the Brown Deer Industrial Park, the Brown Deer Business park, the Brown Deer Corporate Park, and the Opus North Business Park

^cIncludes the Estabrook Corporate Park and the Glendale Technology Center.

^dIncludes the Bradley Industrial Park, the Bradley Woods Industrial Park, the Calumet Industrial Park, the Calumet Woods Industrial Park, the Granville Woods Business Park, the Parkland Industrial Park, the Northwest Commerce Center, and the Northwest Industrial Park.

^eIncludes the Butler southside industrial area, the Acre Home Fields Industrial Park, and the Sunset Industrial Park.

^fIncludes the Butler northside industrial area and the Falls Business Park.

^gIncludes the New Berlin Industrial Park, the Moorland Industrial Park, the Lincoln Avenue Industrial Park, and MSI Business Park.

^hIncludes the Pewaukee Center Office and Industrial Center, Pewaukee Crossroads Industrial Park, the Pewaukee Woods Corporate Center, and the Roundy Opus Industrial Park.

ⁱIncludes the Ridgeview Corporate Park, the Riverwood Corporate Center, the Stone Ridge Business Park, the Stone Ridge/WEPCO Industrial and Business Park, and the Westwood Commerce Center.

Source: SEWRPC.

Table 18

MAJOR RECREATIONAL FACILITIES AND COMPLEXES IN MILWAUKEE COUNTY: 2004

Number on Map 14	Name ^a	Address	Civil Division
1	Bradley Center	1001 N. 4th Street	Milwaukee
2	Henry W. Maier Festival Park	200 N. Harbor Drive	Milwaukee
3	Midwest Airlines Center	400 W. Wisconsin Avenue	Milwaukee
4	Miller Park	One Brewers Way	Milwaukee
5	Milwaukee County Zoo	10001 W. Bluemound Road	Milwaukee
6	Milwaukee Theatre	500 W. Kilbourne Avenue	Milwaukee
7	U.S. Cellular Arena	400 W. Kilbourne Avenue	Milwaukee
8	Wisconsin State Fair Park	640 S. 84th Street	West Allis

^aIncludes public and private facilities hosting activities with attendance of 4,000 or more persons.

Source: SEWRPC.

- About 3.3 million person trips which had either both the origin and destination within Milwaukee County—intracounty trips—or one trip end in the County and the other trip end in a different county in the Southeastern Wisconsin Region—intercounty, intraregional trips—were made on an average weekday in 2001. This represents about a 34 percent increase over the approximately 2.5 million total Milwaukee County person trips made in 1963. Most of the observed increase in person travel was in intercounty, intraregional trips which increased by about 517,500 person trips, or about 210 percent, from about 247,000 trips in 1963 to about 764,500 trips in 2001. Intracounty person trips increased by about 319,100 trips, or about 14 percent, from about 2.2 million trips in 1963 to about 2.5 million trips in 2001.
- The 2.5 million average weekday Milwaukee County intracounty person trips in 2001 represented about 77 percent of all Milwaukee County person trips. The largest proportion, about 32 percent, were home-based other trips, such as trips made for medical, personal business, or social or recreational purposes. The majority, about 70 percent, of the intracounty person trips were made within the central portion of Milwaukee County, that is, the area south of Silver Spring Drive and north of College Avenue. This distribution largely reflects the locations of concentrations of both population and employment in the County. Trips produced in or attracted to the Milwaukee CBD accounted for about 181,600, or about 7 percent, of all the Milwaukee County average weekday intracounty person trips in 2001.
- The 764,500 average weekday Milwaukee County intercounty person trips represented about 23 percent of all Milwaukee County person trips in 2001. Most of these trips, about 40 percent, were made for work purposes. Trips made between Milwaukee and Waukesha Counties accounted for about 501,000 trips, or about two-thirds of all the Milwaukee County intercounty person trips in 2001. The Milwaukee-Waukesha County trips were almost evenly divided between trips produced in Milwaukee County and attracted to Waukesha County, and trips produced in Waukesha County and attracted to Milwaukee County (see Map 17). The vast majority, about 68 percent, of the Waukesha-Milwaukee County person trips in 2001 occurred between central Milwaukee County, the same area that accounted for most of the intracounty travel, and the Waukesha/Pewaukee, New Berlin, Brookfield, and Menomonee Falls areas in eastern Waukesha County. About 9 percent of all intercounty person trips produced outside Milwaukee County were attracted to the Milwaukee County CBD.

Table 19

**MAJOR TERMINAL FACILITIES FOR INTERCITY PASSENGER
TRANSPORTATION SERVICES IN THE MILWAUKEE AREA: 2004**

Number on Map 14	Name	Address	Civil Division
1	AMTRAK Station	433 W. St. Paul Avenue	Milwaukee
2	AMTRAK Station – Mitchell Airport	5601 S. 6th Street	Milwaukee
3	Badger Bus Depot	635 N. James Lovell Street	Milwaukee
4	Greyhound Bus Depot	606 N. James Lovell Street	Milwaukee
5	Lake Express Milwaukee Terminal	2230 S. Lincoln Memorial Drive	Milwaukee
6	Milwaukee County General Mitchell International Airport	5300 S. Howell Avenue	Milwaukee

Source: SEWRPC.

Transit Person Travel Characteristics of Milwaukee County Transit System Users

The Commission on-board bus survey of Milwaukee County Transit System passengers was conducted from April 24 through 27, 2001, on a sample of all scheduled weekday bus trips operated by the transit system, including those on contract service routes serving areas in Ozaukee and Waukesha Counties. The surveys entailed distributing a prepaid, preaddressed, mail-back survey questionnaire (see Appendix B) to all passengers on the sample of scheduled weekday bus trips surveys. Hispanic bus passengers who did not want to use the standard form were provided with a Spanish translation of the questionnaire. About 7,900 completed survey questions were returned, representing about 6 percent of the estimated 124,600 average weekday linked⁵ transit person trips made on the Milwaukee County Transit System in 2001. At the time of the survey, less than 1 percent of the average weekday linked transit person trips were made on the contract service routes the transit system operated for the Ozaukee and Waukesha County public transit systems.⁶ Table 21 summarizes the socio-economic characteristics of Milwaukee County transit system passengers using weekday bus service. The following observations may be made based upon the examination of this information:

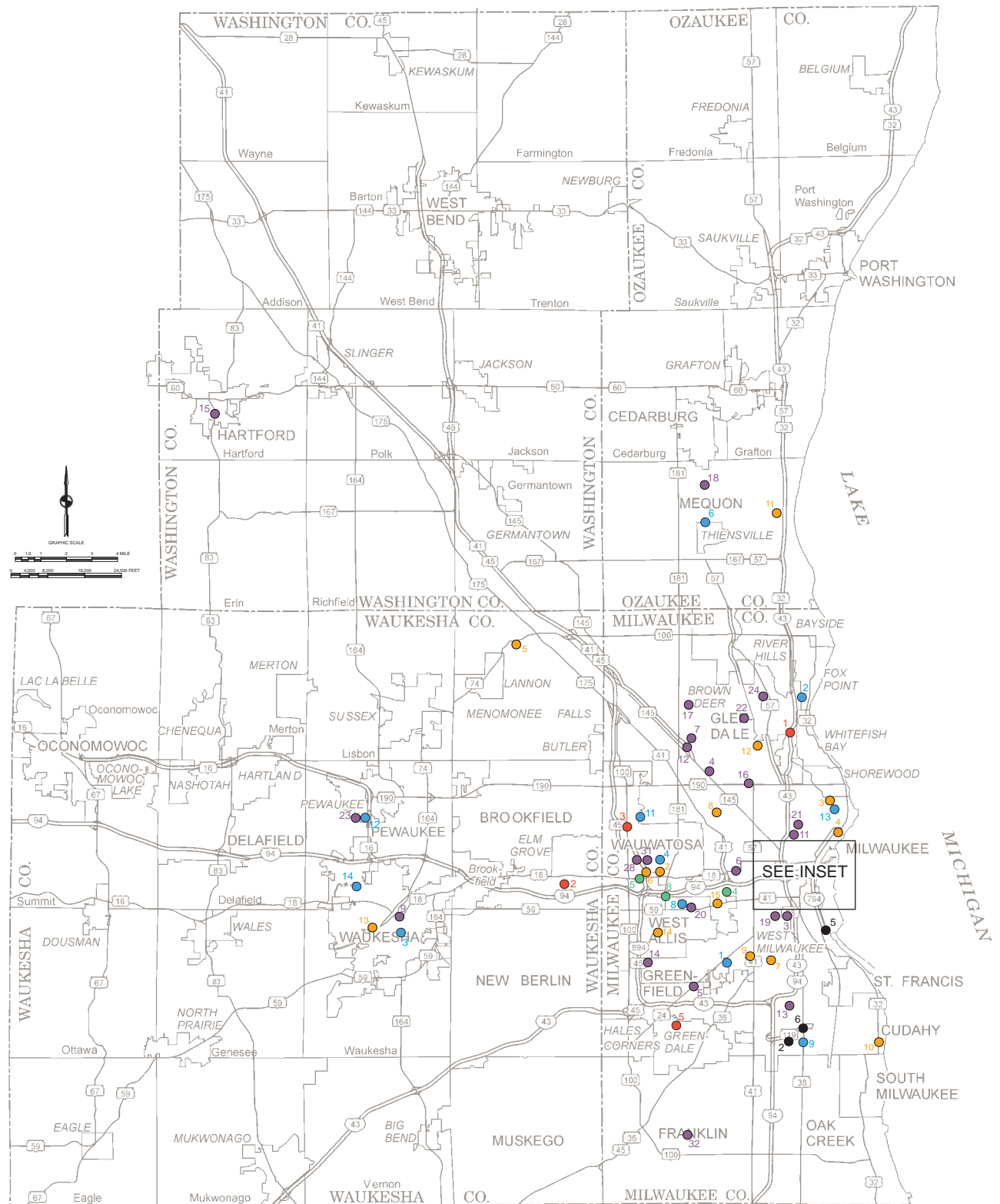
- About 121,000 linked transit person trips, or about 97 percent of the total transit trips, were made within Milwaukee County. The transit person trips were concentrated in the areas in central Milwaukee County with significant concentrations of transit dependent persons and jobs that were previously identified. The reported transit person trips reflected the movements of Milwaukee County residents to jobs, schools, and other locations in the County, in particular in the Milwaukee CBD and the University of Wisconsin-Milwaukee (UWM). Transit person trips attracted to or produced within the Milwaukee CBD accounted for about 30,500, or 25 percent, of all the transit person trips made within the County, while transit person trips attracted to or produced within the UWM area accounted for 27,900 trips, or about 23 percent of the transit person trips made within the County. The vast majority, about 67 percent, of the transit person trips occurred within and between the areas in central Milwaukee County that accounted for most intracounty person travel.

⁵Linked transit person trips approximate the number of one-way trips made on the transit system between specific origins and destinations. Passengers are counted only once for each origin and destination, and transfers between routes are not counted as they are a continuation of a single trip.

⁶When the Commission on-bus user survey was conducted in April 2001, the Milwaukee County Transit System operated Route No. 143 under contract with Ozaukee County, and Route Nos. 6, 8, 9, 10 (between the Milwaukee-Waukesha County line and the Brookfield Square Shopping Center), 79, 106, and 218 under contract with Waukesha County.

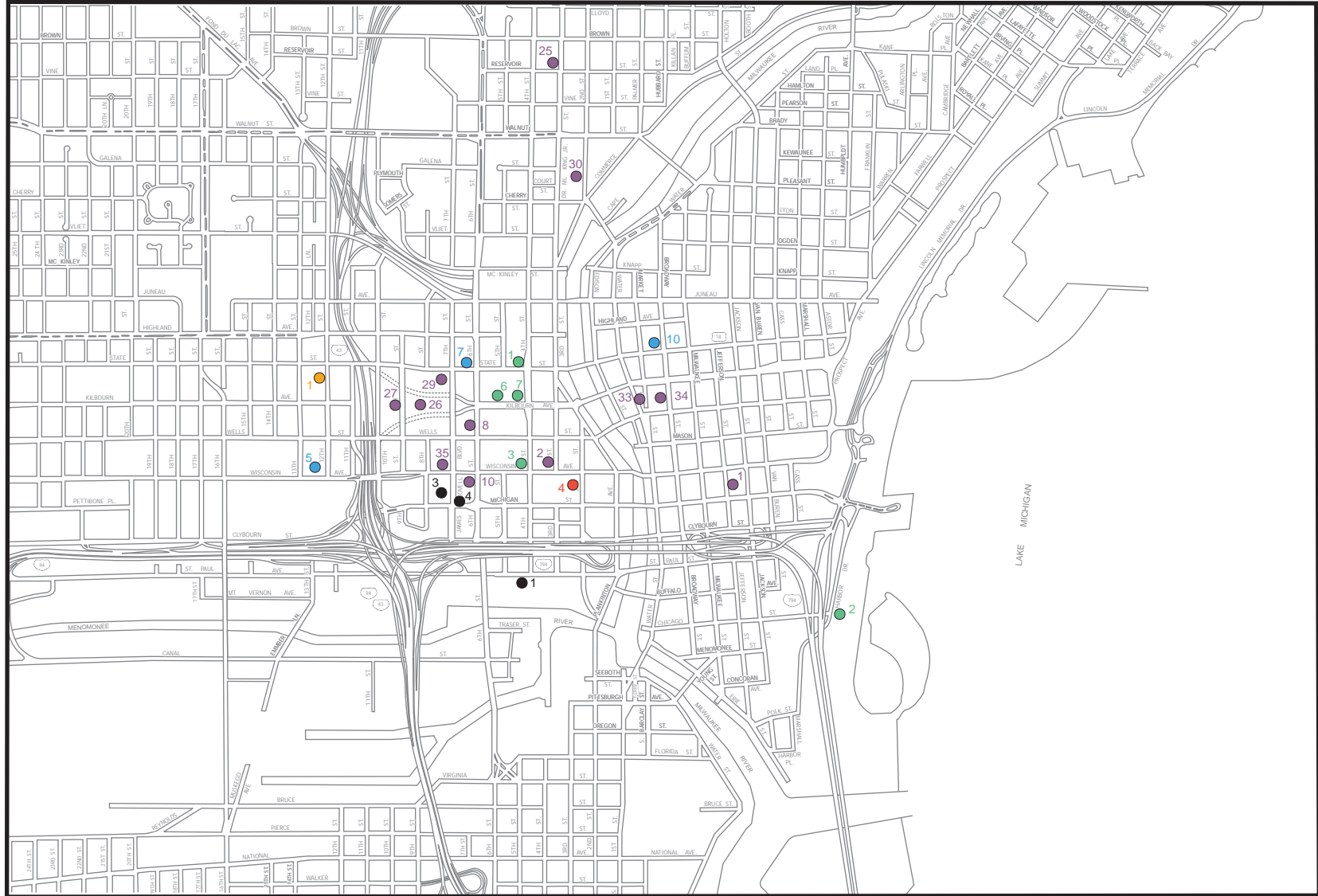
Map 14

MAJOR ACTIVITY CENTERS EXCLUDING EMPLOYERS IN THE MILWAUKEE AREA: 2004



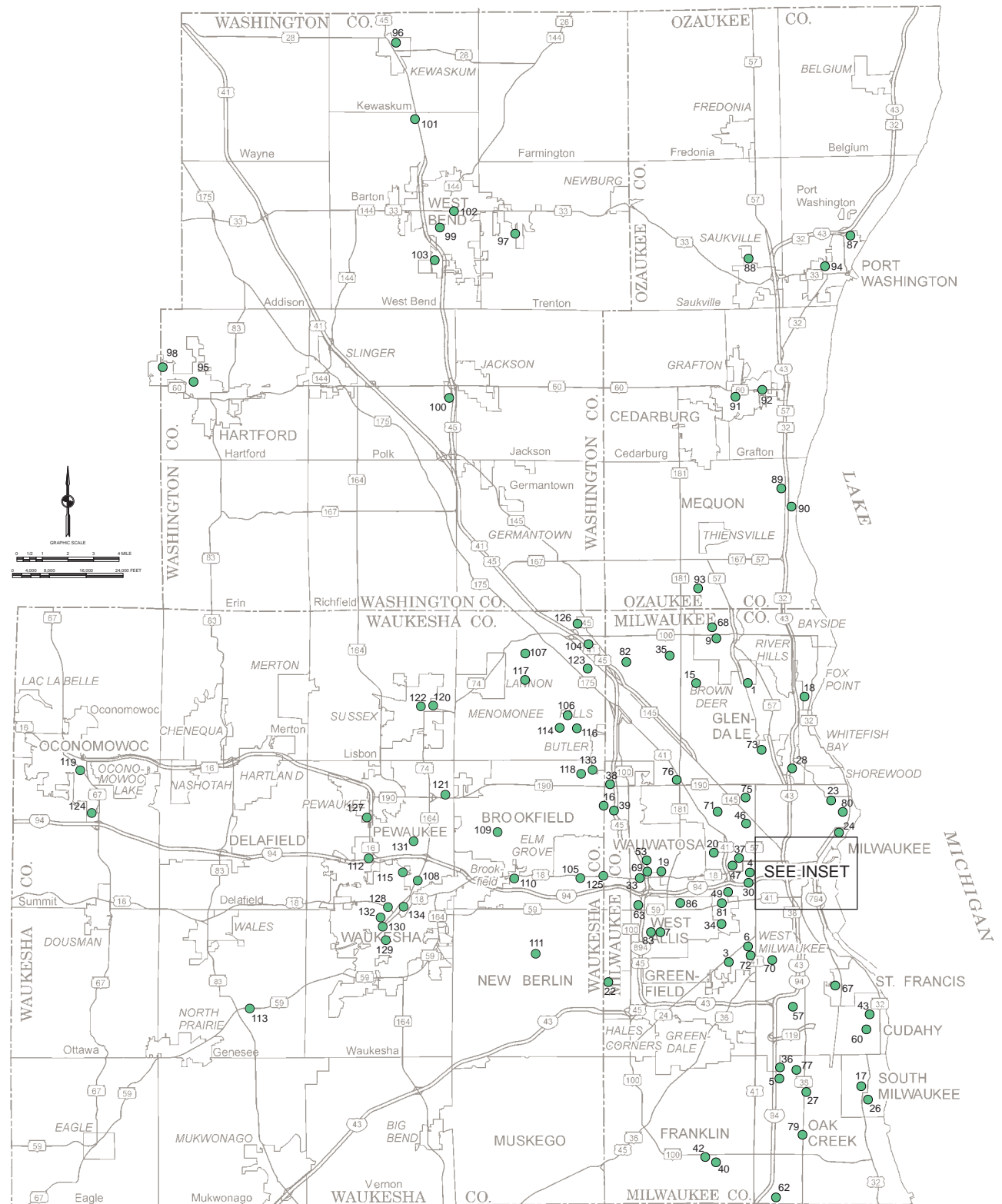
- PRINCIPAL HOSPITAL (SEE TABLE 12)
- PRINCIPAL COLLEGE OR UNIVERSITY (SEE TABLE 13)
- MAJOR SHOPPING MALL (SEE TABLE 14)
- PRINCIPAL FEDERAL, STATE, OR LOCAL GOVERNMENT OFFICE OR INSTITUTION (SEE TABLE 15)
- MAJOR RECREATIONAL FACILITY OR COMPLEX (SEE TABLE 18)
- MAJOR TERMINAL FACILITY FOR INTERCITY PASSENGER TRANSPORTATION SERVICE (SEE TABLE 19)
- 24 IDENTIFICATION NUMBER

Map 14 Inset



LOCATION OF MAJOR EMPLOYERS IN THE MILWAUKEE AREA: 2004

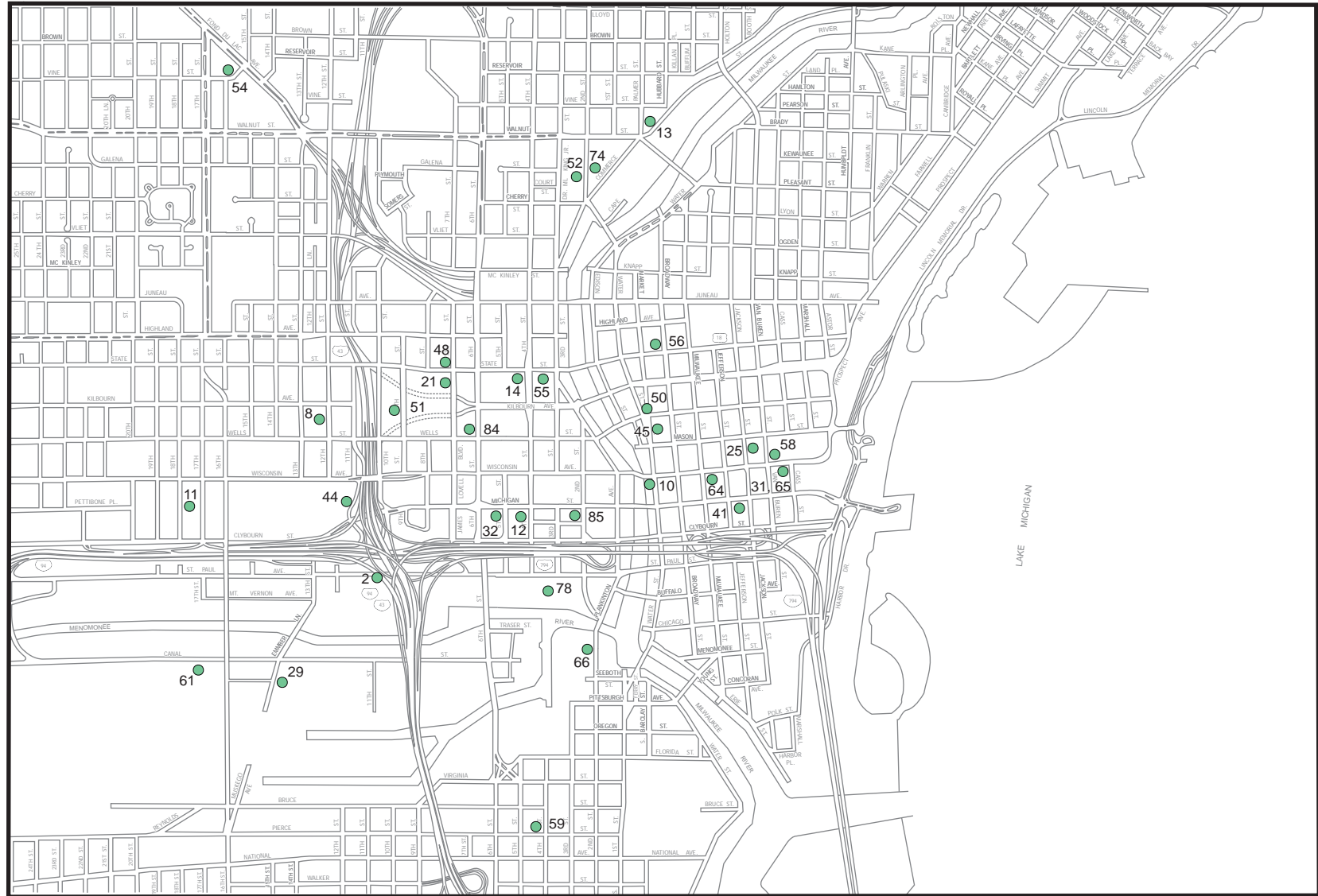
LOCATION OF MAJOR EMPLOYERS IN THE MILWAUKEE AREA: 2004



● EMPLOYER WITH 500 OR MORE EMPLOYEES (SEE TABLE 16)

Source: SEWRPC.

Map 15 Inset

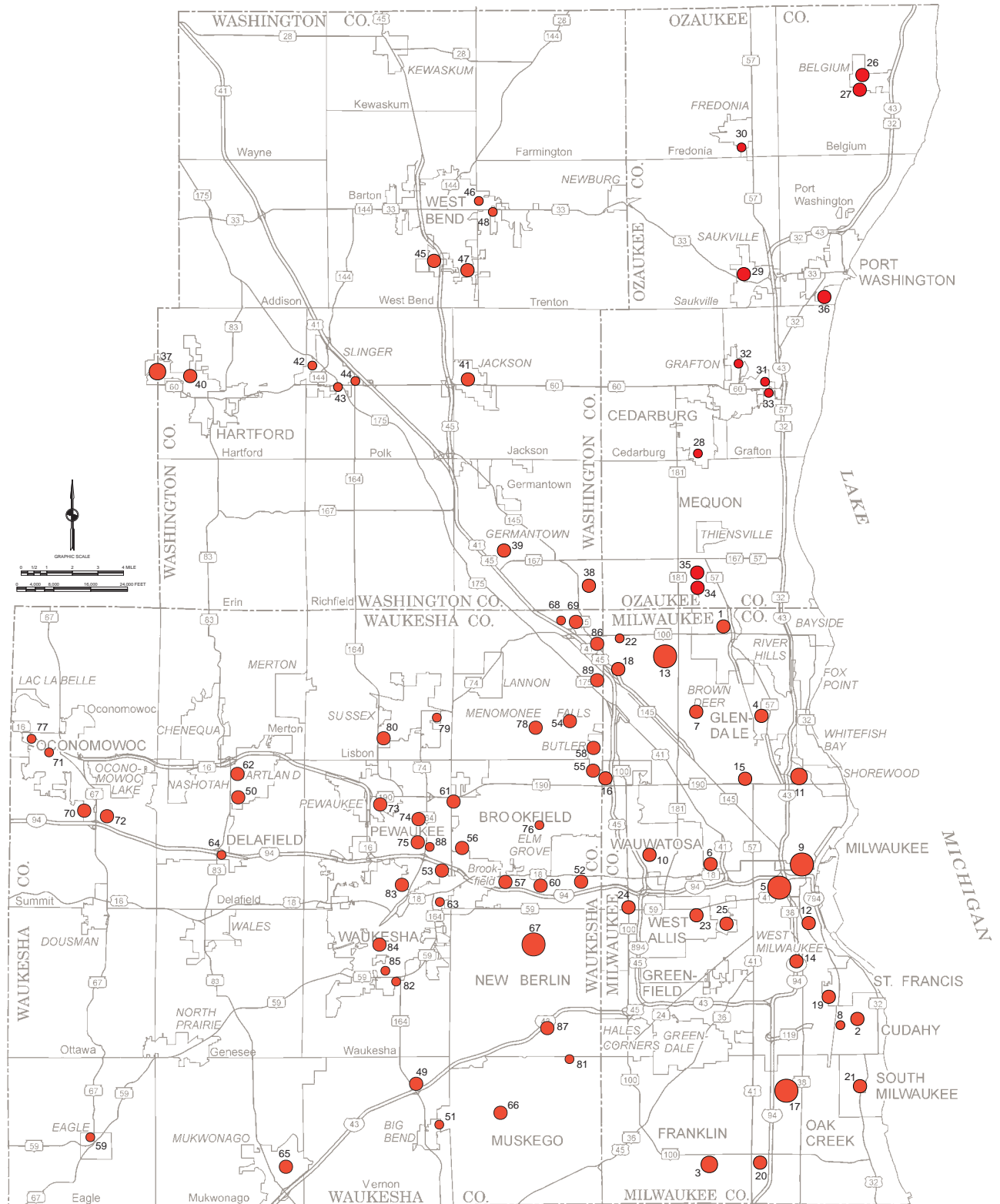


GRAPHIC SCALE



Map 16

MAJOR OFFICE AND INDUSTRIAL PARKS/AREAS IN THE MILWAUKEE AREA: 2004



MAJOR OFFICE OR INDUSTRIAL PARK / AREA (SEE TABLE 17)

- 50-99 ACRES
- 100-499 ACRES
- 500-999 ACRES
- 1,000 OR MORE ACRES
- 24 IDENTIFICATION NUMBER

Table 20

**DISTRIBUTION OF AVERAGE WEEKDAY MILWAUKEE COUNTY
PERSON TRIPS BY TRIP PURPOSE: 1963, 1972, 1991, AND 2001**

Area	Trip Purpose ^a	Person Trips							
		1963		1972		1991		2001	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Within Milwaukee County	Home-based work	590,100	26.5	591,000	24.9	597,100	23.4	590,200	23.2
	Home-based shopping	354,200	15.9	356,200	15.0	386,500	15.2	324,500	12.7
	Home-based other	694,900	31.2	783,800	33.1	758,500	29.7	824,000	32.4
	Nonhome-based	415,600	18.7	435,000	18.4	514,800	20.2	520,700	20.5
	School	170,000	7.7	202,700	8.6	294,700	11.5	284,500	11.2
	Subtotal	2,224,800	100.0	2,368,700	100.0	2,551,600	100.0	2,543,900	100.0
Between Milwaukee County and Other Areas in the Region	Home-based work	90,300	36.6	134,900	33.8	239,100	38.5	308,500	40.4
	Home-based shopping	26,800	10.8	52,900	13.3	59,100	9.5	69,400	9.1
	Home-based other	82,700	33.5	124,800	31.3	155,300	25.0	200,900	26.3
	Nonhome-based	31,500	12.7	72,400	18.1	135,600	21.9	151,000	19.7
	School	15,700	6.4	13,800	3.5	31,900	5.1	34,700	4.5
	Subtotal	247,000	100.0	398,800	100.0	621,000	100.0	764,500	100.0
Total	Home-based work	680,400	27.5	725,900	26.2	836,200	26.4	898,700	27.2
	Home-based shopping	381,000	15.4	409,100	14.8	445,600	14.0	393,900	11.9
	Home-based other	777,600	31.5	908,600	32.8	913,800	28.8	1,024,900	31.0
	Nonhome-based	447,100	18.1	507,400	18.4	650,400	20.5	671,700	20.3
	School	185,700	7.5	216,500	7.8	326,600	10.3	319,200	9.6
	Total	2,471,800	100.0	2,767,500	100.0	3,172,600	100.0	3,308,400	100.0

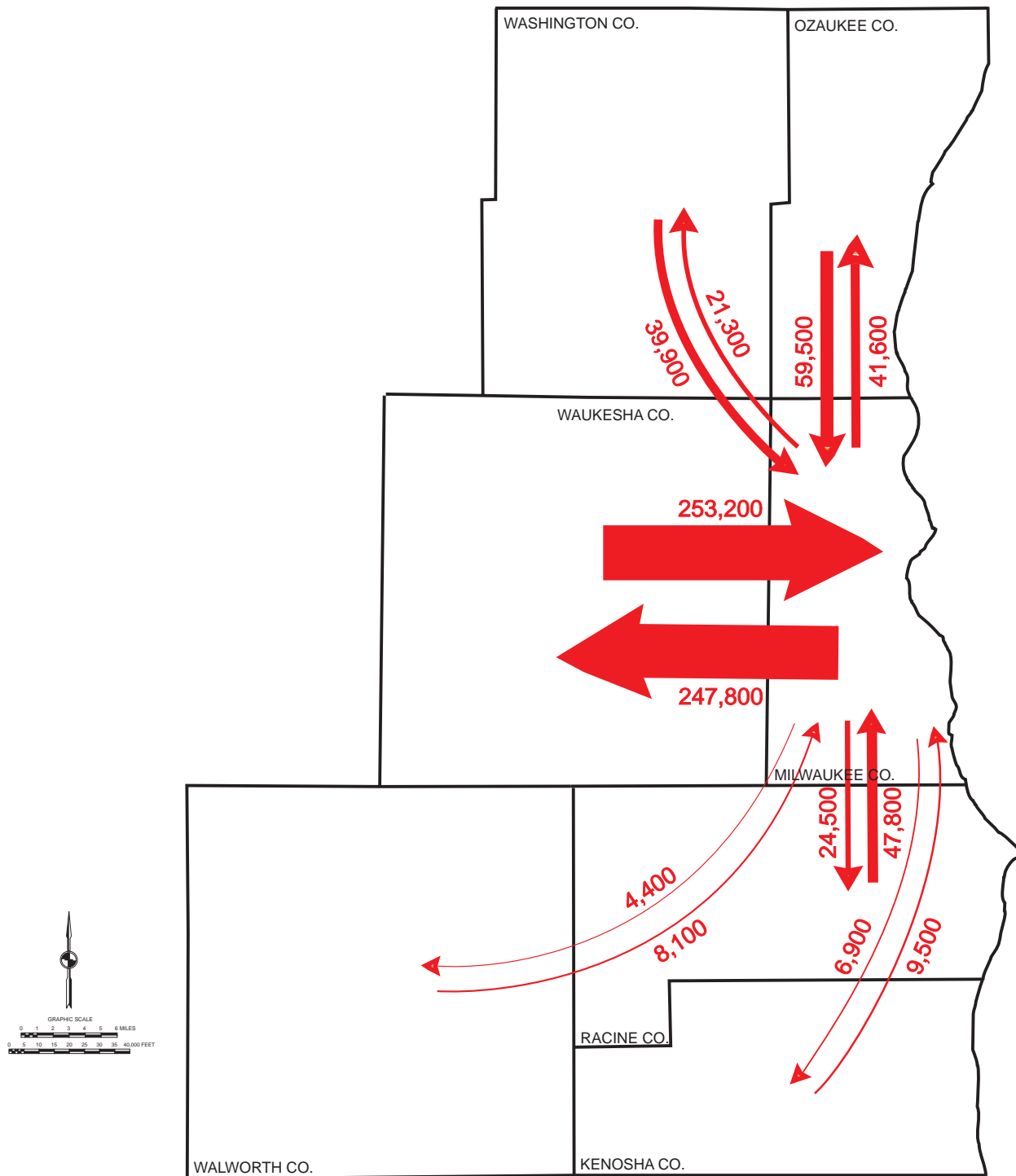
Area	Trip Purpose ^a	Change in Person Trips							
		1963-2001		1963-2001		1963-2001		1963-2001	
		Number	Percent	Number	Percent	Number	Percent	Number	Percent
Within Milwaukee County	Home-based work	100	--	-800	-0.1	-6,900	-1.2	100	--
	Home-based shopping	-29,700	-8.4	-31,700	-8.9	-62,000	-16.0	-29,700	-8.4
	Home-based other	129,100	18.6	40,200	5.1	65,500	8.6	129,100	18.6
	Nonhome-based	105,100	25.3	85,700	19.7	5,900	1.1	105,100	25.3
	School	114,500	67.4	81,800	40.4	-10,200	-3.5	114,500	67.4
	Subtotal	319,100	14.3	175,200	7.4	-7,700	-0.3	319,100	14.3
Between Milwaukee County and Other Areas in the Region	Home-based work	218,200	241.6	173,600	128.7	69,400	29.0	218,200	241.6
	Home-based shopping	42,600	159.0	16,500	31.2	10,300	17.4	42,600	159.0
	Home-based other	118,200	142.9	76,100	61.0	45,600	29.4	118,200	142.9
	Nonhome-based	119,500	379.4	78,600	108.6	15,400	11.4	119,500	379.4
	School	19,000	121.0	20,900	151.4	2,800	8.8	19,000	121.0
	Subtotal	517,500	209.5	365,700	91.7	143,500	23.1	517,500	209.5
Total	Home-based work	218,300	32.1	172,800	23.8	62,500	7.5	218,300	32.1
	Home-based shopping	12,900	3.4	-15,200	-3.7	-51,700	-11.6	12,900	3.4
	Home-based other	247,300	31.8	116,300	12.8	111,100	12.2	247,300	31.8
	Nonhome-based	224,600	50.2	164,300	32.4	21,300	3.3	224,600	50.2
	School	133,500	71.9	102,700	47.4	-7,400	-2.3	133,500	71.9
	Total	836,600	33.8	540,900	19.5	135,800	4.3	836,600	33.8

^aThe trip data were grouped into five categories of travel purpose: home-based work trips, home-based shopping trips, home-based other trips, nonhome-based trips, and school-based trips. Home-based work trips are defined as trips having one end at the place of residence of the trip maker and the other end at the place of work. Home-based shopping trips are defined as trips having one end at the place of residence of the trip maker and the other end at a shopping place of destination. Home-based other trips are defined as trips having one end at the place of residence of the trip maker and the other end at a place of destination other than home, work, shopping, or school. Such trips would include trips made for social, recreation, medical, and personal business. Nonhome-based trips are defined as trips that neither originate nor end at home. School-based trips are defined as having at least one end at school.

Source: SEWRPC

Map 17

**DISTRIBUTION OF AVERAGE WEEKDAY INTERCOUNTY PERSON TRIPS
BETWEEN MILWAUKEE COUNTY AND SURROUNDING COUNTIES: 2001**



NOTE: TRIPS INCLUDE ALL TRIP PURPOSES AND ARE SHOWN IN PRODUCED-ATTRACTED FORMAT. THAT IS, FROM AREA OF PRODUCTION TO AREA OF ATTRACTION. ONLY TRAVEL BETWEEN MILWAUKEE COUNTY AND SURROUNDING COUNTIES IS DEPICTED, REPRESENTING APPROXIMATELY 764,500 PERSON TRIPS.

Source: SEWRPC.

Table 21

**PERCENT OF WEEKDAY PASSENGER TRIPS MADE ON THE MILWAUKEE COUNTY
TRANSIT SYSTEM FOR VARIOUS RIDERSHIP CHARACTERISTICS: APRIL 24 TO 27, 2001**

Category	Percent of Linked Weekday Passenger Trips ^a		
	Trips Made using Express, Local, and Shuttle Routes	Trips Made using Freeway Flyer Routes	All Trips
Age			
Under 16	3.9	- -	3.9
16 to 18	3.9	9.4	11.8
19 to 24	11.8	36.5	21.0
25 to 54	20.8	44.7	50.3
55 to 64	50.3	5.9	5.3
65 and over	5.4	2.3	3.8
No Response	3.9	1.2	3.9
Total	100.0	100.0	100.0
Sex			
Male	35.6	35.3	35.6
Female	52.7	54.1	52.7
No Response	11.7	10.6	11.7
Total	100.0	100.0	100.0
Licensed Driver			
Yes	40.0	83.5	40.4
No	57.1	14.1	56.7
No Response	2.9	2.4	2.9
Total	100.0	100.0	100.0
Household Income			
Under \$10,000	24.3	4.8	24.1
\$10,000-\$29,999	35.8	14.1	35.5
\$30,000-\$49,999	15.2	20.0	15.3
\$50,000 and Over	8.6	38.8	8.9
No Response	16.1	22.3	16.2
Total	100.0	100.0	100.0
Trip Purpose			
Home-based work	42.1	49.4	42.1
Home-based shopping	9.0	- -	8.9
Home-based other	18.6	1.2	18.4
Nonhome-based	7.9	3.5	7.8
School	22.4	45.9	22.8
Total	100.0	100.0	100.0
Vehicles available per Household			
No vehicle	35.0	7.0	34.7
One vehicle	28.3	23.5	28.2
Two or more vehicles	19.7	66.0	20.3
No Response	17.0	3.5	16.8
Total	100.0	100.0	100.0
Frequency of Use			
Less than once a month	6.7	7.1	6.7
1-3 times a month	6.2	4.7	6.2
1-2 times a week	10.0	4.7	9.9
3-5 times a week	29.4	64.7	29.8
More than 5 times a week	44.7	16.5	44.4
No Response	3.0	2.3	3.0
Total	100.0	100.0	100.0

^aLinked Passenger trips approximate the number of one-way trips made on the transit system between specific origins and destinations. Passengers are counted only once for each origin and destination, and transfers between routes are not counted as they are a continuation of a single trip

Source: SEWRPC.

- About 3,600 linked transit person trips, or about 3 percent of the total transit person trips, were made between Milwaukee County and the surrounding counties with about 85 percent of these trips occurring between Ozaukee/Waukesha Counties and Milwaukee County. Some Ozaukee and Waukesha County residents use Milwaukee County Transit System routes to commute to jobs in the Milwaukee CBD and to classes at the UWM. At the same time, some Milwaukee County residents commute to jobs in Ozaukee and Waukesha Counties using the contract service routes operated by the Milwaukee County Transit System for these two counties.
- The Milwaukee County Transit System is used predominantly for work travel as about 42 percent of the average weekday linked transit person trips made on the system were work purpose trips. Trips made for school and other purposes (medical, personal business or social-recreational) were also significant, accounting for about 23 and 18 percent, respectively, of all weekday linked passenger trips. The system was also used predominantly by passengers from 24 to 55 years old, or of typical working age. About 44 percent of the weekday trips on the system are made by passengers who use the transit system regularly, that is, more than five times per week. School-age children (ages 10-16), and elderly persons (age 65 and older), two of the population groups which are typically considered transit-dependent, did not comprise a significant proportion of Milwaukee County Transit System passengers in the Commission's 2001 on-board bus survey.
- The characteristics of Milwaukee County Transit System users differ somewhat between passengers using the freeway flyer routes and passengers using the other routes of the system. For freeway flyer passengers, about 58 percent of the trips were by passengers reporting annual household incomes of \$30,000 or more; about 84 percent were licensed drivers; and about 66 percent resided in households with two or more automobiles. By comparison, for trips made on the regular local, shuttle, and UBUS routes of the system, about 60 percent of the trips were by passengers that reported they had annual household incomes of \$30,000 or less; about 57 percent, respectively, were not licensed drivers; and about 35 percent, respectively, resided in households with no automobile available.

SUMMARY AND CONCLUSIONS

This chapter has presented pertinent information on past trends and existing conditions for selected characteristics of Milwaukee County and surrounding Ozaukee, Washington, and Waukesha Counties which affect, or may be affected by, the provision and use of the transit service provided by the Milwaukee County Transit System including population, employment, land use, and travel habits and patterns. Information on the changes in key characteristics for Milwaukee County which were observed over approximately the last two decades is summarized in Figure 1. The most important findings concerning these characteristics may be summarized as follows:

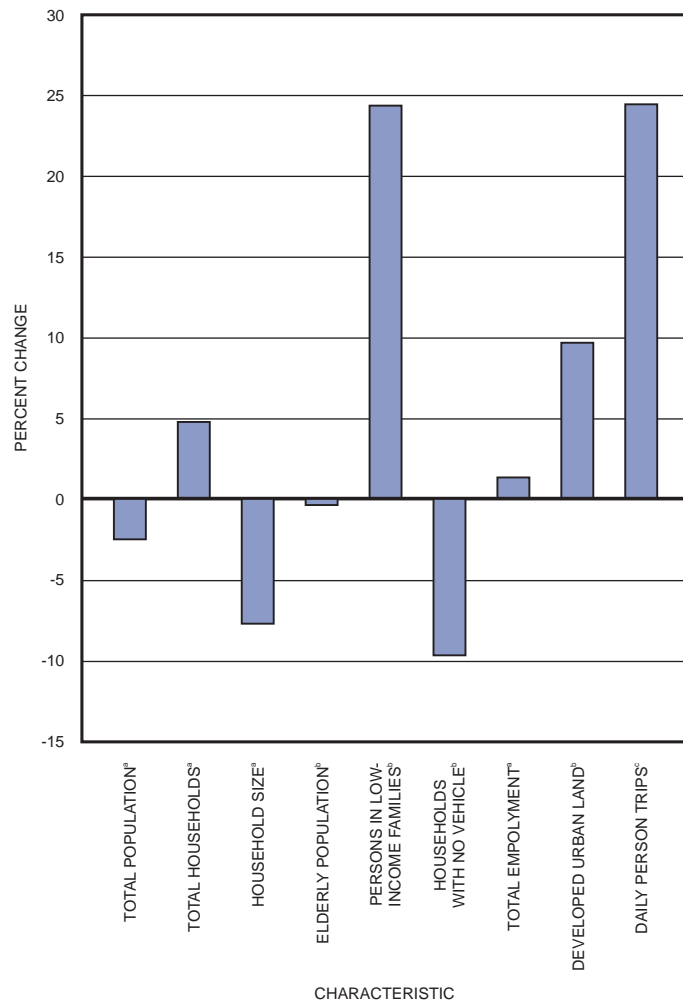
1. Since 1960, the County's total resident population has decreased from about 1,036,000 persons in 1960 to about 941,300 persons in 2003, or by about 9 percent, while the total population in the Region has increased by about 25 percent and the total population in adjacent Ozaukee, Washington, and Waukesha Counties increased by about 138 percent. The decrease in Milwaukee County's total population since 1960 occurred largely as a result of declining population in the City of Milwaukee and other communities in the central portion of the County, including the Cities of Wauwatosa and West Allis and the Village of Whitefish Bay. As these areas are in the core of the service area for the Milwaukee County Transit System, the declining County population reduced the size of the market for the public transit service offered by the Milwaukee County Transit System. The recent population growth that has occurred in the County since 1980 has largely been in the southern one-third of the County in the Cities of Greendale and Greenfield, which are served by several County bus routes, and in the Cities of Franklin and Oak Creek, where bus service is far more limited due to low residential and employment densities.
2. While the population of Milwaukee County decreased, the number of households in the County increased by about 21 percent from 1960 to 2003. The average household size within the County,

consequently, decreased from about 3.2 persons per household in 1960 to about 2.4 persons per household in 2003. No community in the County experienced a decrease in households between 1960 and 2000 including the City of Milwaukee which saw a slight increase in households despite decreases in its total population. Trip making and, hence, the potential need to serve trips by transit is strongly related to the number of households and their characteristics.

3. Information from the U.S. Census was compiled and examined for the various minority populations in the County including Black/African American, American Indian or Alaska Native, Asian or Pacific Islander, other minority, and Hispanic persons. The County's principal minority populations in 2000 were Black/African American persons constituting about 240,100 persons, or about 26 percent of the total County population, and Hispanic persons constituting about 82,400 persons, or about 9 percent of the County population. Both minority groups have increased in size since 1980, with the Black/African American population increasing by about 61 percent, and the Hispanic population increasing by about 180 percent. The highest residential concentrations of the combined population for all minorities occur in the east-central and northwestern portions of the County, primarily in the City of Milwaukee.

4. Census information was also compiled and examined for five population subgroups who have typically been considered as transit-dependent because their dependence on, and use of, public transit has historically been greater than that of the general population as a whole. These population groups included school-age children (ages 12-16), elderly persons (age 65 and older), persons in low-income families (total family income less than 200 percent of the Federal poverty level), disabled persons, and households with no vehicle available. The largest transit-dependent population group in the County in 2000 in terms of absolute numbers was persons in low-income families which included about 297,600 persons or about 32 percent of the total County population. Zero-auto households, which represent a major market for the Milwaukee County Transit System, constituted 61,600 households in 2000, or about 16 percent of all households in the County. The highest residential concentrations of transit-dependent persons were found in the east-central and northwestern portions of the County, primarily in the City of Milwaukee.

Figure 1
RELATIVE CHANGES FOR
SELECTED CHARACTERISTICS OF
MILWAUKEE COUNTY: 1980-2000



^aRelative change for the period 1980-2003.

^bRelative change for the period 1980-2000.

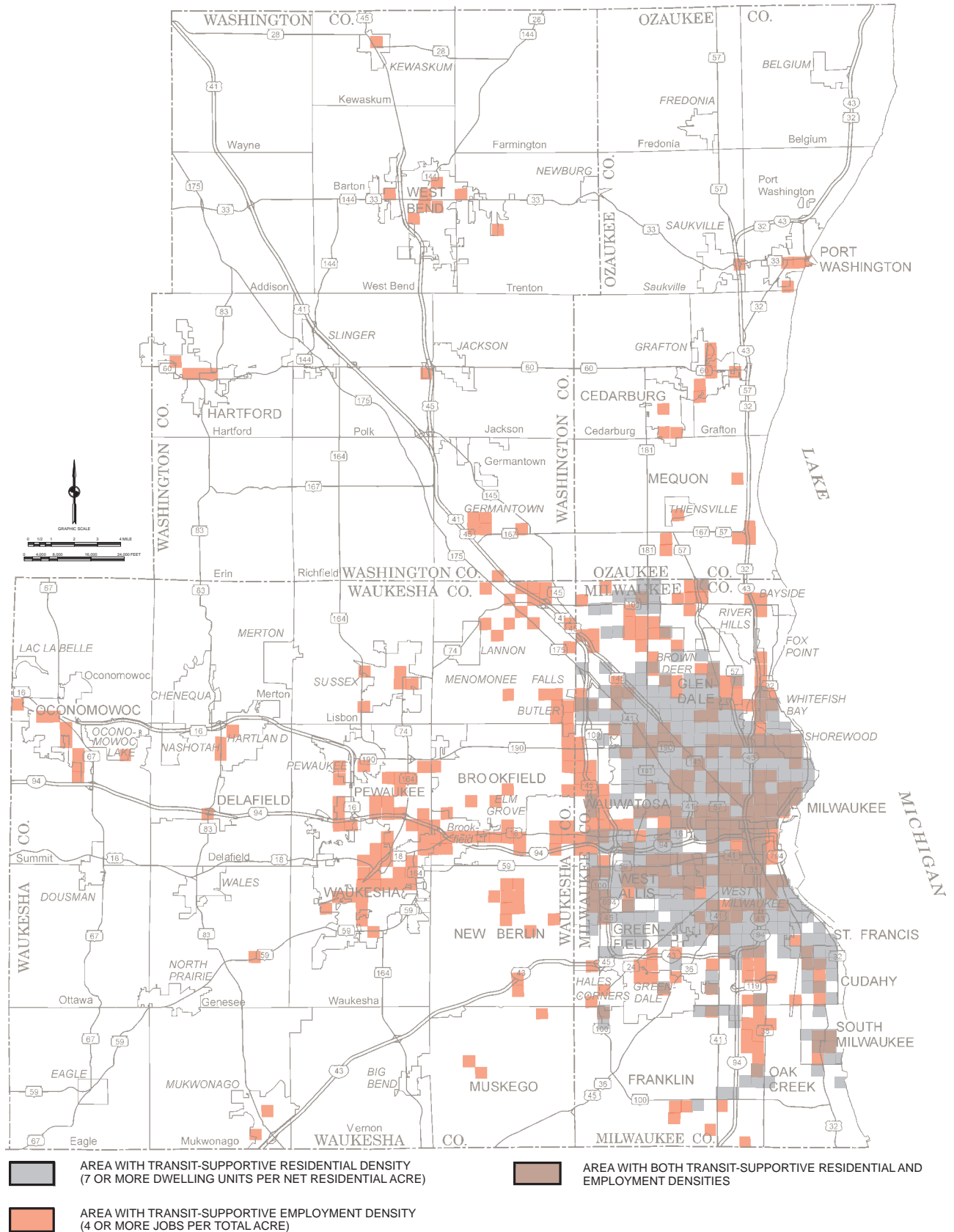
^cRelative change for the period 1972-2000.

Source: SEWRPC.

5. Total employment in Milwaukee County has increased from about 503,300 jobs in 1960 to about 589,800 jobs in 2003, or by about 17 percent, which is much slower than the increase in total employment for the Region as a whole of about 75 percent over this period. The growth of jobs in Milwaukee County has also been significantly slower than the growth of jobs in adjacent Ozaukee, Washington, and Waukesha Counties as the number of jobs in these counties increased from about 58,000 jobs in 1960 to about 377,400 jobs in 2003, or by about 551 percent, compared with the 17 percent increase in jobs in Milwaukee County. The significant job growth in the counties adjacent to Milwaukee County has resulted in the creation of new transit services, some operated by the Milwaukee County Transit System, that have been specifically designed to transport Milwaukee County residents to jobs in the adjacent counties.
6. Significant numbers of jobs are dispersed throughout Milwaukee County with the largest concentrations occurring within the Milwaukee Central Business District (CBD) and the area around the CBD, in the area including the University of Wisconsin-Milwaukee, and in the area that contains the Milwaukee County Regional Medical Center. The most significant concentrations of jobs outside of Milwaukee County occur in eastern Waukesha County with smaller job concentrations occurring in southern Ozaukee and Washington Counties. The highest employment densities in the four-county area are in Milwaukee County with no areas in Ozaukee, Washington, or Waukesha Counties approaching the employment densities reached in the Milwaukee CBD and central Milwaukee County.
7. Since 1980, the developed urban areas in Ozaukee, Washington, and Waukesha Counties have increased in acreage by about 50 percent while urban development in Milwaukee County has increased by about 10 percent. The pattern of this development has been discontinuous and diffused, which makes it difficult to serve effectively or efficiently with conventional fixed-route transit service. In Milwaukee County, the new development that has occurred recently has principally been in the far northwest side in the City of Milwaukee and in the far southern portion in the Cities of Franklin and Oak Creek. The development patterns in these areas, however, have been similar to those in the surrounding Counties and are generally not supportive of fixed-route bus service.
8. Substantial areas exist in central Milwaukee County with the residential densities needed to support fixed-route bus service operating with headways of 30 minutes or less. These areas generally lie between Silver Spring Drive on the north and Layton Avenue on the south and are east of 91st Street—areas that were largely developed by 1963. Similarly, extensive areas with employment densities that could potentially support fixed-route bus service can be found throughout most of Milwaukee County except for the far southern portion. Areas with such employment densities are far more limited in the surrounding counties, with the most extensive areas found in eastern Waukesha County. The areas which have residential and employment densities that have the highest potential for supporting fixed-route bus service are shown on Map 18.
9. The vast majority of the major activity centers for medical, school, shopping, government, recreation, and intercity rail and bus passenger services are located within Milwaukee County. Many of these centers, therefore, are currently served by the Milwaukee County Transit System. The major activity centers related to employment—major employers and major office and industrial parks/areas—are more widely dispersed throughout the four-county Milwaukee area. Of the 134 Milwaukee area employers with 500 or more employees, 48 are located in surrounding Ozaukee, Washington, or Waukesha Counties. Of the 89 major office and industrial parks/areas identified in the Milwaukee area, 64 are located in the surrounding counties.
10. On the basis of travel surveys undertaken by the Regional Planning Commission in 1963, 1972, 1991, and 2001, it may be concluded that average weekday total person travel entirely within Milwaukee County and between the County and the other six counties in the Southeastern Wisconsin Region has increased from about 2.5 million person trips in 1963 to about 3.3 million person trips in 2001, or by about 34 percent. Intracounty person trips—those made entirely within Milwaukee County—increased by about 319,100

Map 18

**TRANSIT SUPPORTIVE AREAS IDENTIFIED FOR THE
MILWAUKEE COUNTY TRANSIT SYSTEM DEVELOPMENT PLAN: 2000**



trips, or about 14 percent, from about 2.2 million trips in 1963 to about 2.5 million trips in 2001. About 77 percent of all Milwaukee County person trips in 2001, were intracounty trips with the largest proportion being made for medical, personal business, or social or recreational purposes. Trips produced in or attracted to the Milwaukee CBD accounted for about 181,600, or about 7 percent, of all the Milwaukee County average weekday intracounty person trips in 2001. Intercounty, intraregional trips—those made with one trip end in Milwaukee County and the other trip end within one of the other six counties in the seven-county Southeastern Wisconsin Region—increased by about 517,500 person trips, or about 210 percent, from about 247,000 trips in 1963 to about 764,500 trips in 2001. About 23 percent of all Milwaukee County person trips in 2001 were intercounty, intraregional trips with the largest proportion being made for work purposes. Trips made between Milwaukee and Waukesha Counties accounted for about 501,000 trips, or about two-thirds of all the Milwaukee County intercounty person trips in 2001 with the majority occurring between central Milwaukee County and eastern Waukesha County.

11. A survey of passengers using the Milwaukee County Transit System was conducted by the Commission from April 24 through 27, 2001, on a sample of all scheduled weekday bus trips. It was determined that about 121,000 of the 124,600 average weekday linked transit person trips in 2001, or about 97 percent, were made within Milwaukee County. Transit person trips attracted to or produced within the Milwaukee CBD accounted for about 30,500, or 25 percent, of all the transit person trips made within the County, while transit person trips attracted to or produced within the UWM area accounted for 27,900 trips, or about 23 percent of the transit person trips made within the County. About 3,600 linked transit person trips, or about 3 percent of the total average weekday transit person trips, were made between Milwaukee County and the surrounding counties with about 85 percent of these trips occurring between Ozaukee/Waukesha Counties and Milwaukee County. Contract bus services sponsored by these two counties were included in the Commission passenger survey. The survey also found that the transit system was used principally for work or school purpose travel with about 42 and 23 percent, respectively, of average weekday linked transit person trips made for these purposes; that the system was used predominantly by passengers from 24 to 55 years old, or of typical working age; and that about 45 percent of the weekday linked transit person trips on the system were made by passengers who used the transit system regularly, that is, more than five times per week.

Chapter III

EXISTING TRANSIT SYSTEM

INTRODUCTION

A thorough understanding of the existing transit system is essential to the preparation of any transit system development plan. This understanding should be based upon pertinent information describing the existing transit system services and their operating characteristics, the existing operating equipment and facilities, trends in system ridership and service levels, and the financial requirements and funding sources for the transit system. Information on other major transit services that operate within the service area and interface with the transit system should also be provided.

This chapter documents the important information for the Milwaukee County Transit System and the other public transit systems operating in the four-county Milwaukee area that is necessary for the preparation of a sound transit system development plan. Presented first is a description of the Milwaukee County Transit System including service operations, fares, equipment and facilities, ridership, and public investment. This is followed by descriptions of the transit services provided by other public transit operators with services interfacing with the Milwaukee County Transit System—Ozaukee, Washington, and Waukesha Counties, and the Cities of Racine and Waukesha. The final section identifies and briefly describes other major transit services operating in Milwaukee County including taxicab services, intercity bus and rail service and specialized transportation services for elderly and disabled persons.

THE MILWAUKEE COUNTY TRANSIT SYSTEM

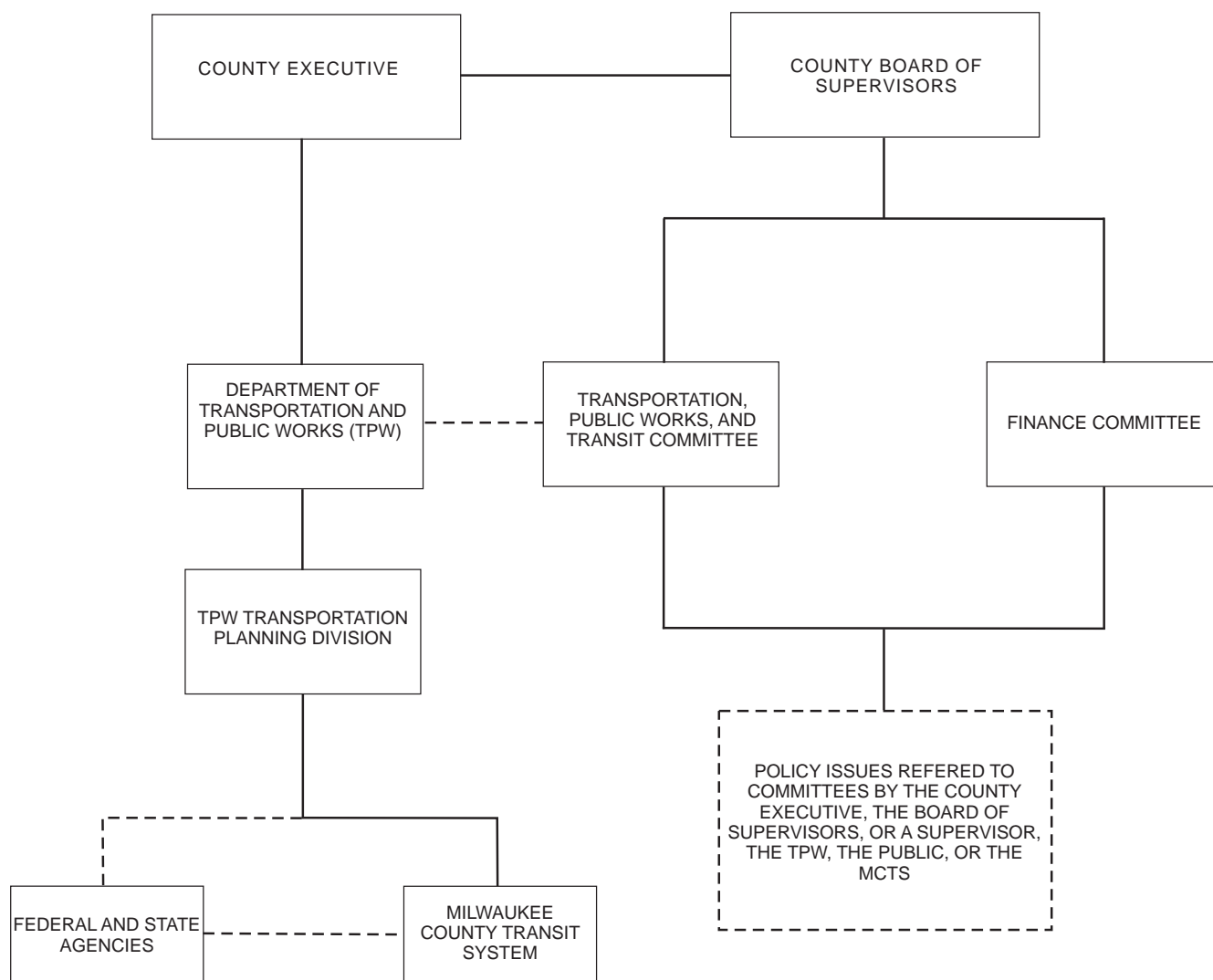
The Milwaukee County Transit System was created from the privately owned fixed-route bus system operated by the Milwaukee and Suburban Transport Company, Inc. All assets of the private company, including operating rights to all the routes and the operating equipment and facilities, were acquired by Milwaukee County which on July 1, 1975 formally began operation of the bus system as the newly created Milwaukee County Transit System. The following sections describe a description of current transit system administration and operations, equipment and facilities, ridership, and funding.

Administrative Structure

The Milwaukee County Transit System is owned by Milwaukee County and operated by the private contract management firm of Milwaukee Transport Services, Inc., a private nonprofit corporation. Oversight of the management firm is provided by staff within the Milwaukee County Department of Transportation and Public Works and the Milwaukee County Transportation, Public Works, and Transit Committee—a standing committee of the Milwaukee County Board of Supervisors. Under this arrangement, Milwaukee Transport Services, Inc.,

Figure 2

ADMINISTRATIVE AND POLICY-MAKING STRUCTURE FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM



Source: Milwaukee County Transit System and SEWRPC.

assumes full responsibility for day-to-day operating and management decisions and operates the transit system with private sector employees, while the County assumes the principal role in determining the transit budget and transit policy issues including the fares charged, services operated, and operating equipment and facilities. The County is responsible for providing the management firm with the capital equipment and facilities and the public funds needed for operating the transit system. The overall management arrangement and policy making structure for the Milwaukee County Transit System is illustrated in Figure 2.

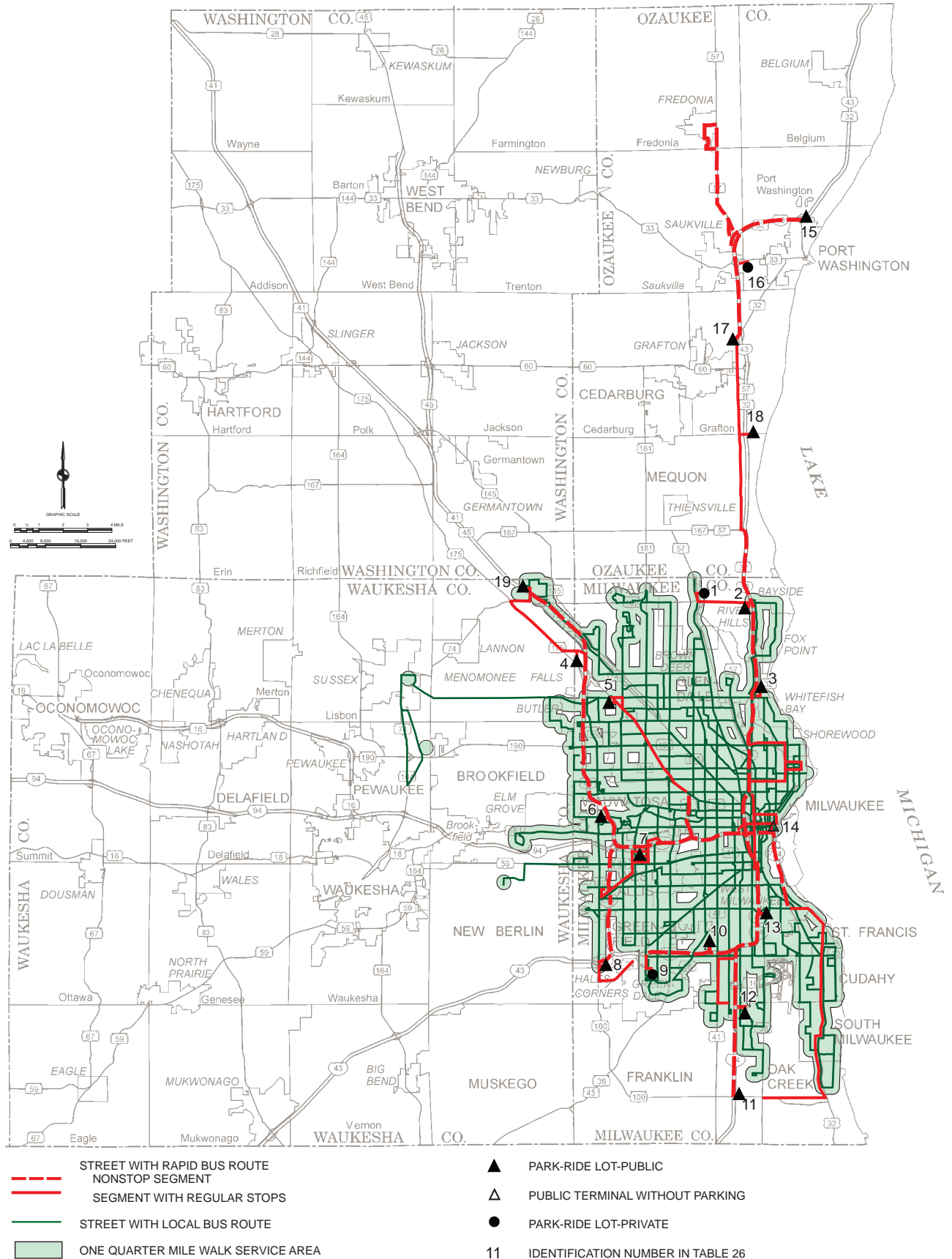
Fixed Route Bus Service

Routes and Operating Characteristics:

The fixed-route bus service provided by the Milwaukee County Transit System during 2004 is illustrated on Map 19 and the basic characteristics for the transit system are summarized in Table 22. The regular transit services provided by the system in 2004 include:

Map 19

**EXISTING PUBLIC TRANSIT SERVICE PROVIDED BY
THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**



Source: Milwaukee County Transit System and SEWRPC.

Table 22

**SELECTED CHARACTERISTICS OF THE FIXED-ROUTE BUS SERVICE
PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

Characteristic	Weekday	Saturday	Sunday/Holiday
Number of Bus Routes			
Regular Service			
Freeway Flyer.....	9	--	--
Express.....	--	--	--
Regular Local and Shuttle.....	31	30	29
Schoolday			
High/Middle School.....	8	--	--
UBUS.....	3	--	--
Subtotal	51	30	29
Contract Service.....	8	2	3
Total	59	32	32
Round Trip Route Miles			
Regular Service			
Freeway Flyer.....	238	--	--
Express.....	--	--	--
Regular Local and Shuttle.....	862	877	839
Schoolday			
High/Middle School.....	123	--	--
UBUS.....	84	--	--
Subtotal	1,307	877	839
Contract Service.....	239	88	158
Total	1,546	965	997
Hours of Operation			
Regular Service			
Freeway Flyer.....	5:30 a.m.-9:00 a.m. 3:15 p.m.-7:00 p.m.	No Service	No Service
Express.....	No Service	No Service	No Service
Regular Local and Shuttle.....	3:45 a.m.-2:30 a.m.	4:00 a.m.-2:30 a.m.	4:30 a.m.-2:30 a.m.
Schoolday			
High/Middle School.....	6:15 a.m.-8:00 a.m. 2:45 p.m.-4:15 p.m.	No Service	No Service
UBUS.....	6:45 a.m.-9:15 p.m.	No Service	No Service
Peak Vehicle Requirements.....	398	214	167

Source: Milwaukee County Transit System and SEWRPC.

- Rapid “Freeway Flyer” bus service. This service consists of buses operating between outlying areas or park-ride lots and the Milwaukee Central Business District (CBD) over the freeway system and arterial streets, making a limited number of stops between the outlying route terminus and downtown Milwaukee (see Map 20). Freeway Flyer routes are designed to provide high speed direct service to downtown Milwaukee from outlying residential areas in the County that are generally not served by other bus routes or served with only infrequent “end of the line” local bus service. Service is provided only during the weekday morning and afternoon peak periods and principally in the peak direction of travel. The transit system currently operates nine Freeway Flyer routes serving 12 outlying park-ride lots where there is no parking charge for passengers using automobiles to get to or from the route. On some Freeway Flyer routes, riders may also board or alight at bus stops located along arterial streets before buses get on or after they get off the freeway system.

- Regular local and shuttle bus service (see Map 21). Local bus service is operated primarily over arterial and collector streets with frequent stops, typically at about one-eighth mile intervals. Local shuttle bus service is operated primarily on collector streets to connect passengers using regular local routes to employment centers such as industrial and office parks. The local routes form a grid that serves as the basic network of the transit system and are designed so that most passengers do not have to transfer more than once to reach their destination. The transit system operates 31 local service routes, 12 of which either pass through or terminate in the Milwaukee CBD. Many of the cross town routes have branches at the ends of the route. This allows the transit system to adjust service levels for outlying areas of the county where residential and employment densities are lower than in the central portions of the County served by the routes. The regular local bus service is available seven days a week with most routes operating on both weekdays and weekends. Local shuttle bus service is operated only during weekday peak periods.
- Special school day bus services including high school/middle school routes and UBUS routes (see Map 22). Six high school/middle school routes are operated primarily over arterial and collector streets to and from public schools and generally have a service schedule limited to one or two trips in the mornings and afternoons on schooldays only. Three UBUS routes are operated over the freeway system and arterial streets between outlying areas and park-ride lots to and from the University of Wisconsin-Milwaukee (UWM) campus and make a limited number of stops between the outlying route terminus and the UWM campus. The UBUS routes operate on only weekdays and only during the fall and spring semesters at the UWM.

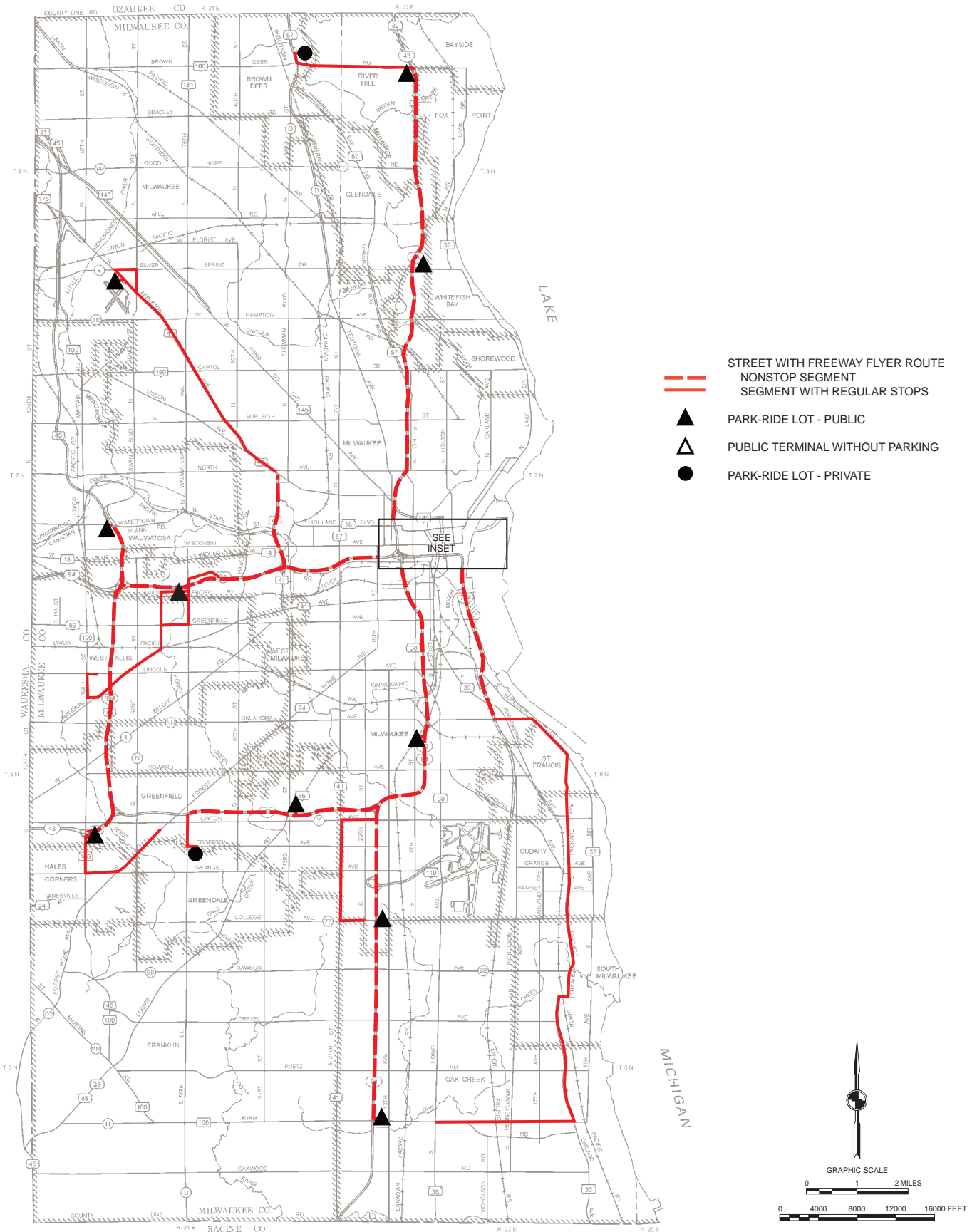
The Milwaukee County Transit System provides contract bus services that should be considered apart from the regular bus services funded by Milwaukee County. The contract service routes are operated for, and funded by, other counties in the Milwaukee area or by local business (see Map 23) and include Route No. 143, operated for Ozaukee County, and Route Nos. 6, 8, 9, 79, 106 and the segment of Route No. 10 operated between the Milwaukee-Waukesha County line and the Brookfield Square Shopping Center, all operated for Waukesha County. These two counties are responsible for providing the Federal, State, and local funds needed to pay for the portion of the operating expenses for these routes not covered through passenger revenues. The Ozaukee County service contract is administered by staff in the Ozaukee County Highway Department and the Waukesha County service contract is administered by staff at the City of Waukesha Metro Transit System for Waukesha County. The transit system also operates a special circulator service during the summer period from Memorial Day through Labor Day over a loop route serving the Milwaukee CBD and Milwaukee's lower east side. The Milwaukee Trolley Loop operates using special buses that resemble historic trolleys and is funded through passenger fares and money contributed by the local businesses served and neighborhood organizations.

Finally, the transit system also provides special event service using routes serving Miller Park for Milwaukee Brewers games, Henry W. Maier Festival Park for Summerfest and other festivals held at the site, and State Fair Park for the Wisconsin State Fair (see Map 24). The transit system has designed 20 routes to serve high attendance events at these sites, the majority of which are operated over the freeway system. Not all routes are operated for each special event at the above sites.

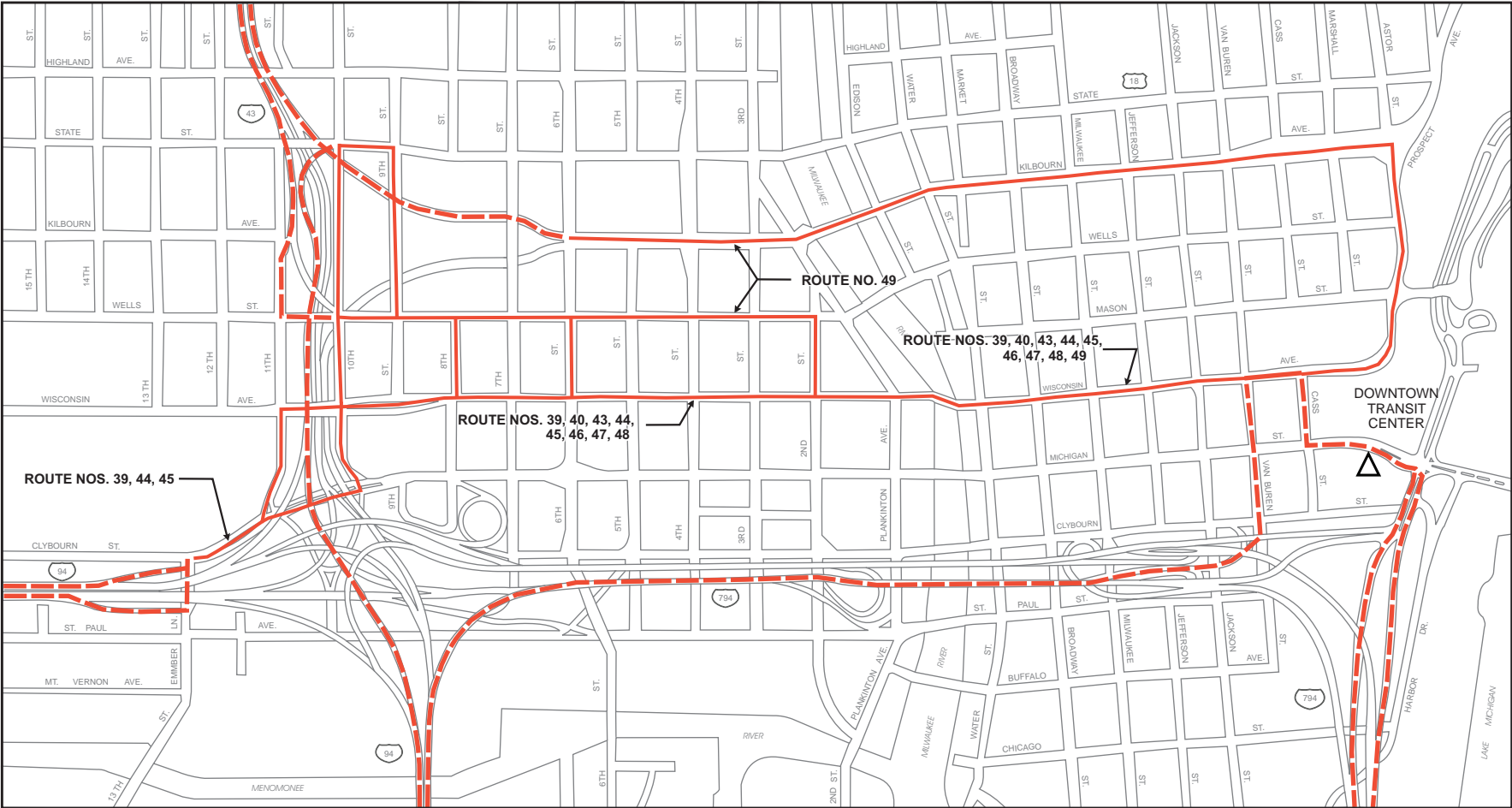
As shown in Table 22, a total of 37, or about 75 percent, of the 49 regular routes operated on weekdays provide essentially local bus service, that is, service with frequent stops and relatively slow travel speeds. On weekends and holidays, the only routes operated are the regular local routes with the exception of when routes are operated for special events at the lakefront, Miller Park, and State Fair Park. The current 2004 transit system does not operate any express routes as part of its regular service. Prior to 2003, the transit system provided limited-stop express bus service over several routes that operated both within and outside Milwaukee County as shown on Map 25. The express routes were operated primarily over arterial streets in major travel corridors with stops usually located at intersecting bus routes and major activity centers. Two of the express routes—Route No. 1 Metrolink and Route No. 2 Metrolink—operated entirely within Milwaukee County, linking the County's northwest and southwest sides to the Milwaukee CBD. A third express route—Route No. 3 Metrolink—was operated in 1997 and 1998 as one of several congestion mitigation measures funded by the Wisconsin Department of Transportation (WisDOT) during the resurfacing of IH 94 in Milwaukee and Waukesha Counties. The route operated between the Brookfield Square

Map 20

RAPID FREEWAY FLYER BUS SERVICE PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004

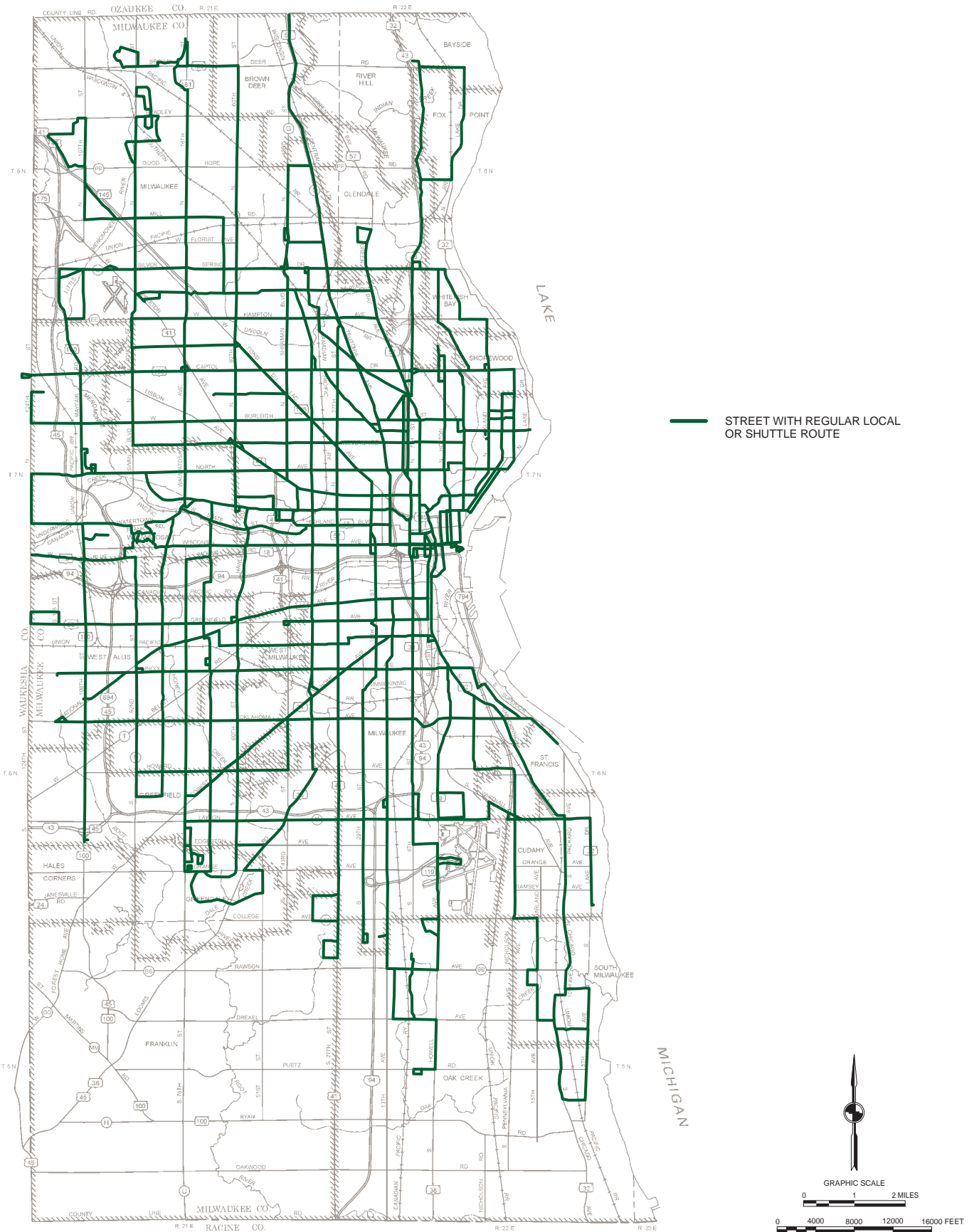


Map 20 Inset

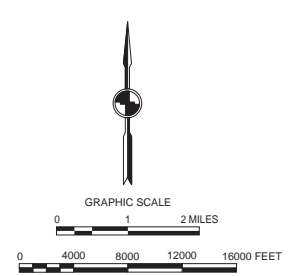


Map 21

**REGULAR LOCAL AND SHUTTLE BUS SERVICE PROVIDED
BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

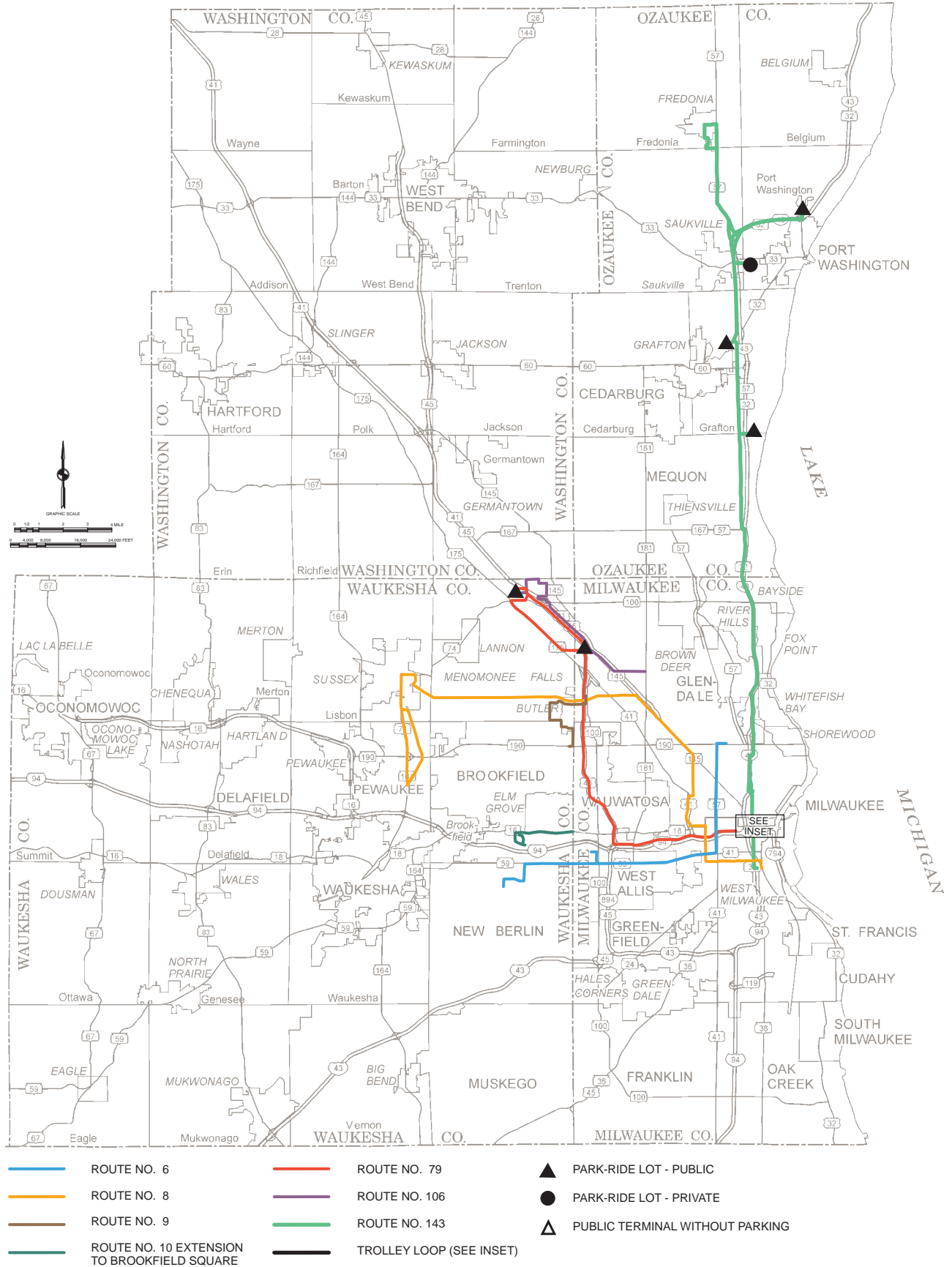


**SCHOOLDAY BUS SERVICES PROVIDED BY THE
MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

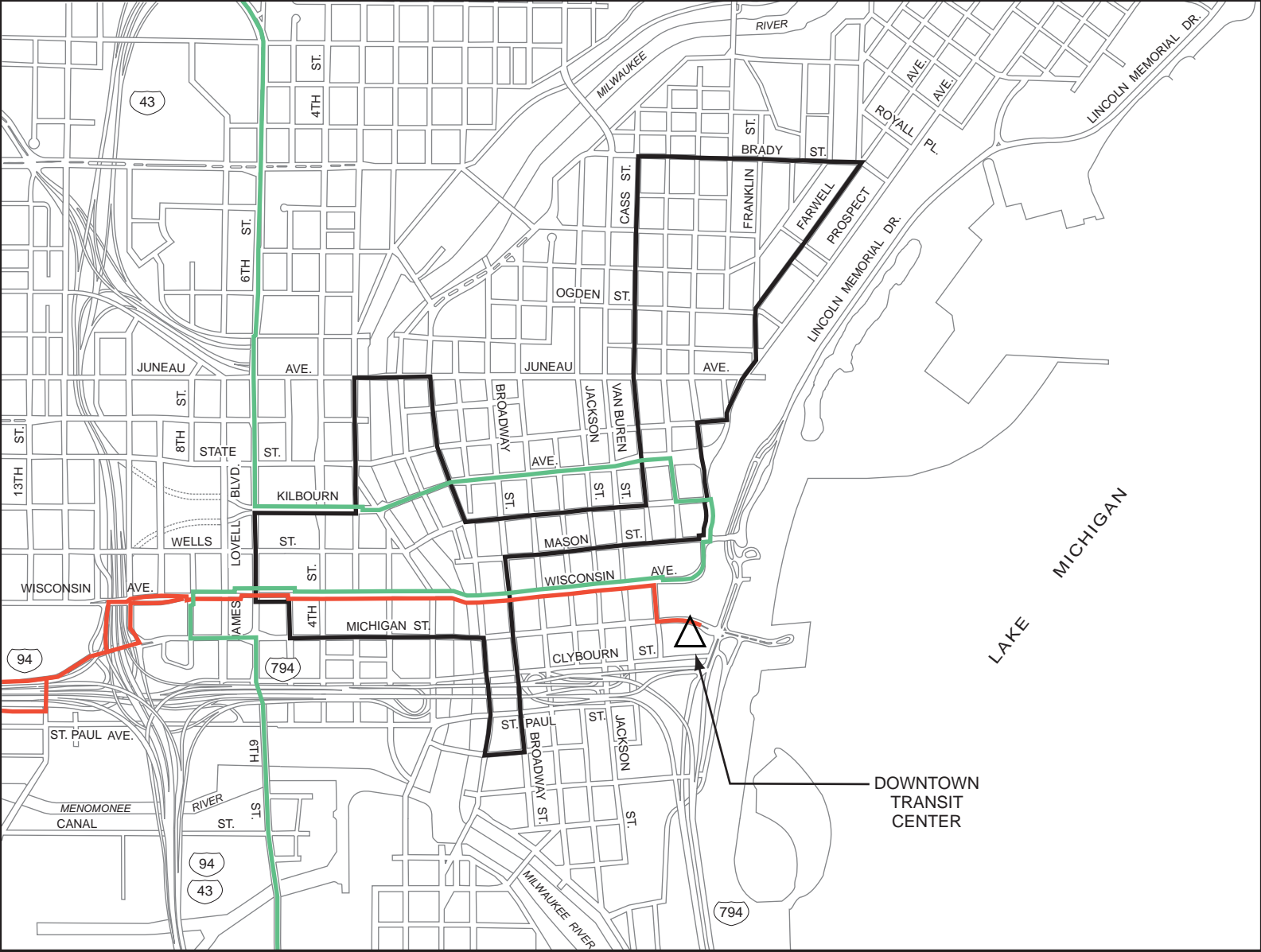


Map 23

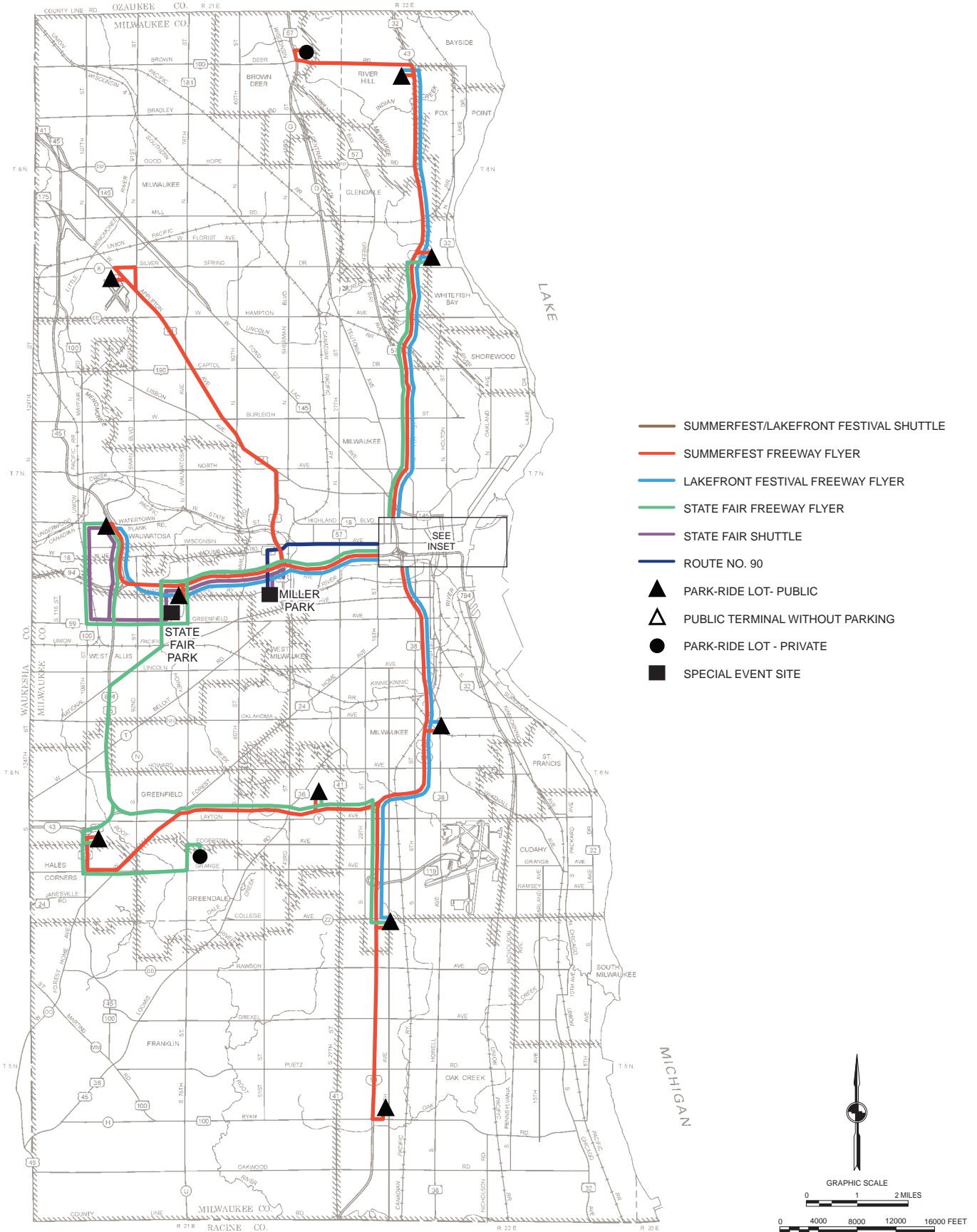
**SPECIAL CONTRACT BUS SERVICES PROVIDED BY THE
MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**



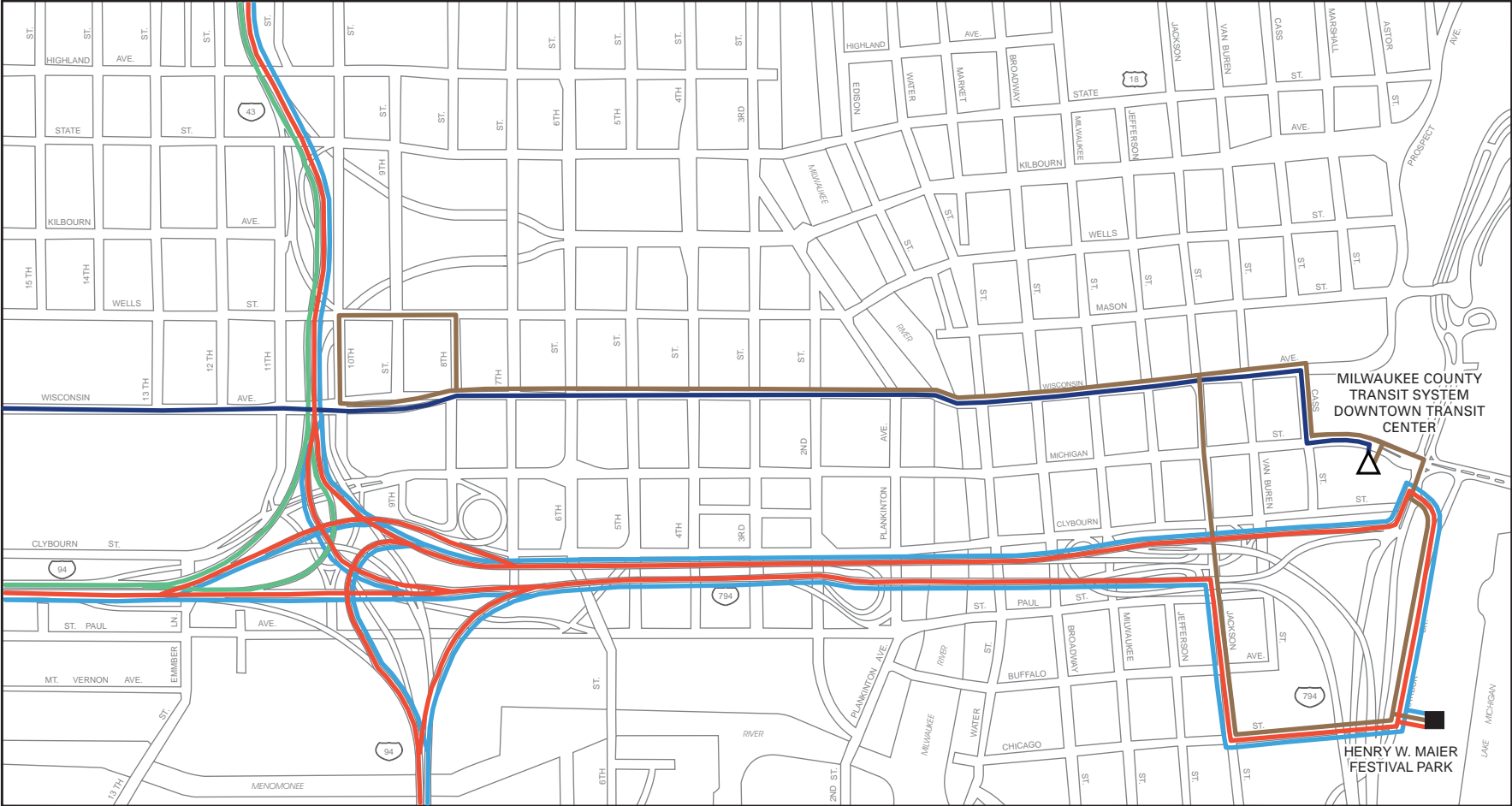
Map 23 Inset



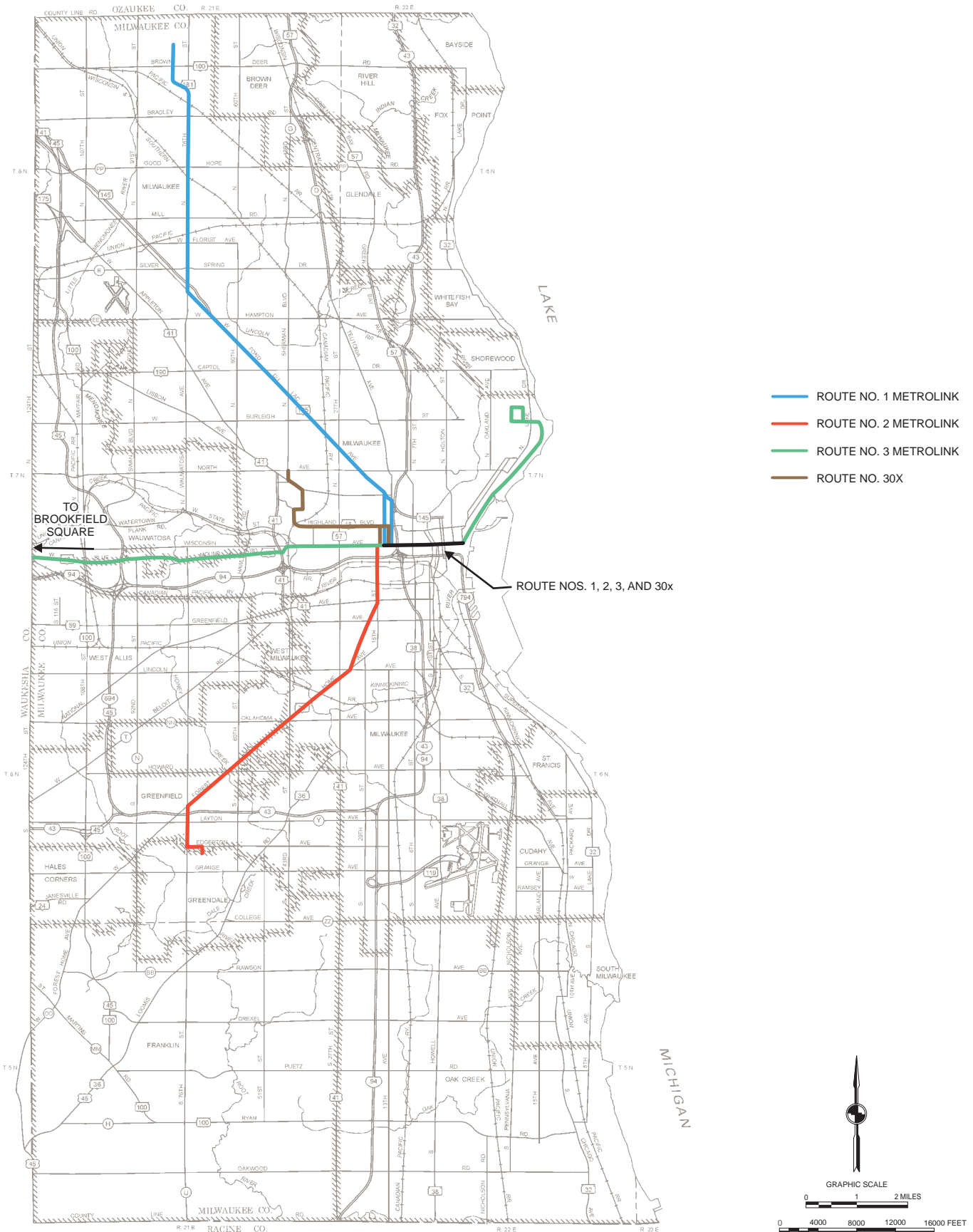
**SPECIAL EVENT BUS SERVICE PROVIDED BY
THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2004**



MAP 24 Inset



**EXPRESS BUS SERVICE FORMERLY PROVIDED
BY THE MILWAUKEE COUNTY TRANSIT SYSTEM**



Shopping Center in Waukesha County, the Milwaukee CBD, and UWM. Express service was also provided over a portion of Route No. 30—Route No. 30X—operated west of the CBD. The Route No. 1 express service was the most extensive and was provided during both weekday peak and off-peak hours and on weekends. The Route No. 3 express service was also provided during both weekday peak and off-peak hours but not on weekends while the service over Route Nos. 2 and 30X was provided only during both weekday peak hours and in the peak direction of travel. Route Nos. 1, 2, and 30X were eliminated as part of the service reductions implemented in late 2001 and 2002 to meet overall Milwaukee County budgetary constraints. Route No. 3 was eliminated in 1998 after the resurfacing of IH 94 in Milwaukee and Waukesha Counties was completed and special WisDOT funding for operation of the route was no longer available.

Service Levels

The bus routes of the transit system operate with service levels—headways—that are determined individually for each route based on actual ridership demand. In general, the most frequent service is provided in the central portion of the County between Capitol Drive on the north, Oklahoma Avenue on the south, 60th street on the west, and Lake Michigan on the east. Weekday headways for regular local bus service in this area are generally between five and 20 minutes during peak periods, between 10 and 30 minutes during the midday period, and between 15 and 30 minutes during the evening period before 10:00 p.m. and on weekends. On the routes serving the outer portions of the County, service frequencies are longer. Headways on the regular local routes outside central Milwaukee County are generally between 15 and 60 minutes on weekdays and on weekends where service is available. Headways on UBUS routes generally range from 15 to 60 minutes during weekday peak and midday periods and headways on freeway flyer routes generally range from 10 to 30 minutes during weekday peak periods. On the local routes serving high schools and middle schools throughout the County, only one or two bus trips are operated on school days. The average headway on each route on weekdays and weekends are illustrated on Map 43 in the service evaluation material presented in Chapter V.

Service Area

The regular local service area for the Milwaukee County transit system (see Map 19) includes all areas within a one-quarter mile—a maximum walking distance for fixed route bus passengers based on accepted transit industry standards—of a local bus route operated by the transit system, including both regular and contract local bus routes. This service area includes the vast majority of the City of Milwaukee and most of the suburban communities in Milwaukee County. Only the Cities of Oak Creek and Franklin in southern Milwaukee County, and the Villages of River Hills and Hales Corners in the northeastern and southwestern, respectively, portions of the County are left largely unserved by the County's local bus routes. The service area also includes small portions of Waukesha County in the Cities of Brookfield and New Berlin, and in the Villages of Elm Grove and Menomonee Falls that are served by the Waukesha County contract local bus routes operated by the transit system. The total local service area in 2004 is estimated to encompass approximately 161 square miles, have a total estimated year 2000 population of about 866,000 persons, and include approximately 635,000 jobs based on 2000 employment data.

Fares

The fares charged for fixed route bus service in 2004 are shown in Table 23. The base adult cash fare is \$1.75 per trip with reduced fares offered for students, elderly persons, and disabled individuals. Convenience fares are also available in the form of tickets and passes which offer a discount from the comparable cash fare. Free transfers are issued upon request at the time the fare is paid, and may be used to transfer to any route, including the route from which the transfer was issued, during the one-hour period after the transfer is issued.

The historic trends in the base adult cash fare and the price of an adult weekly pass for the Milwaukee County Transit System since it began public operation in 1975 are shown in Figure 3 in both actual dollars and constant 1975 dollars. The last fare increase implemented by Milwaukee County was in January 2004 when the base adult cash fare was raised from \$1.50 to \$1.75 per trip, or by about 17 percent. With the past fare increases, the current adult cash fare in constant 1975 dollars is about the same as the adult cash fare of \$0.50 per trip that was in effect when the County began public operation of the system in 1975, and the current price of an adult weekly pass in constant 1975 dollars is slightly less than the price of an adult weekly pass in 1975. The introduction of two new

Table 23

FARES FOR MILWAUKEE COUNTY TRANSIT SYSTEM FIXED-ROUTE BUS SERVICE: FALL 2004

Fare Category by Service Type	Fare Type		
	Cash (per one-way trip)	Tickets	Pass
Regular Service			
Adults Ages 12 to 64.....	\$1.75	10 for \$13.00	\$13.00 per week ^a
Students			
With UPASS.....	--	--	\$38.00 per semester ^b
With Student Fare Permit.....	\$1.30	10 for \$11.00	\$5.00 per school year
Children Ages 6-11 (Under age 6 free when accompanied by an adult).....	\$0.85	10 for \$8.50	--
Elderly (65 and older) and Disabled Persons	\$0.85	10 for \$8.50	--
Commuter Value Pass.....	--	--	\$42.00 per month ^c
Freeway Flyer Service	\$2.05	10 for \$16.00	\$13.00 per week plus \$0.30 cash
Contract Service			
Trolley Loop			
Adults Ages 12 to 64.....	\$1.00	--	--
Elderly (65 and older) and Disabled Persons	\$0.50	--	--
Waukesha County Service			
Route Nos. 6, 8, 9, 10 (extension to Brookfield Square), and 106	Applicable cash fare stated above	Applicable ticket fare stated above	Applicable pass fare stated above
Route No. 79	\$2.25 plus \$0.35 zone charge	10 for \$16.00 plus \$0.35 zone charge	\$13.00 per week plus \$0.30 zone charge
Ozaukee County Service			
Route No. 143	\$2.25	Applicable regular ticket fare plus \$0.75, or applicable premium ticket fare plus \$0.25	Weekly pass fare plus \$0.75, or UPASS or commuter value pass fare plus \$0.25
Transfers			
With Milwaukee County Transit System Routes ^d			
To Freeway Flyer routes	\$0.30 when transferring to route	\$0.30 when transferring to route	\$0.30 when transferring to route
To All other routes.....	Free	Free	Free
With Trolley Loop Route	Applicable cash fare stated above ^e	Applicable cash fare stated above ^e	Applicable cash fare stated above ^e
With Waukesha County contract service routes.....			
Route Nos. 6, 8, 9, 10 (extension to Brookfield Square), and 106	Free	Free	Free
Route No. 79	\$0.30 when transferring to route plus \$0.35 zone charge	\$0.30 when transferring to route plus \$0.35 zone charge	\$0.30 when transferring to route plus \$0.35 zone charge
With Ozaukee County contract service Route No. 143.....	\$0.75 when transferring to route	\$0.75 when transferring to route	\$0.75 when transferring to route
With other transit operators			
Coach USA/Wisconsin Coach Lines, Inc.....	\$0.50 discount applied toward applicable fare with a valid transfer	\$0.50 discount applied toward applicable fare with a valid transfer	\$0.50 discount applied toward applicable fare with a valid transfer
Washington County Commuter Express	Applicable cash fare stated above ^e	Applicable ticket fare stated above ^e	Applicable pass fare stated above ^e
Waukesha Metro Transit.....	\$0.25 with a valid transfer	\$0.25 with a valid transfer	\$0.25 with a valid transfer

^aThe weekly pass is good for unlimited riding for one week.

^bThe UPASS is good for unlimited riding during a semester. It is paid for by participating colleges and universities for use by eligible students.

^cThe commuter value pass is good for unlimited riding during the monthly period indicated on the pass. It is paid for by a participating employer which may charge each employee up to \$19 per month for the pass.

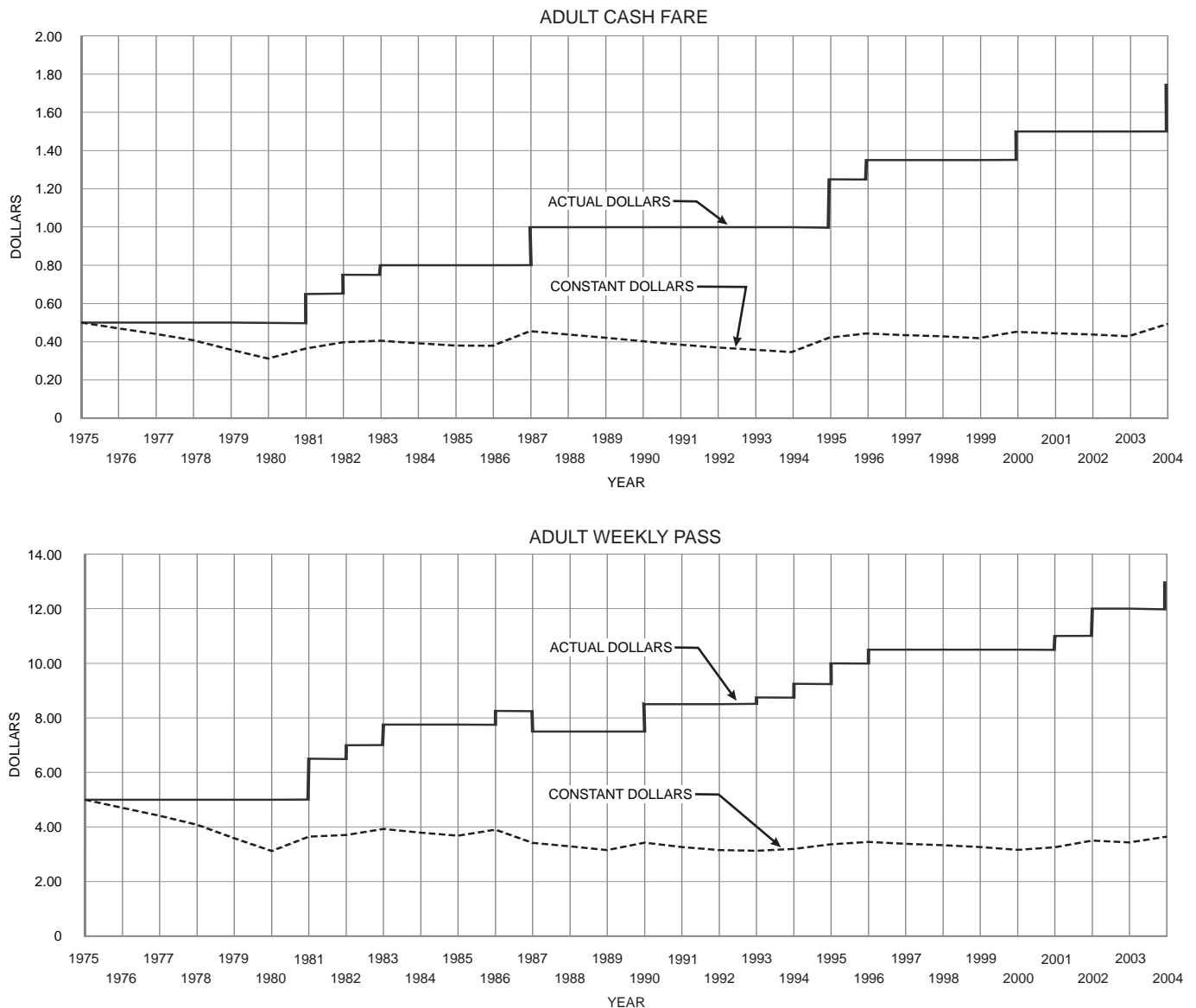
^dFree transfers for Milwaukee County Transit System routes are currently issued at the time the cash or ticket fares are paid and are valid for one hour. Passengers transferring to Freeway Flyer routes must also pay a premium fare of \$0.30.

^eThere is currently no special transfer fare policy in effect for passengers transferring between these services and Milwaukee County Transit System bus routes. Transferring passengers must pay the appropriate full cash, ticket or pass fare.

Source: Milwaukee County Transit System and SEWRPC.

Figure 3

**HISTORIC FARES FOR FIXED ROUTE BUS SERVICE CHARGED
BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1975-2004**



Source: Milwaukee County Transit System and SEWRPC.

pass programs in the mid 1990's—the UPASS for UWM students and the Commuter Value Pass for workers at large employers in the County—has also served to moderate the impacts of recent increases in cash and pass fares by increasing the number of discounted fare types for frequent bus riders.

Transit Plus Paratransit Service for Disabled Individuals

The Milwaukee County Transit System also provides paratransit service to serve the travel needs of disabled individuals through the Transit Plus paratransit system. The Transit Plus service is provided in accordance with Federal regulations implementing the public transit requirements of the Americans with Disabilities Act of 1990 which states that each public entity operating a fixed route transit system must ensure that paratransit service is available as a complement to its fixed route bus service for disabled individuals. Such paratransit service must provide for transit service that is directly comparable to that provided by the public entity's fixed-route bus system.

Table 24

**OPERATING AND SERVICE CHARACTERISTICS OF THE PARATRANSIT
SERVICE FOR DISABLED INDIVIDUALS PROVIDED BY TRANSIT PLUS: FALL 2004**

Characteristic	Description ^a
Eligible Users	<p>Disabled individuals whose physical or cognitive disability prevents them from using bus service provided by the Milwaukee County Transit System including those:</p> <ul style="list-style-type: none"> • Who cannot independently board, ride or get off a bus • Who could use an accessible fixed route bus, but none is available for the trip desired • Who have a disability related condition or an environmental barrier that makes it impossible to independently travel to or from a fixed route bus stop <p>Eligible users may have a personal care attendant travel with them if the attendant is needed by the user to travel safely or to provide assistance to the user at the trip destination. Eligible users may bring along one companion, who is not a personal care attendant, traveling to the same destination as the user. Additional companions are allowed only on a space available basis</p>
Type of Service	<p><u>Taxicab Service</u> Taxicab service is offered to disabled individuals who are ambulatory, those who can travel with minimal assistance, and those who can transfer between a wheelchair and the taxi seat. Service is provided curb-to-curb with passengers picked-up and dropped-off at the closest location where passengers can safely board or alight the taxi vehicle.</p> <p><u>Van Service</u> Van service is offered to those who need accessible vehicles and/or driver assistance. Service is door-to-door with drivers allowed to assist passengers through the first exterior door at both the origin and destination locations.</p>
Response Time	<p><u>Taxicab Service</u> No advance reservation requirement. Trip reservations may be made the same day that travel is desired</p> <p><u>Van Service</u> Trip reservations must be accepted no less than the day prior to when service is needed. Reservations may also be made up to 14 days in advance of the time service is needed. Subscription service is allowed on a limited basis.</p>
Restrictions or Priorities Placed on Trips	None
Fares	<p><u>Taxicab Service</u> Cash: \$3.25 per one-way trip Tickets: 10 for \$32.50 Fares for taxicab trips are on a time- and mileage-based meter charge and the total trip charge may exceed \$3.25. In this case, the rider is responsible for the initial \$3.25 fare plus any amount exceeding \$14.60. There is no fare charged for personal care attendants or service animals. Companions traveling with disabled riders are charged \$0.75 per one-way trip. There may be extra charges for packages, wait time between destinations, and travel to/from the airport.</p> <p><u>Van Service</u> Cash: \$3.25 per one-way trip Tickets: 10 for \$32.50 There is no fare charged for personal care attendants or service animals. Companions traveling with disabled riders are charged \$3.25 per one-way trip.</p>
Hours and Days of Operation	<p><u>Taxicab Service</u> 24 hours a day, seven days a week</p> <p><u>Van Service</u> 4:30 a.m. - 1:00 a.m., seven days a week</p>
Service Area	Milwaukee County
Vehicles	<p><u>Taxicab Service</u> 50 nonaccessible taxicabs</p> <p><u>Van Service</u> 215 accessible vans or buses</p>

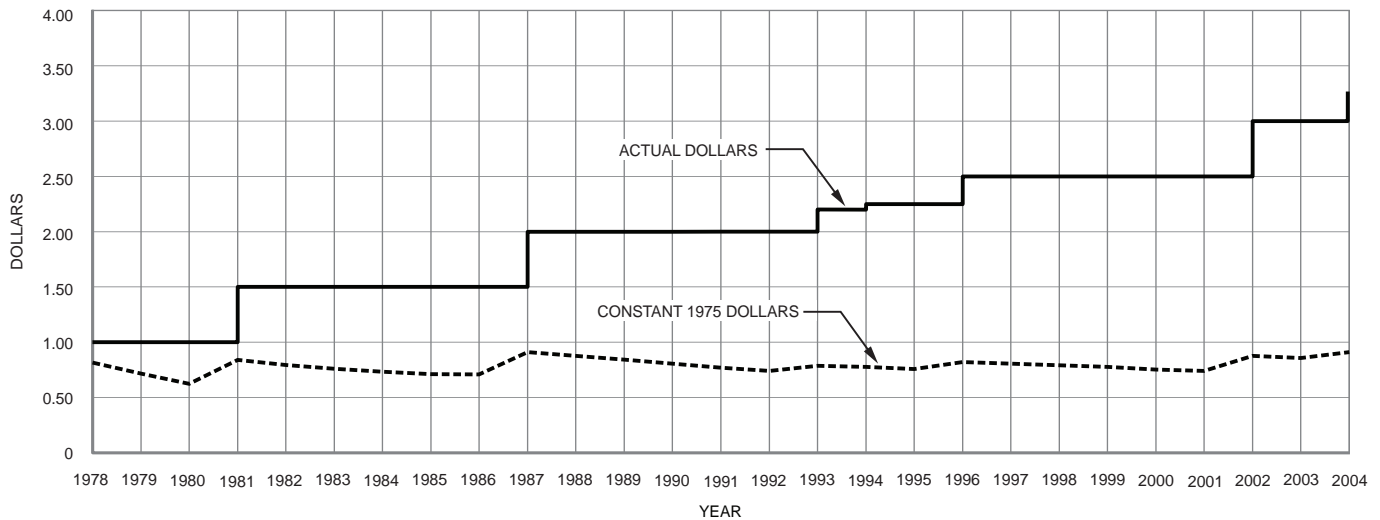
^aUnless otherwise noted, the description applies to both the taxicab and van services provided under the Transit Plus paratransit system.

Source: Milwaukee County Transit System and SEWRPC.

The eligibility requirements for, and service characteristics of, the Transit Plus service are summarized in Table 24. The service is designed for disabled individuals who have a disability that prevents them from using the fixed-route bus service provided by the Milwaukee County Transit System. Transit Plus service includes taxicab service for ambulatory disabled individuals who do not require an accessible vehicle and can travel with a minimal level of assistance, and van service for disabled individuals who require an accessible vehicle and/or some driver assistance in making a trip. Taxicab service is provided as curb-to-curb service with users picked-up and dropped-off at the closest streetside or driveway location where passengers can safely board or alight the taxi vehicle and prospective users may call for service the same day it is needed. To provide the taxicab service, the transit system contracts with one private taxicab company, American United Taxicab Services. The Transit Plus van service is provided as door-to-door service with drivers assisting, if needed, users through the first exterior door at both the

Figure 4

**HISTORIC FARES FOR PARATRANSIT SERVICE CHARGED
BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1978-2004**



Source: Milwaukee County Transit System and SEWRPC.

origin and destination locations. Prospective users of the van service are required to make reservations at a minimum the day prior to when service is needed. Reservations for service may also be made up to 14 days in advance of the time service is needed and subscription trips made to/from the same location at the same time on a regular basis are also allowed on a limited basis. To provide the van service, the transit system contracts with two private paratransit service providers, Transit Express, Inc. and Laidlaw Transit Services, Inc. The Transit Plus paratransit service is available during the same service periods as the Milwaukee County Transit System fixed-route bus service, and serves trips made throughout Milwaukee County and small areas in adjacent Waukesha and Ozaukee Counties that are served by local Milwaukee County Transit System bus routes providing service throughout the day. This represents a larger service area than that for the Milwaukee County Transit System fixed-route bus service.

Registered users of the Transit Plus program are charged a base fare of \$3.25 per trip for both the van and taxi services provided. There is no fare charged for personal care attendants or service animals. For van service, companions are charged \$3.25 per one-way trip and there is no extra charge for packages or bags brought along by riders. For taxi service, companions are charged \$0.75 per one-way trip and there may be extra charges for packages, wait time between destinations, and travel to/from the airport. Also, since taxicab fares are based on time and mileage, the entire cost of a long taxicab trip may not be covered in full by the \$3.25 Transit Plus fare. For trips where the total fare on the taxi meter exceeds \$14.60, the Transit Plus rider pays the regular \$3.25 fare plus the amount over \$14.60. The historic trends in the fares for the paratransit service since it was first provided in 1978 are shown in Figure 4 in both actual dollars and constant dollars. The last time paratransit fares were changed was in January 2004 when the base Transit Plus fare was raised from \$3.00 to \$3.25 per trip, or by about 8 percent. When viewed in constant (1975) dollars, the current base Transit Plus fare is only slightly higher than the fare that was charged when the paratransit service was initiated in 1978.

Disabled individuals can also use accessible bus service provided on the regular bus routes. All of the buses currently used by the Milwaukee County Transit System to provide fixed-route bus service are accessible to individuals using wheelchairs. During 2004, disabled passengers using wheelchairs made approximately 38,600 passenger trips on the fixed-route bus system, about three times the approximately 12,600 passenger trips made on the bus system in 1999 by passengers using wheelchairs. By comparison, about 1,003,400 trips were made by disabled individuals on the Transit Plus services in 2004, up from about 888,900 trips in 1999.

Table 25

FIXED-ROUTE BUS FLEET OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: WINTER 2005

Type of Bus		Number of Buses in Active Fleet	Length (feet)	Seats per Bus	Year of Manufacture	Special Equipment			Age (Years)
Make	Model					Air Conditioning	Wheelchair Lift/Ramp	Kneeling Feature	
New Flyer Industries	D40LF	146	40	39	1996	Yes	Yes	Yes	9
New Flyer Industries	D30LF	9	30	25	1997	Yes	Yes	Yes	7
New Flyer Industries	D40LF	90	40	39	2000	Yes	Yes	Yes	5
Chance Bus, Inc.	V524	4	29	22	2000	Yes	Yes	Yes	5
New Flyer Industries	D40LF	69	40	39	2001	Yes	Yes	Yes	4
New Flyer Industries	D40LF	40	40	39	2002	Yes	Yes	Yes	3
New Flyer Industries	D30LF	20	30	25	2002	Yes	Yes	Yes	3
Gillig Corporation ^a	Low Floor	5	40	37	2002	Yes	Yes	Yes	3
New Flyer Industries	D40LF	51	40	39	2003	Yes	Yes	Yes	2
New Flyer Industries	D40LF	30	40	39	2004	Yes	Yes	Yes	1
New Flyer Industries	D40LF	15	40	39	2005	Yes	Yes	Yes	Less than 1
Total		479	--	--	--	--	--	--	Average 5.1

^aBuses owned by Ozaukee County and used exclusively to provide service on Route No. 143.

Source: Milwaukee County Transit System and SEWRPC.

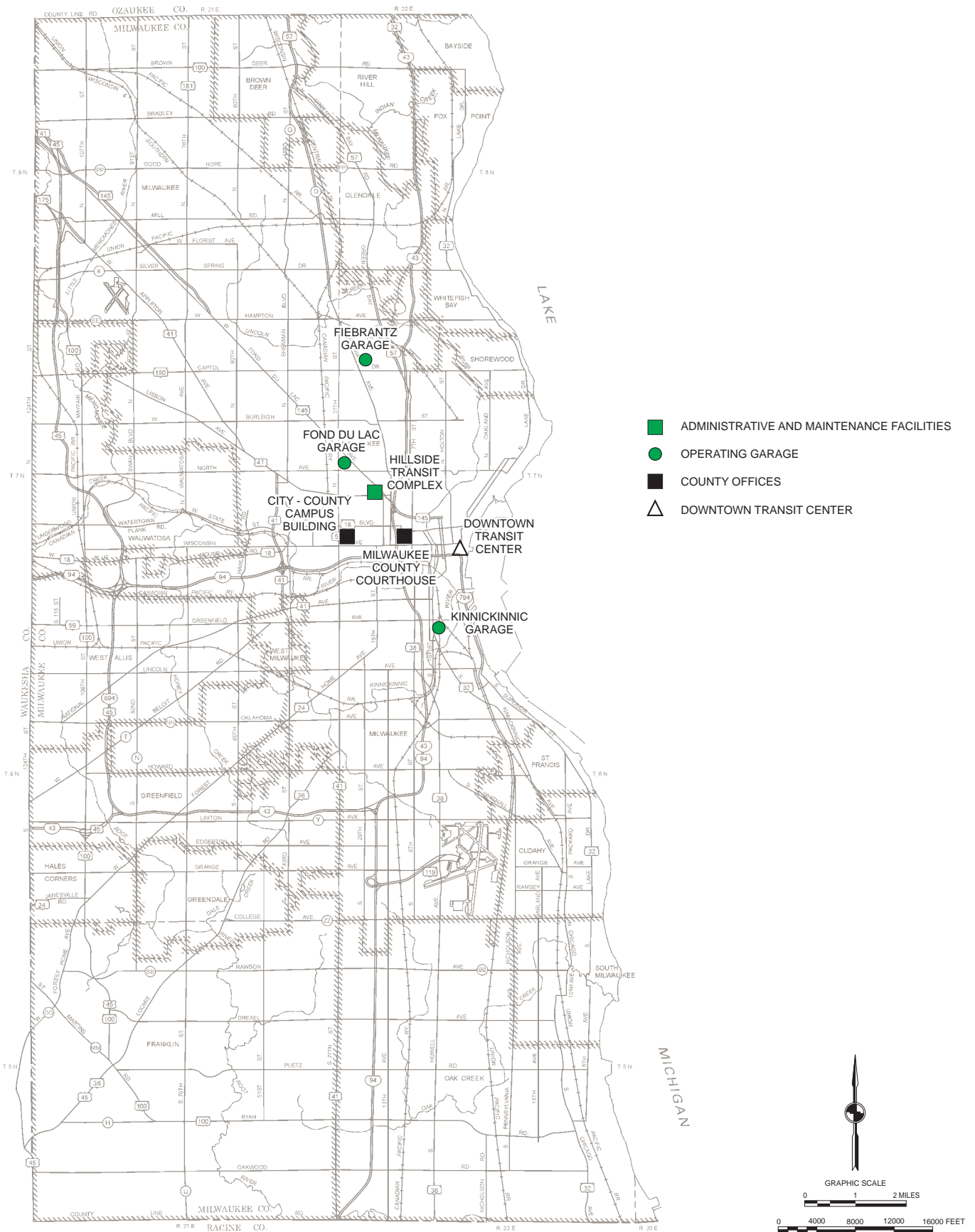
Equipment and Facilities

The 2005 bus fleet of the Milwaukee County Transit System is listed in Table 25. The location of the administrative offices, heavy maintenance facility, and operating garage facilities used by the transit system are shown on Map 26. The park-ride lots and passenger terminals served by the routes of the transit system are identified in Table 26. The equipment and facilities of the transit system may be summarized as follows:

- The bus fleet used to provide fixed-route service currently consists of a total of 479 heavy-duty, diesel-powered buses. A total of 446 buses, or about 93 percent of the fleet, are 40 feet in length. Five of the 40-foot long are buses owned by Ozaukee County and used by the transit system in the operation of contract service over Route No. 143. The bus fleet also includes 29, 30-foot long buses used in the operation of shuttle and other routes where maximum passenger loads do not justify a large vehicle, and four trolley buses used for the downtown trolley loop route. All of the buses in the 2004 fleet are air-conditioned and equipped with wheelchair lifts or ramps to make them accessible to disabled persons. The bus fleet is relatively new, with an average age of about 5.1 years.
- The administrative offices of the private contract management firm that operates the Transit System for Milwaukee County, Milwaukee Transport Services, Inc., are in the Hillside Administrative Facility located at 1942 N. 17th Street in the City of Milwaukee. The facility consists of a single building built in 1985 and includes the executive offices and the support departments of the management firm used in the day-to-day operation of both the fixed-route and paratransit services provided by the transit system. Services for the general public performed in this building include providing telephone information and the sale of tickets and weekly passes. The facility also includes meeting rooms, which are used for various staff and public meetings.
- The offices of the Milwaukee County Department of Parks and Public Infrastructure are located in the Milwaukee County-City Campus building at 2711 W. Wells Street in the City of Milwaukee. The Department staff is responsible for determining the transit budget and transit policy issues, and for providing oversight of the activities of the private management firm. The meetings of the Milwaukee County Board of Supervisors and its various committees, including the Transportation Public Works and Transit Committee and the Finance Committee, are held in the Milwaukee County Courthouse at 901 N. Ninth Street in the City of Milwaukee.

Map 26

FIXED FACILITIES FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004



Source: Milwaukee County Transit System and SEWRPC.

Table 26

**PARK-RIDE AND TERMINAL FACILITIES SERVED
BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

Number on Map 19	Location	Ownership	Total Auto Parking Spaces Available	Autos Parked on an Average Weekday: 2004	Percent of Spaces Used
	<u>Milwaukee County</u>				
1	Kohl's Department Store (STH 57 and W. Brown Deer Road, Brown Deer)	Private	100	60	60
2	River Hills Transit Station (IH 43 and W. Brown Deer Road, River Hills)	Public	360	80	22
3	Northshore Transit Station (IH 43 and W. Silver Spring Drive, Glendale)	Public	195	87	45
4	Good Hope Road Transit Station (USH 45 and W. Good Hope Road, Milwaukee)	Public	135	33	24
5	Timmerman Transit Station (N. 93rd Street and W. Appleton Avenue, Milwaukee)	Public	140	51	36
6	Watertown Plank Road Transit Station (USH 45 and W. Watertown Plank Road, Wauwatosa)	Public	240	131	55
7	State Fair Park Transit Station (IH 94 and S. 76th Street, Milwaukee)	Public	285	176	62
8	Whitnall Transit Station (IH 43 and S. 108th Street, Hales Corners)	Public	360	202	56
9	Southridge Shopping Center (S. 76th Street and Edgerton Avenue, Greendale)	Private	80	65	61
10	Loomis Road Transit Station (IH 43/894 and W. Loomis Road, Greenfield)	Public	410	97	24
11	Ryan Road Transit Station (IH 94 and W. Ryan Road, Oak Creek)	Public	305	137	45
12	College Avenue Transit Station (IH 94 and W. College Avenue, Milwaukee)	Public	650	286	44
13	Holt Avenue Transit Station (IH 43 and W. Holt Avenue, Milwaukee)	Public	230	103	45
14	Downtown Transit Center (E. Michigan Street and Lincoln Memorial Drive, Milwaukee)	Public	N/A ^a	N/A ^a	N/A ^a
	<u>Ozaukee County</u>				
15	Port Washington Park-Ride Lot (IH 43 and STH 32-CTH H, Port Washington)	Public	50	19	38
16	Wal-Mart Store (IH 43 and STH 33, Saukville)	Private	50	N/A ^a	N/A ^a
17	Grafton Park-Ride Lot (IH 43 and CTH V, Grafton)	Public	85	30	35
18	Pioneer Road Park Ride Lot (IH 43 and CTH C, Grafton)	Public	65	47	72
	<u>Waukesha County</u>				
19	Pilgrim Road Park-Ride Lot (USH 41 and Pilgrim Road, Menomonee Falls)	Public	70	56	80
--	Total	--	3,810	1,660	44

^aData not available.

Source: Wisconsin Department of Transportation, Milwaukee County Transit System, and SEWRPC.

- Major maintenance on the revenue and service vehicles and other operating equipment used by the transit system is performed at the Hillside Fleet Maintenance Facility located at 1525 W. Vine Street in the City of Milwaukee, adjacent to Hillside Administrative Facility. The facility consists of a single building built in 1987 and includes the various shops and service areas used by the transit system to maintain, repair, and rebuild the buses and other vehicles in the transit system fleet, as well as equipment such as bus stop shelters and signs. The building also includes employee facilities and classrooms for training.
- The transit system utilizes three bus operating garages in the daily operation of fixed-route bus service including the Fiebrantz Garage located at 1990 W. Fiebrantz Avenue, the Fond du Lac Garage located at 3343 W. Fond du Lac Avenue, and the Kinnickinnic Garage located at 1710 S. Kinnickinnic Avenue, all in the City of Milwaukee. Each garage facility consists of several buildings that are used for bus

storage, service and light maintenance, and fueling and cleaning, plus buildings housing driver facilities. The operating garages were acquired from the former private transit company in 1975 and underwent significant rehabilitation and reconstruction during the 1970's and 1980's to reconstruct, modernize, and improve the facilities. The bus storage buildings at these facilities can provide indoor storage for approximately 600 buses.

- A downtown terminal used exclusively for the routes of the Milwaukee County Transit System is located at 909 E. Michigan Street in the Milwaukee CBD. Constructed in 1992, the Downtown Transit Center includes an interior passenger waiting area and provides an off-street marshalling area for approximately 30 buses which layover at the facility between scheduled bus trips. The transit center also includes facilities for bus operators and rooms that are used for public meetings and private parties or events.
- A total of 19 park-ride lots and passenger terminals in Milwaukee, Ozaukee, and Waukesha Counties are directly served by the routes of the system. These facilities include 16 publicly constructed park-ride lots specifically designed to serve as change of mode facilities for express bus service or for carpooling, two privately-owned shopping center parking lots, and the Downtown Transit Center as discussed above.
- Approximately 700 bus passenger waiting shelters have been placed at various locations in Milwaukee County. Most of the shelters are of a modular design with the size of the shelter being determined by the number of back and sidewall panels used.

Ridership and Service Levels

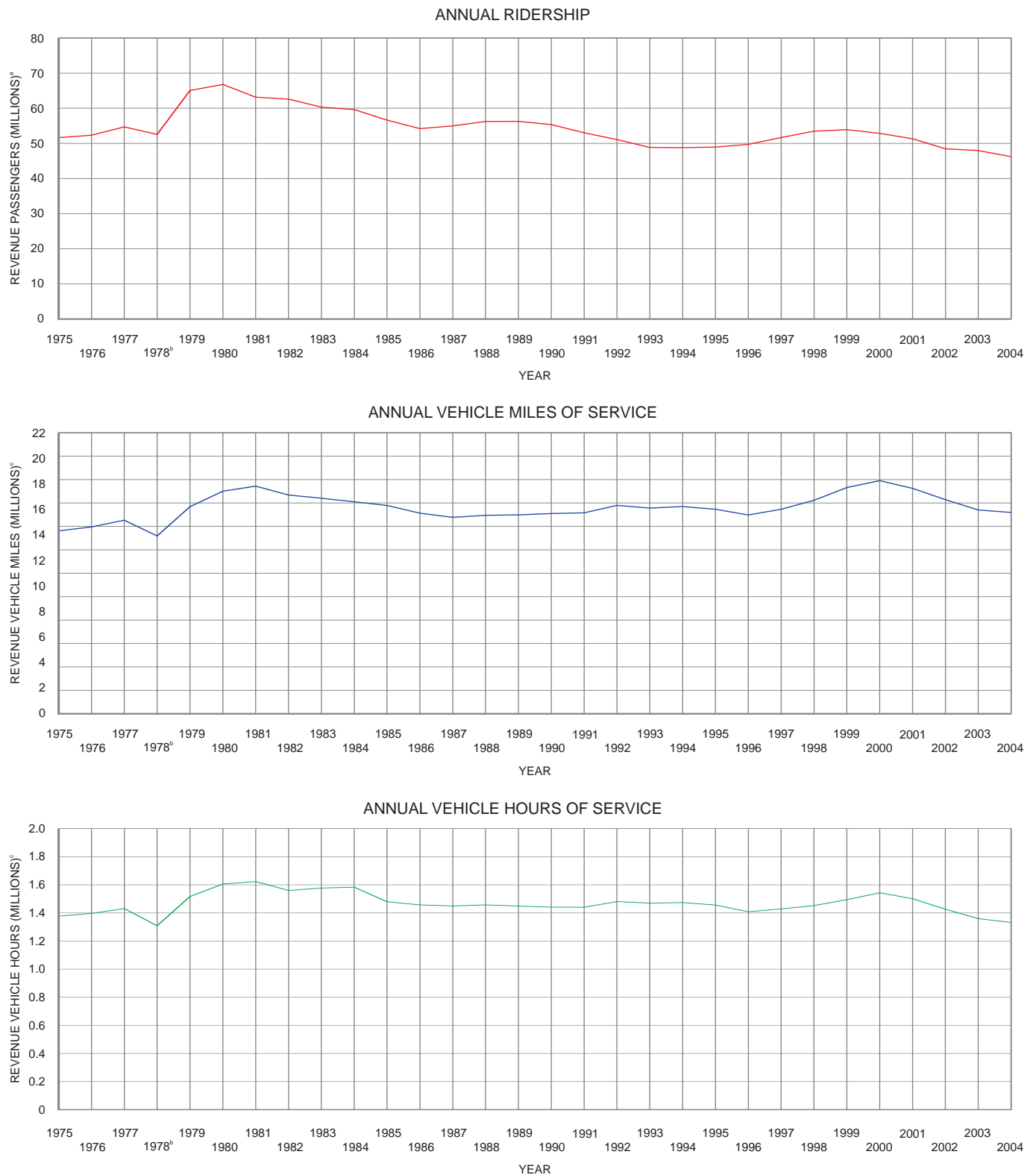
The historic trends in transit ridership and service levels for the Milwaukee County Transit System since it began public operation in 1975 are shown in Figure 5. The transit system experienced steadily increasing transit ridership each year from 1975 through 1980, with the exception being the year 1978 in which transit service was interrupted by a 39-day transit operators strike that occurred during May and June. The period was one of major transit service improvement and expansion occurring immediately after the County began operation of the transit system during which the County also kept fares stable and placed new buses in service over much of the transit system. Toward the end of this period in 1979 and 1980, the price of gasoline increased substantially which influenced some people to use public transit instead of their automobile. Between 1975 and 1980, ridership increased by about 30 percent from an estimated 51.5 million revenue passengers in 1975 to about 66.8 million revenue passengers in 1980, and transit revenue vehicle miles of service increased by about 24 percent from an estimated 15.6 million miles in 1975 to about 19.4 million miles in 1980.

There was a steady decline in ridership on the bus system during the years 1981 through 1994, with ridership declining by between 1 to 5 percent per year except for between 1987 and 1989. Ridership increased slightly during these years after the system implemented a policy of deep fare discounts for weekly pass users, reducing the price of a monthly pass from \$8.25 in 1986 to \$7.50 in 1987. Ridership declined again after weekly pass prices were raised to \$8.50 in 1990. Overall, ridership declined from about 63.2 million revenue passengers in 1981 to about 48.8 million revenue passengers in 1994, or by about 23 percent. Key factors contributing to the ridership decreases were fare increases implemented in eight of the 14 years, with the base adult cash fare doubling from \$0.50 to \$1.00 per ride and the price of an adult weekly pass increasing by about 42 percent from \$6.50 to \$9.25. Transit revenue vehicle miles of service decreased steadily from 1982 through 1987, declining by about 14 percent, before increasing by about 5 percent between 1988 and 1994. New express and shuttle bus services implemented in 1992 and 1993 accounted for most of the service increase.

From 1995 through 1999, there was a brief period when both ridership and service increased on the transit system. Ridership increased by about 10 percent from about 48.8 million revenue passengers in 1994 to about 53.9 million revenue passengers in 1999, and service increased by about 9 percent from about 17.7 million revenue vehicle miles in 1994 to about 19.3 million revenue vehicle miles in 1999. The increases were due to several actions including: an expansion of bus service, including additional bus routes and more frequent service on some existing routes, that

Figure 5

**ANNUAL RIDERSHIP AND SERVICE LEVELS FOR FIXED ROUTE BUS SERVICE
PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1975-2004**



^aRidership data for 1975 through 1977 have been adjusted to include passengers using a weekly pass to transfer so as to make the ridership data for these years comparable to that reported from 1978 to the present day.

^bRidership and service data for 1978 reflect less than 12 months of operation due to a bus operator's strike.

^cService data for 1975 through 1984 have been adjusted to remove an estimate of deadhead vehicle miles and vehicle hours so as to make the service data for these years comparable to that reported from 1985 to the present day.

Source: Milwaukee County Transit System and SEWRPC.

was intended to act as congestion mitigation measures during the resurfacing of the IH 94 freeway in 1997 and 1998; the implementation of new bus services directed at serving outlying employment centers in Milwaukee and Waukesha Counties; and the effects of new pass programs initiated to stimulate ridership including the UPASS program implemented in 1994 which provided bus passes to students at the University of Wisconsin-Milwaukee at a greatly reduced price from regular bus fares and the Commuter Value Pass which offered employees at participating major employers a pass similar to the UPASS.

Other factors have also contributed to the general decline of ridership on the Milwaukee County Transit System since the early 1980s. These factors include the location of housing and jobs outside Milwaukee County, the primary service area for the system; the continued decline of population and employment density in the areas served; and the increase in automobile ownership and use, particularly in terms of the number of households with two or more vehicles. There has also been an inability, due to a lack of funding, to significantly improve and expand transit service to better serve Milwaukee County and more of the metropolitan area, provide faster service with more express and rapid routes, and increase service frequencies to make it reasonably convenient and attractive to use transit.

Information on the ridership and service levels on the Milwaukee County Transit System for the five-year period—1999 through 2003—for which audited financial data was available is shown in Table 27. Since 2000, the predominant trend on the transit system has been one of service cuts and fare increases, principally due to overall Milwaukee County budgetary constraints, resulting in steadily and consistently declining ridership. The magnitude of the service reductions are illustrated by the comparison of transit system operating characteristics for the years 2000 and 2004 as presented in Table 28. Since 2000, the number of regular bus routes and their route miles has been reduced by about 30 and 19 percent, respectively, and average weekday service levels have been reduced by about 16 percent. The base adult cash fare has been increased twice from \$1.35 per ride in 1999 to \$1.75 per ride in 2004, a total increase of \$0.40 or 30 percent, and the price of a weekly pass has been raised three times from \$10.50 in 1999 to \$13.00 in 2004, a total increase of \$2.50 or 24 percent. As a result of these actions, ridership on the bus system has declined by about 9 percent from about 52.9 million revenue passengers in 2000 to about 48.0 million revenue passengers in 2003, and service has declined by about 13 percent from about 19.9 million revenue vehicle miles in 2000 to about 17.4 million revenue vehicle miles in 2003. During 2004, ridership decreased by about 3 percent to about 46.6 million revenue passengers, and service decreased by about 2 percent to about 17.1 million revenue vehicle miles.

Figure 6 shows the trends in passengers carried on the paratransit service provided through the Milwaukee County Transit System since the County first began providing it in 1978 under the User-Side Subsidy Program administered by the Milwaukee County Department of Public Works. The ridership trends for paratransit service are quite different from that for the County's fixed-route bus service, with the trend being one of regular increases in use over time. Paratransit ridership grew steadily from its inception through the mid-1980s when changes were made in the User-Side Subsidy Program in the methods vendors used to report and be compensated for trips made by eligible service users. Ridership then grew only at a modest rate through the mid-1990s when additional changes were made to the program to start bringing it into compliance with the paratransit service requirements of the Americans with Disabilities Act of 1990 (ADA) and more disabled individuals became aware of and began using the service. The County changed the name of the service to "Transit Plus" in 1996. Since 1997, significant ridership increases have occurred as the number of trips made on the service almost doubled from about 533,800 rides in 1997 to about 1,060,500 rides in 2003. During this period, the service underwent a major restructuring to reach full ADA compliance including transferring administration of the service to the private management firm for the transit system and renaming the service as Transit Plus in 2000. The service restructuring included reducing the number of contract service providers to two, and increasing the capacity of the service so it could serve all trip requests. Ridership on the Transit Plus service decreased by about 5 percent to about 1,003,400 rides during 2004. This ridership level represents just over 2 percent of the total annual revenue passengers carried on the County's fixed-route and paratransit services combined.

Table 27

**ANNUAL RIDERSHIP AND SERVICE LEVELS ON THE BUS AND
PARATRANSIT SERVICES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1999-2003**

Bus Service						
Characteristic	Year					Average Annual
	1999	2000	2001	2002	2003	
Service Provided						
Revenue Vehicle Miles	19,320,900	19,906,000	19,246,100	18,280,200	17,397,800	18,530,200
Revenue Vehicle Hours	1,493,900	1,543,100	1,501,200	1,426,200	1,359,700	1,464,800
Revenue Passengers	53,889,100	52,855,800	51,306,400	48,455,300	47,952,300	50,891,800
Service Effectiveness						
Revenue Passengers per Vehicle Mile	2.79	2.66	2.67	2.65	2.76	2.71
Revenue Passengers per Vehicle Hour	36.10	34.30	34.20	34.00	35.30	34.80

Paratransit Service						
Characteristic	Year					Average Annual
	1999	2000	2001	2002	2003	
Service Provided						
Revenue Vehicle Miles	7,461,200	5,461,700	5,007,100	5,237,500	5,379,800	5,385,200
Revenue Vehicle Hours	740,700	401,600	383,800	374,700	354,600	407,100
Revenue Passengers	888,900	994,300	1,027,000	1,048,000	1,060,500	1,003,700
Service Effectiveness						
Revenue Passengers per Vehicle Mile	0.12	0.18	0.21	0.20	0.20	0.19
Revenue Passengers per Vehicle Hour	1.20	2.50	2.70	2.80	3.00	2.50

Total Transit System						
Characteristic	Year					Average Annual
	1999	2000	2001	2002	2003	
Service Provided						
Revenue Vehicle Miles	26,782,100	25,367,700	24,253,200	23,517,700	22,777,600	24,215,400
Revenue Vehicle Hours	2,234,600	1,944,700	1,885,000	1,800,900	1,714,300	1,871,900
Revenue Passengers	54,778,000	53,850,100	52,333,400	49,503,300	49,012,800	51,895,500
Service Effectiveness						
Revenue Passengers per Vehicle Mile	2.05	2.12	2.16	2.10	2.15	2.14
Revenue Passengers per Vehicle Hour	24.50	27.70	27.80	27.50	28.60	27.70

Source: Wisconsin Department of Transportation; Bureau of Transit and Local Roads, Milwaukee County Department of Transportation and Public Works; Milwaukee County Transit System, and SEWRPC.

Operating and Capital Costs

The operating expenses of the bus and paratransit services provided by the Milwaukee County Transit System are funded through a combination of farebox revenues, and Federal, state, and local funds. Capital expenditures are funded through a combination of Federal and local funds. The historic trends in the total operating expenses, revenues, and operating assistance for the transit system since the initiation of public operation in 1975 through 2003 are shown in Figure 7. Figure 8 presents trends in operating assistance levels for the bus and paratransit systems and for the transit system as a whole since 1990 when Federal legislation was enacted that made significant changes to Federal requirements regarding the provision of transit and other services for disabled persons. Information on the trends in operating expenses, revenues, operating assistance for the bus and paratransit systems and the transit

Table 28

**COMPARISON OF SELECTED CHARACTERISTICS OF THE FIXED-ROUTE BUS
SERVICE PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2000 AND 2004**

Characteristic	Weekday Service 2000	Weekday Service 2004	Change: 2000-2004	
			Number	Percent
Number of Bus Routes				
Regular Service				
Freeway Flyer.....	10	9	-1	-10.0
Express.....	3	--	-3	-100.0
Regular Local and Shuttle.....	42	31	-11	-26.2
Schoolday				
High/Middle School.....	10	6	-4	-40.0
UBUS.....	5	3	-2	-40.0
Subtotal	70	49	-21	-30.0
Contract Service.....	7	8	1	14.3
Total	77	57	-20	-26.0
Round Trip Route Miles				
Regular Service				
Freeway Flyer.....	264	238	26	-9.8
Express.....	77	--	77	-100.0
Regular Local and Shuttle.....	993	862	131	-13.2
Schoolday				
High/Middle School.....	140	123	-17	-12.1
UBUS.....	137	84	-53	-38.7
Subtotal	1,611	1,307	-304	-18.9
Contract Service.....	188	239	51	27.1
Total	1,799	1,546	-253	-14.1
Service Provided				
Revenue Vehicle Miles.....	64,200	54,200	10,000	-15.6
Revenue Vehicle Hours.....	4,980	4,190	790	-15.9
Peak Vehicle Requirements.....	461	398	63	-13.7

Source: Milwaukee County Transit System and SEWRPC.

system as a whole for the most recent five-year period from 1999 through 2003 for which audited financial data is available are shown in Table 29 and in Figure 9. Information on total transit system capital expenditures over this same recent period is shown in Table 30. The following observations may be made based upon an examination of this information:

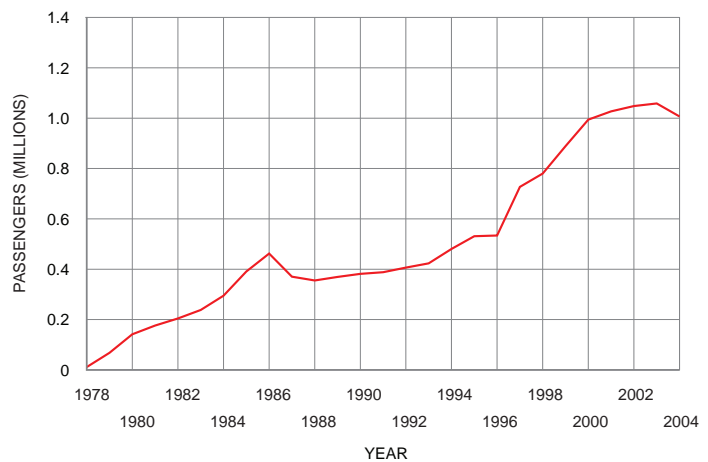
- Total operating expenses for the transit system have increased steadily since the system began public operation in 1975. Operating expenses increased more rapidly in the early years of public operation (1975-1981) as transit service was improved and expanded over that provided under the formerly private operation. During the 1980's as service improvements were scaled back, total system operating costs increased at a slower rate and were relatively stable when viewed in constant dollars. Operating expenses have steadily increased since 1990 as the transit system added service in several areas including: new express and shuttle bus services implemented in 1992 and 1993; adding service on selected routes in 1997 and 1998 as congestion mitigation efforts during IH 94 resurfacing; and implementing new bus routes in 1999 and later years directed at serving outlying employment centers in Milwaukee and Waukesha Counties. In addition, the costs associated with the Transit Plus paratransit service increased significantly during the 1990's, in particular since 1997 as the service was modified to fully comply with Federal ADA paratransit service requirements. This included adding service to provide for enough capacity to accommodate ridership demands. Since 2000, the service cuts and fare increases implemented on the bus

system have not been enough to fully offset inflationary increases in system operating expenses and the increases in paratransit service costs. To minimize the local tax levy for the transit system, the transit system increased the total amount of Federal Transit Administration (FTA) formula transit assistance funds it applied toward the annual transit system budget since 2000. As noted below, this was done by drawing down the County's balance of unspent FTA formula funds that remained available from previous years.

- From 1999 through 2003, the average annual operating expenditures for the County bus and paratransit systems have totaled about \$127.6 million. Of this total, about \$40.9 million, or 32 percent, came from farebox and other revenue. The remaining \$86.7 million, or 68 percent of total expenses, constituted the average annual public operating assistance which has been funded as follows: \$13.8 million, or 11 percent of total expenses, through Federal transit assistance programs; \$56.3 million, or 44 percent of total expenses, through State transit assistance programs; and 16.6 million, or 13 percent of total expenses, through County operating assistance funds generated by local property taxes. Approximately two-thirds of the County funds were used to support the operating costs of fixed route bus service, with the other one-third going toward the operating costs of paratransit service.
- The proportions of total system operating expenses funded by passenger and other revenues, Federal funds, and County tax dollars have changed somewhat between 1999 and 2003, as illustrated in Figure 9. State transit assistance funds covered about 45 percent of the total system operating expenses in both 1999 and 2003. In 1999, operating revenues amounted to about \$39 million, or about 33 percent of total system operating costs; Federal funds amounted to about \$10 million, or about 9 percent of operating costs; and County funds amounted to about \$15.7 million, or about 13 percent of operating costs. By 2003, total system operating revenues had increased by 7 percent to about \$41.6 million but the share of expenses covered by the operating revenues decreased to about 31 percent, or 2 percent less than in 1999. Total operating revenues for the Transit Plus paratransit service, however, increased by 60 percent from about \$1.5 million in 1999 to about \$2.6 million in 2003, which increased the proportion of Transit Plus operating costs covered by revenues from 10 percent in 1999 to 13 percent in 2003. The total Federal funds used in 2003 were increased by 66 percent to about \$16.6 million, which funded about 12 percent of the 2003 total system operating costs, or 3 percent more than in 1999. With the increase in Federal funds used by the system, total County funding in 2003 increased by only 3 percent to \$16.1 million, and the proportion of total operating expenses funded by the County in 2003 decreased by 2 percent to about 12 percent of operating costs. Notably, while most of the total increase in Federal funds between 1999 and 2003 went to the County bus system, about 25 percent went to cover a larger proportion of Transit Plus operating expenses—about 13 percent in 2003 compared with about 5 percent in 1999. The additional Federal funds in combination with increased 2003 passenger revenues resulted in only a slight increase from 1999 to 2003 in the total amount of County funds needed for the Transit Plus service, and a decrease in the proportion of Transit Plus operating costs covered by County funds from 35 percent in 1999 to 29 percent in 2003.
- Notably, the County was able to increase the Federal funds used by the system from 1999 to 2003 because it had not fully spent the allocations of Federal Transit Administration (FTA) Section 5307 formula program

Figure 6

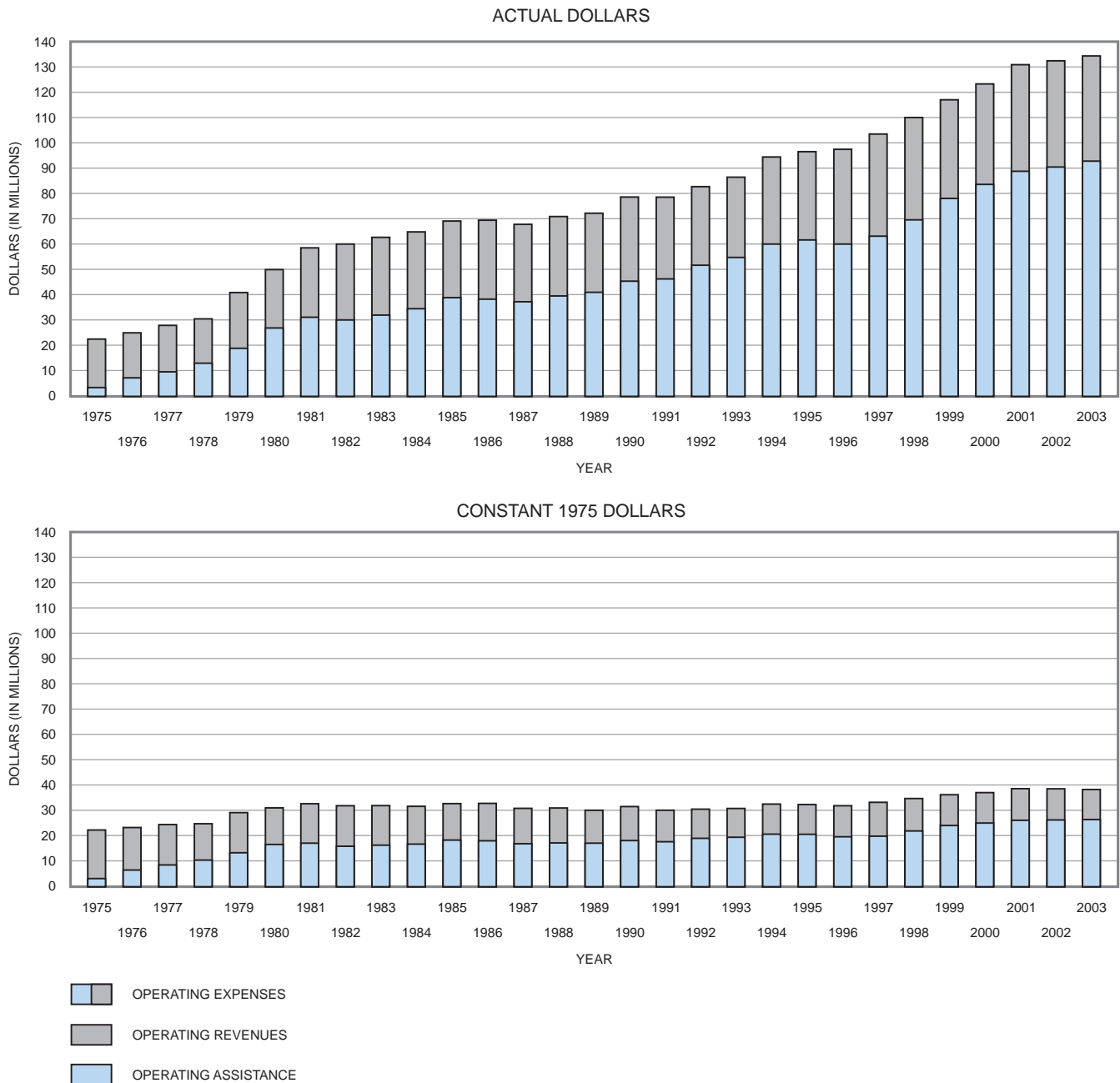
ANNUAL RIDERSHIP ON THE PARATRANSIT SERVICE PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1978-2004



Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Figure 7

TOTAL ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR THE BUS AND PARATRANSIT SERVICES PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1975-2003

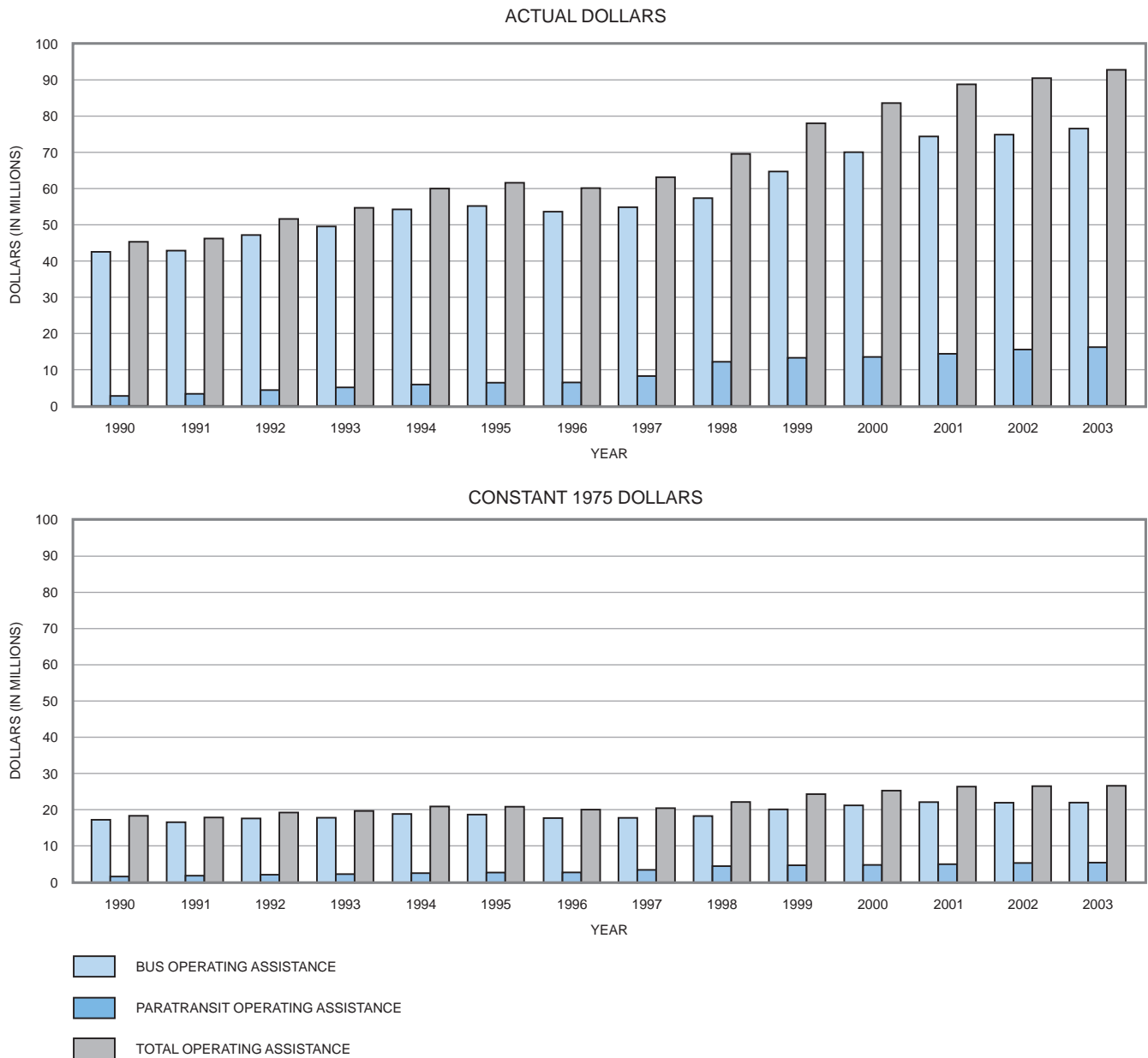


Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

transit assistance funds received annually. The unspent funds from each annual allocation are available for subsequent annual allocations to create the total balance of FTA Section 5307 funds that are available to Milwaukee County each year. At the beginning of 1999, Milwaukee County had a total balance of approximately \$32 million in Section 5307 funds which it could draw upon as needed for the transit system. For the past few years, the transit system has been able to use the Federal carryover Section 5307 funds to avoid the need for increases in County tax levy funding and to limit the extent of service reductions and fare increases. As the County increases its use of these Federal funds, the balance of available carryover funds decreases each year. With the increase in the Federal funds used by the transit system from 1999 through

Figure 8

TOTAL ANNUAL OPERATING EXPENSES, ASSISTANCE FOR THE BUS AND PARATRANSIT SERVICES PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1990-2003



Source: Milwaukee County Transit System and SEWRPC.

2003, the balance of FTA Section 5307 carryover funds decreased to about \$20.9 million by the beginning of 2004. Transit system officials have projected that the balance of available funds will be insufficient to fully fund all transit system needs in 2008. Extensive service cuts and additional fare increases are likely to be needed at that time if property taxes cannot be increased or an alternative source of funds is not established to finance the transit system.

- The average annual capital expenditures on the transit system over the five-year period 1999 through 2003 totaled about \$14.1 million. The vast majority of these funds were expended for bus fleet replacement or rehabilitation. Of this total, about \$11.4 million, or about 80 percent, came from Federal transit capital assistance programs, and the remaining \$2.6 million, or about 20 percent, came from Milwaukee County.

Table 29

**ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR THE
BUS AND PARATRANSIT SERVICES PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1999-2003**

Bus System ^a						
Characteristic	Year					Five-year Average
	1999	2000	2001	2002	2003	
Service Provided						
Total Vehicle Miles	21,529,300	22,196,300	21,849,100	20,756,200	19,745,200	21,215,200
Total Vehicle Hours	1,598,800	1,650,500	1,621,100	1,541,900	1,468,400	1,576,100
Revenue Passengers.....	53,889,100	52,855,800	51,306,400	48,455,300	47,952,300	50,891,800
Costs, Revenues, and Assistance						
Operating Expenses.....	\$102,202,300	\$107,652,100	\$114,309,100	\$114,555,300	\$115,730,700	\$110,889,900
Revenues						
Passenger Revenues.....	\$36,684,900	\$36,282,300	\$38,491,100	\$36,288,700	\$35,502,300	\$36,649,900
Other	\$815,700	\$1,339,000	\$1,449,300	\$3,404,400	\$3,691,400	\$2,140,000
Total Revenues	\$37,500,600	\$37,621,300	\$39,940,400	\$39,693,100	\$39,193,700	\$38,789,900
Required Operating Assistance	\$64,701,700	\$70,030,800	\$74,368,700	\$74,862,200	\$76,537,000	\$72,100,100
Percent of Expenses Recovered through Revenues	36.7	34.9	34.9	34.6	33.9	35.0
Sources of Operating Assistance						
Federal	\$9,195,900	\$10,954,400	\$16,087,400	\$11,934,400	\$14,186,300	\$12,471,700
State	\$44,882,300	\$47,101,000	\$47,408,200	\$51,046,100	\$51,532,900	\$48,394,100
County	\$10,623,500	\$11,975,400	\$10,873,100	\$11,881,700	\$10,817,800	\$11,234,300
Total	\$64,701,700	\$70,030,800	\$74,368,700	\$74,862,200	\$76,537,000	\$72,100,100
Per Trip Data						
Operating Cost	\$1.90	\$2.04	\$2.23	\$2.36	\$2.41	\$2.18
Revenue	0.70	0.72	0.78	0.82	0.81	0.76
Total Operating Assistance	1.20	1.32	1.45	1.54	1.60	1.42
Local Operating Assistance	0.20	0.23	0.21	0.25	0.23	0.22

Paratransit System ^b						
Characteristic	Year					Five-year Average
	1999	2000	2001	2002	2003	
Service Provided						
Total Vehicle Miles	5,840,100	5,461,700	5,007,100	5,237,500	5,379,800	5,385,200
Total Vehicle Hours	520,700	401,600	383,800	374,700	354,600	407,100
Revenue Passengers.....	888,900	994,300	1,027,000	1,048,000	1,060,500	1,003,700
Costs, Revenues, and Assistance						
Operating Expenses.....	\$14,835,000	\$15,627,200	\$16,583,800	\$17,900,400	\$18,632,100	\$16,715,700
Passenger Revenues.....	\$1,535,700	\$2,080,200	\$2,180,700	\$2,318,600	\$2,396,200	\$2,102,300
Required Operating Assistance	\$13,299,300	\$13,547,000	\$14,403,100	\$15,581,800	\$16,235,900	\$14,613,400
Percent of Expenses Recovered through Revenues	10.4	13.3	13.1	13.0	12.9	12.6
Sources of Operating Assistance						
Federal	\$806,400	\$5,000	\$1,581,500	\$1,661,100	\$2,477,400	\$1,306,300
State	\$7,342,300	\$7,975,700	\$7,638,900	\$8,214,500	\$8,412,200	\$7,916,700
County	\$5,150,600	\$5,566,300	\$5,182,700	\$5,706,200	\$5,346,300	\$5,390,400
Total	\$13,299,300	\$13,547,000	\$14,403,100	\$15,581,800	\$16,235,900	\$14,613,400
Per Trip Data						
Operating Cost	\$16.69	\$15.72	\$16.15	\$17.08	\$17.57	\$16.65
Revenue	1.73	2.10	2.13	2.21	2.26	2.09
Total Operating Assistance	14.96	13.62	14.02	14.87	15.31	14.56
Local Operating Assistance	5.79	5.60	5.05	5.44	5.04	5.37

Table 29 (continued)

Characteristic	Total Transit System ^{a,b}					Five-year Average
	1999	2000	2001	2002	2003	
Service Provided						
Total Vehicle Miles	27,369,400	27,658,000	26,856,200	25,993,700	25,125,000	26,600,500
Total Vehicle Hours	2,119,500	2,052,100	2,004,900	1,916,600	1,823,000	1,983,200
Revenue Passengers.....	54,778,000	53,850,100	52,333,400	49,503,300	49,012,800	51,895,500
Costs, Revenues, and Assistance						
Operating Expenses.....	\$117,037,300	\$123,279,300	\$130,892,900	\$132,455,700	\$134,362,800	\$127,605,600
Passenger Revenues.....	\$39,036,300	\$39,701,500	\$42,121,100	\$42,011,700	\$41,589,900	\$40,892,100
Required Operating Assistance	\$78,001,000	\$83,577,800	\$88,771,800	\$90,444,000	\$92,772,900	\$86,713,500
Percent of Expenses Recovered through Revenues	33.4	32.2	32.2	31.7	31.0	32.0
Sources of Operating Assistance						
Federal	\$10,002,300	\$10,959,400	\$17,668,900	\$13,595,500	\$16,663,700	\$13,778,000
State	\$52,224,600	\$55,076,700	\$55,047,100	\$59,260,600	\$59,945,100	\$56,310,800
County	\$15,774,100	\$17,541,700	\$16,055,800	\$17,587,900	\$16,164,100	\$16,624,700
Total	\$78,001,000	\$83,577,800	\$88,771,800	\$90,444,000	\$92,772,900	\$86,713,500
Per Trip Data						
Operating Cost	\$2.14	\$2.29	\$2.50	\$2.68	\$2.74	\$2.46
Revenue	0.72	0.74	0.80	0.85	0.85	0.79
Total Operating Assistance	1.42	1.55	1.70	1.83	1.89	1.67
Local Operating Assistance	0.29	0.33	0.31	0.36	0.33	0.32

^aRidership and service data taken from monthly financial and statistical reports prepared by the Milwaukee County Transit System. Financial information taken from National Transit Database reports filed annually by the transit system.

^bRidership and service data taken from monthly financial and statistical reports prepared by the Milwaukee County Transit System for 2000 through 2003, and from the annual report filed for the Wisconsin Department of Transportation Section 85.21 program for 1999. Financial information taken from National Transit Database reports filed annually by the transit system and from Milwaukee County budget documents.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

CONNECTING PUBLIC BUS SERVICES

The focus of this transit System development plan is on the transit service needs of Milwaukee County residents and how they can best be served by the transit services provided by the Milwaukee County Transit System within Milwaukee County. The plan, however, will also review the other publicly sponsored bus services that connect with the Milwaukee County Transit System. While these services bring many workers and students from the surrounding counties into Milwaukee County, they also provide transit links to major activity centers, in particular job centers, in adjacent counties that serve as trip destinations for Milwaukee County residents. None of the connecting transit services carry passengers between points located entirely within Milwaukee County as that is the market served by the Milwaukee County Transit System. The service characteristics of the major connecting public bus services are summarized in Table 31 and the services are briefly described in the following sections.

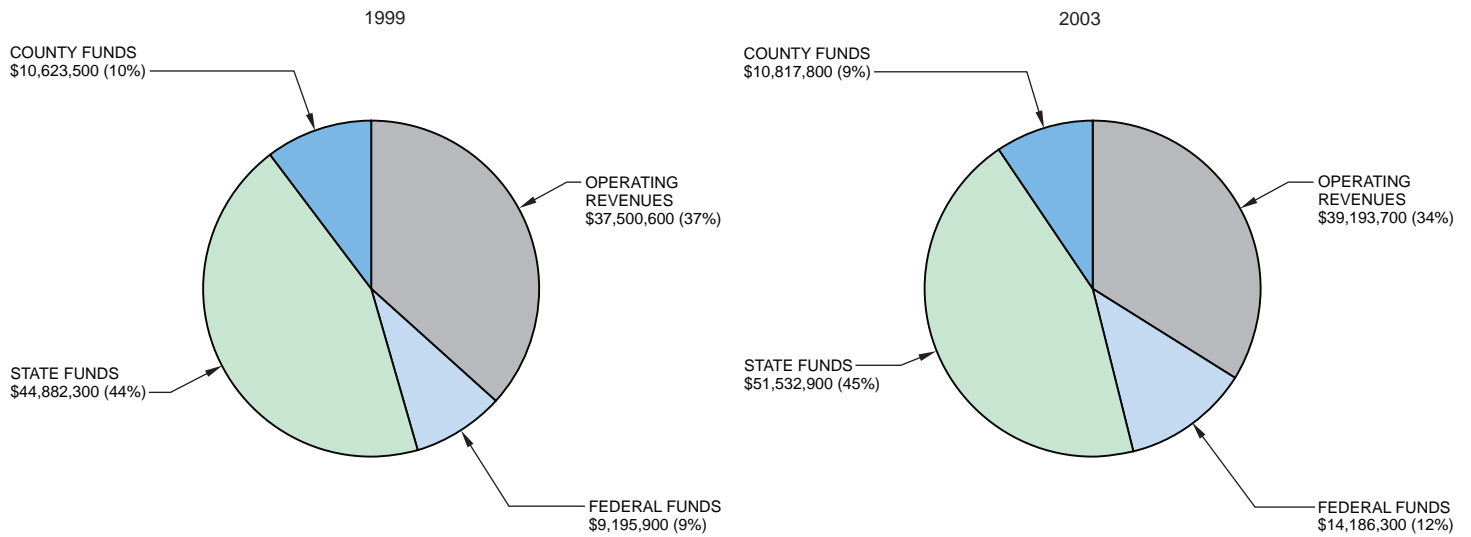
The Ozaukee County Express Bus Service

Ozaukee County currently provides bus service over one route operated between the City of Port Washington, Village of Fredonia and central Milwaukee County, including the Milwaukee CBD. The route, shown on Map 27, is operated by the Milwaukee County Transit System as Route No. 143. The buses used for the service are owned by Ozaukee County which also provides the public funds needed to cover the costs not funded through passenger revenues. Ozaukee County initiated the route in 1996 to serve Ozaukee County residents commuting to jobs in the Milwaukee CBD and to bring Milwaukee County residents to jobs in Ozaukee County. The Milwaukee County transit System has operated the route since 2002. In Milwaukee County, the route includes stops along N. Port Washington Rd., N. 7th and 8th Streets, and 6th Street between E. Capitol Dr. and Mitchell Street to serve Milwaukee

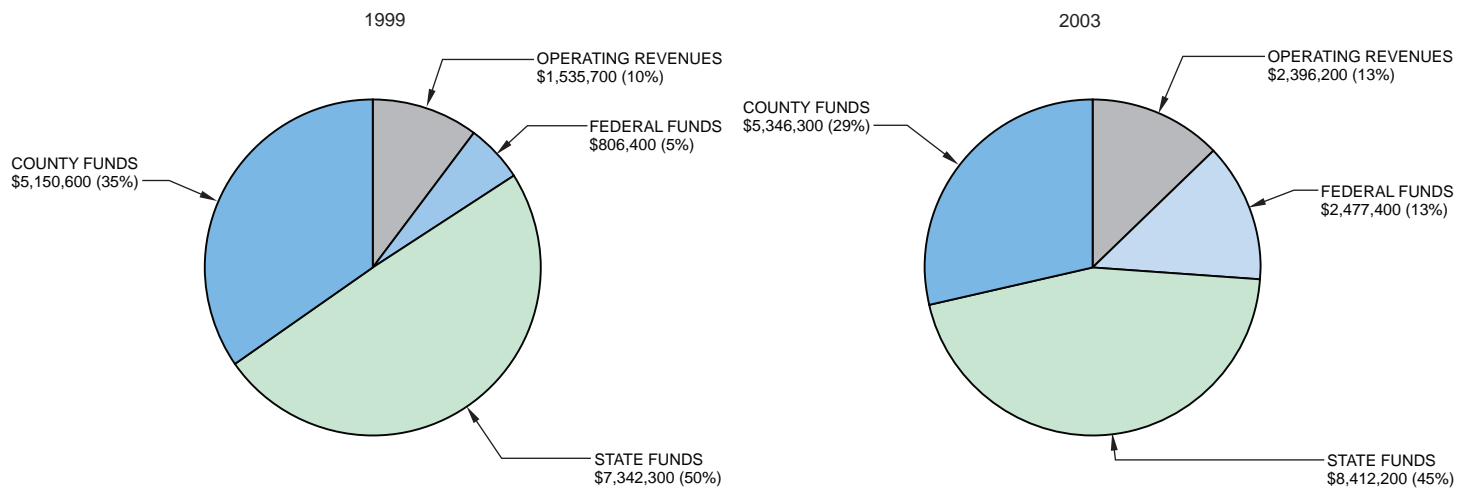
Figure 9

DISTRIBUTION OF TOTAL ANNUAL OPERATING EXPENSES FOR THE BUS AND PARATRANSIT SERVICES PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1999 AND 2004

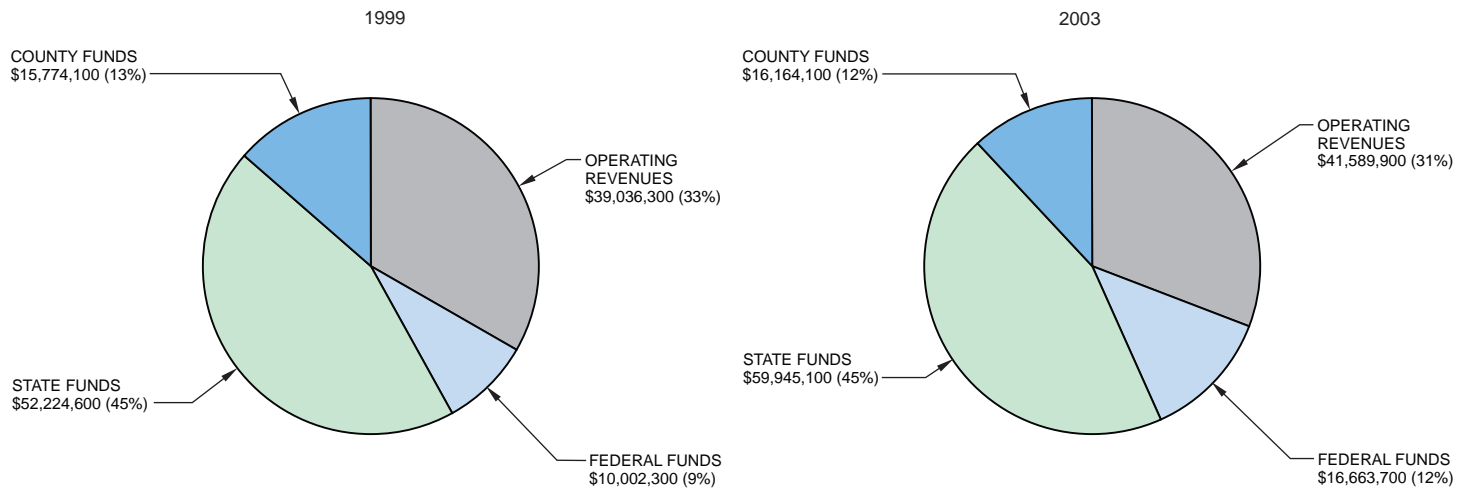
BUS SYSTEM



PARATRANSIT SYSTEM



TOTAL SYSTEM



Source: Milwaukee County Transit System and SEWRPC.

Table 30

**ANNUAL CAPITAL PROJECT EXPENDITURES BY FUNDING
SOURCE FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM: 1999-2003**

Characteristic	Capital Expenditures by Year					Five-year Average
	1999	2000	2001	2002	2003	
Capital Project Type						
Fleet Expansion, Replacement, or Rehabilitation.....	\$2,700,000	\$22,500,000	\$7,800,000	\$15,000,000	\$13,300,000	\$12,260,000
Facility Renovation or Replacement	--	--	350,000	2,500,000	370,000	644,000
Facility Expansion or Additions	--	--	--	--	--	--
Other.....	900,000	550,000	1,730,000	2,700,000	--	1,176,000
Total	\$3,600,000	\$23,050,000	\$9,880,000	\$20,200,000	\$13,670,000	\$14,080,000
Source of Funds						
Federal	\$2,961,000	\$19,115,000	\$7,904,000	\$16,160,000	\$10,936,000	\$11,415,200
County	639,000	3,935,000	1,976,000	4,040,000	2,734,000	2,664,800
Total	\$3,600,000	\$23,050,000	\$9,880,000	\$20,200,000	\$13,670,000	\$14,080,000

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

County residents commuting to Ozaukee County jobs. Stops along E. and W. Kilbourn and Wisconsin Avenues to serve Ozaukee County residents commuting to jobs in the Milwaukee CBD. In Ozaukee County, the route serves four park-ride facilities located along IH 43 and has other stops along Port Washington Road and in the Village of Fredonia to serve major employers. Connections to employers not directly served by Route 143 are provided through the Ozaukee County Taxi, the countywide public shared-ride taxi system sponsored by Ozaukee County. The taxi system operates shuttle routes for Route No. 143 passengers between the park-ride lots in Saukville and Grafton and major employers in these communities. Taxi service to employers not on the shuttle routes can also be arranged by passengers calling the taxi system for service.

Washington County Commuter Express Bus

Washington County currently provides bus service over three routes shown on Map 28 with stops in Milwaukee County: the Downtown Express route operated between the City of West Bend and the Milwaukee CBD; the Milwaukee County Regional Medical Center and Mayfair Mall Express route operated between the City of West Bend and the Regional Medical Center and Mayfair Mall in the City of Wauwatosa in western Milwaukee County; and the Germantown Shuttle operated between the City of Milwaukee's northwest side and the Maple Road (Germantown) Industrial Park. The routes are operated by a private transit company, Riteway Bus Services, Inc., under contract with Washington County which provides the public funds needed to cover the net costs of the services. Like Ozaukee County, Washington County initiated bus services between Washington and Milwaukee Counties to serve Washington County residents commuting to jobs in the Milwaukee CBD and to bring Milwaukee County residents to jobs in Washington County. The County has made several service adjustments since the bus service was initiated in 1998, including eliminating in 2002 most of the services designed for Milwaukee County residents commuting to Washington County jobs. In Milwaukee County, the Downtown Express route currently stops along E. and W. Wisconsin Avenue, and the Medical Center/Mayfair Mall Express route currently stops at the medical college and hospitals in the Regional Medical Center, both to serve Washington County residents commuting to Milwaukee County. The Germantown shuttle route is the only remaining bus service for Milwaukee County residents that need to commute to jobs in Washington County. The bus route operates between a stop at N. 76th Street and W. Mill Road and the employers in the Maple Road Industrial Park. Germantown shuttle passengers working at employers located in Hartford, Slinger, Jackson, and West Bend can still get shuttle service to their employer through the Washington County Taxi, the countywide public shared-ride taxi system sponsored by Washington County. Taxi service to shuttle workers to employers in these communities must be arranged by either the employer or its employee calling the taxi system for service.

Table 31

MAJOR PUBLIC BUS SERVICES WHICH CONNECT WITH THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004

Service Provider	Name of Service	Days and Hours of Operation	Fares ^a	Service Area	Vehicles Used	2004 Average Weekday Ridership (One-way Trips)
Ozaukee County	Ozaukee County Express	Weekdays: 5:00 a.m.-9:30 a.m. 12:45 p.m.-6:30 p.m. 9:00 p.m.-11:00 p.m. Sundays: 9:00 p.m.-11:00 p.m.	Adults (ages 12-65): \$2.25 Elderly (ages 65 and over) and disabled: \$1.00	Mequon, Cedarburg, Grafton, Saukville, Port Washington, and Fredonia areas	Urban transit buses	340
	Ozaukee County Taxi (connecting shuttle service)	Weekdays: 5:45 a.m.- 6:45 a.m. 2:30 p.m.- 3:30 p.m. 9:30 p.m.-10:30 p.m. Sundays: 9:30 p.m.- 1:15 p.m.	All shuttle passengers: \$0.75	Grafton and Saukville areas	Vans	20
Washington County	Washington County Commuter Express	Weekdays: 5:30 a.m.-10:00 a.m. 1:30 p.m.- 8:30 p.m. 9:30 p.m.- 1:15 p.m.	<u>Milwaukee Express Routes:</u> Adults (ages 12-65): \$2.50 <u>Germantown Shuttle:</u> Adults (ages 12-65): \$1.50	West Bend, Jackson, and Germantown areas	Over-the-road motor coaches	190
	Washington County Taxi (connecting shuttle service)	Weekdays: 6:00 a.m.-10:00 p.m. Saturdays: 6:00 a.m.-10:00 p.m. Sundays: 8:00 a.m.- 4:00 p.m.	All shuttle passengers: \$1.00	Hartford, Slinger, Jackson, and West Bend areas	Vans	Less than 10
Waukesha County ^b	Milwaukee County Transit System	<u>Route Nos. 6 and 8</u> Daily: 5:00 a.m.-7:00 a.m. 5:00 p.m.-7:00 p.m. <u>Route Nos. 9 and 106</u> Weekdays: 5:30 a.m.-8:30 a.m. 1:30 p.m.-4:30 p.m. 9:30 a.m.-11:30 a.m. <u>Route No. 79</u> Weekdays: 6:00 a.m.-8:15 a.m. 3:45 p.m.-6:15 p.m. <u>Route No. 10^d</u> Weekdays: 5:30 a.m.-10:45 p.m. Saturday: 8:30 a.m.-10:30 p.m. Sundays: 9:45 a.m.- 7:45 p.m.	Adults (ages 12-64): \$1.50 ^c Students (ages 6-11): \$1.10 ^c Elderly (ages 65 and over) and disabled: \$0.75	Portions of Brookfield, Butler, Elm Grove, Menomonee Falls, New Berlin, Pewaukee, and Sussex	Urban transit buses	1,000
	Wisconsin Coach Lines, Inc.	<u>Route No. 901</u> Weekdays: 5:30 a.m.-10:45 p.m. <u>Route Nos. 905 and 905</u> Weekdays: 6:00 a.m.- 8:00 a.m. 4:45 p.m.-6:15 p.m.	Adults (ages 12-64): \$2.25-2.75 Elderly (ages 65 and over) and disabled: \$1.15-1.40	Portions of Brookfield, Delafield, Hartland, Mukwonago, Nashotah, Oconomowoc, Pewaukee, and Waukesha	Over-the-road motor coaches	1,000
	Waukesha Metro Transit System	<u>Route No. 1</u> Weekdays: 5:30 a.m.-10:45 p.m. Saturday: 8:30 a.m.-10:30 p.m. Sundays: 9:45 a.m.- 7:45 p.m. <u>Route No. 218</u> Weekdays: 5:30 a.m.-8:00 a.m. 2:00 p.m.-5:30 p.m. 10:00 p.m.-11:45 p.m.	Adults (ages 18-64): \$1.25 Students (ages 5-17): \$1.00 Elderly (ages 65 and over) and disabled: \$0.75	Portions of Brookfield, and New Berlin	Urban transit buses	340
City of Racine	Wisconsin Coach Lines, Inc.	Weekdays: 5:30 a.m.-10:45 p.m. Saturday: 8:30 a.m.-10:30 p.m. Sundays: 9:45 a.m.- 7:45 p.m.	Adults (ages 12-64): \$1.00-4.00 Elderly (ages 65 and over) and disabled: \$0.50-2.00	Portions of Kenosha, Racine, and Milwaukee	Over-the-road motor coaches	220

^aFares shown are cash fares per one-way trip.

^bThe City of Waukesha Metro Transit System administers the contracts with the Milwaukee County Transit System and Wisconsin Coach Lines, Inc. for Waukesha County.

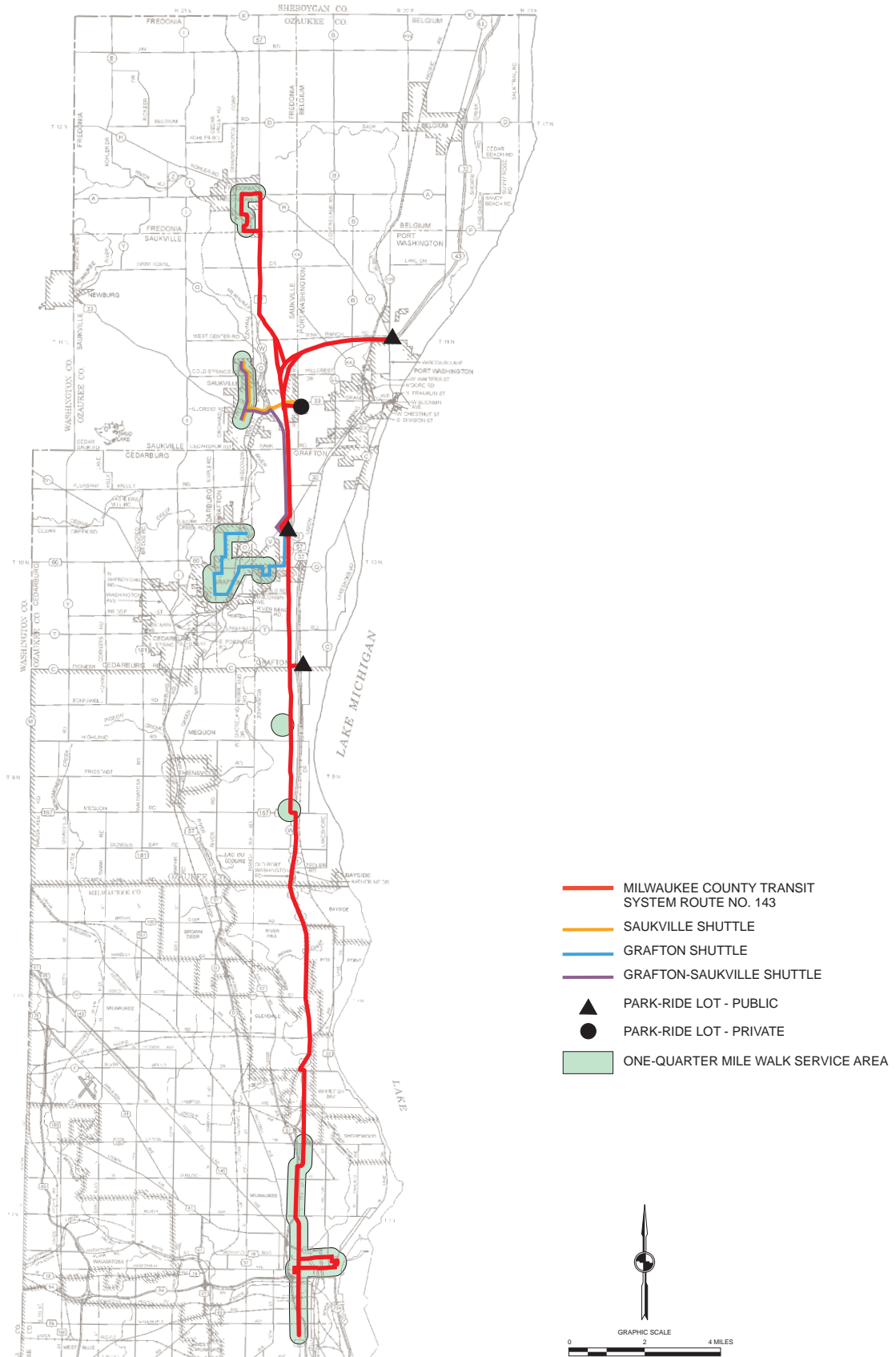
Source: SEWRPC.

Waukesha County Transit System

The Waukesha County transit system provides bus service over 11 routes which primarily provide service for work commuting between Waukesha and Milwaukee Counties. Waukesha County contracts for all of its bus service from two public transit operators, the Milwaukee County Transit System and the City of Waukesha Metro Transit System, and from one private transit company, Wisconsin Coach Lines, Inc. The staff of the City of Waukesha Metro Transit System administers the service contracts for Waukesha County including monitoring the service operations, ridership, and costs of each route. As shown on Map 29, the system includes four rapid "freeway flyer" routes operating between Menomonee Falls, Waukesha, Oconomowoc, and Mukwonago and the Milwaukee CBD. These routes serve 11 park-ride facilities in Waukesha County and also have stops to accommodate walk access along

Map 27

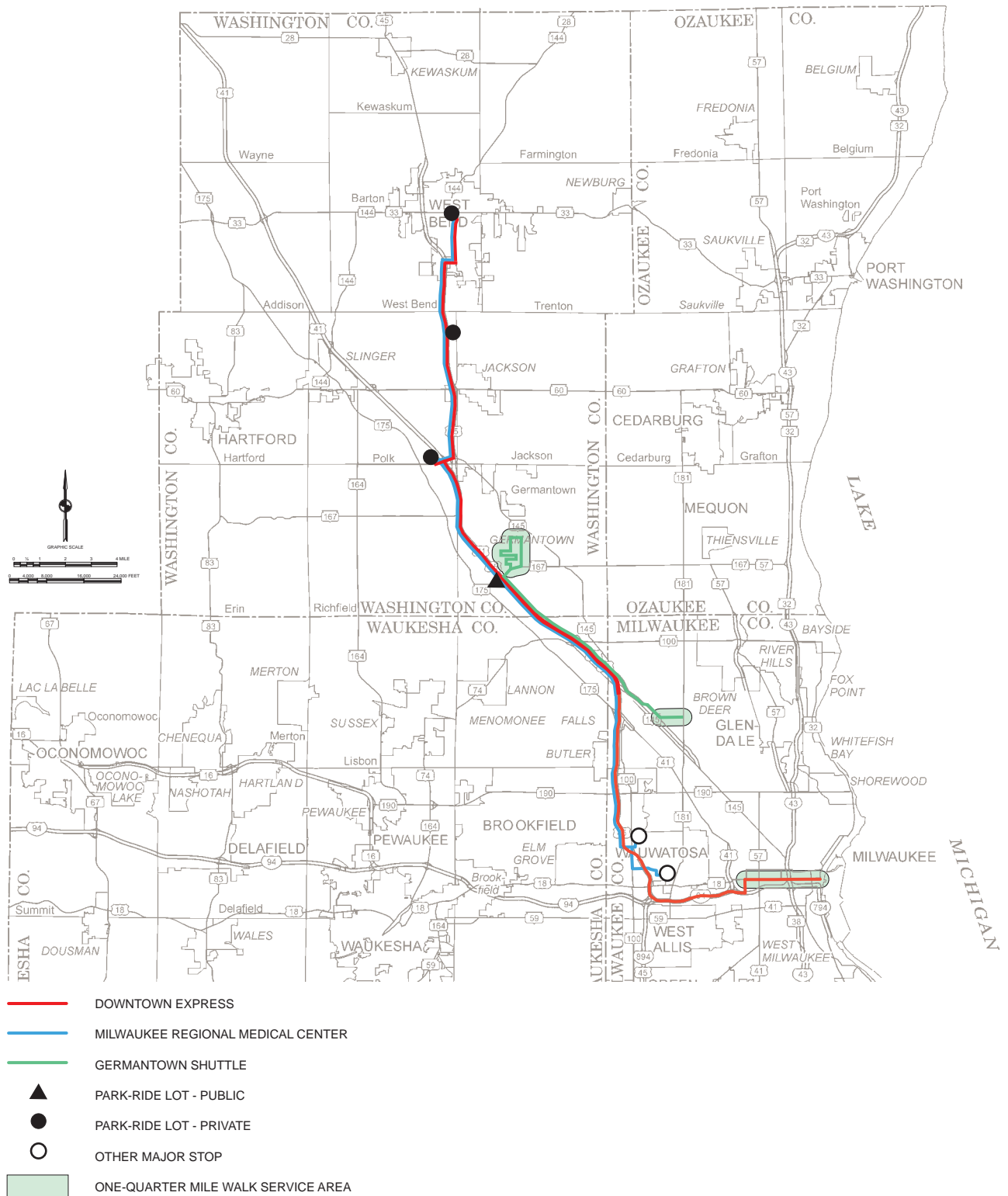
OZAUKEE COUNTY EXPRESS BUS SERVICE AND CONNECTING TAXI SERVICE: FALL 2004



Source: Milwaukee County Transit System and SEWRPC.

Map 28

WASHINGTON COUNTY COMMUTER EXPRESS BUS SERVICES: FALL 2004



Source: Washington County Transit Services and SEWRPC.

WAUKESHA COUNTY BUS ROUTES
MILWAUKEE COUNTY TRANSIT SYSTEM
 ROUTE NO. 6
 ROUTE NO. 8
 ROUTE NO. 9
 ROUTE NO. 10 (EXTENSION)
 ROUTE NO. 79
 ROUTE NO. 106

WISCONSIN COACH LINES, INC.
 ROUTE NO. 901
 ROUTE NO. 905
 ROUTE NO. 906

WAUKESHA METRO TRANSIT SYSTEM
 ROUTE NO. 1 (EXTENSION)
 ROUTE NO. 218

--- COMMON SEGMENTS WITH NO STOPS
 ——— COMMON SEGMENTS WITH FREQUENT STOPS

STATIONS, STOPS, AND SERVICE AREA
 ▲ PARK-RIDE LOT- PUBLIC
 ● PARK-RIDE LOT- PRIVATE
 ○ OTHER MAJOR STOPS (ROUTE NO. 901)

0 1 2 4 MILES

Source: City of Waukesha Metro Transit System and SEWRPC.

route segments operated through the City of Waukesha, the Hartland-Pewaukee area, in the Bluemound Road corridor, and in the Village of Menomonee Falls. In Milwaukee County, stops for these routes are primarily along E. and W. Wisconsin Avenue, and E. and W. Wells and Michigan Streets. The Waukesha-Milwaukee route has additional stops near State Fair Park and at the University of Wisconsin-Milwaukee. The system also includes two extensions of regular local routes operated by the Milwaukee County Transit System and the City of Waukesha Transit System to serve employers and businesses along W. Bluemound Road, and five local shuttle routes designed to bring Milwaukee County residents out to jobs at employers in eastern Waukesha County.

Kenosha-Racine-Milwaukee Commuter Bus

The City of Racine, in a joint effort with the City of Kenosha and with Racine and Kenosha Counties, provides commuter bus service between the Cities of Kenosha and Racine and downtown Milwaukee. The bus service is provided through a contract with a private transit operator, Wisconsin Coach Lines, Inc., with the four public entities agreeing to act as sponsors for the Federal and State transit assistance funds used to cover the net costs of the service. The service is oriented principally towards serving Racine and Kenosha passengers commuting to and from the Milwaukee area, but is also used to travel between Racine and Kenosha. As shown on Map 30, the route includes stops at the central transfer terminal for the Kenosha Transit System and the Kenosha Metra commuter rail station in downtown Kenosha, the central transfer terminal for the Racine Belle Urban System in downtown Racine, and Milwaukee County's General Mitchell International Airport. The route also includes local stops along segments in the Cities of Racine and Kenosha and in Southern Milwaukee County. In downtown Milwaukee, stops for the routes are along E. and W. Michigan Street and at the Greyhound Bus Depot.

OTHER TRANSIT SERVICES

Additional transit services for the general public or special population groups are provided within Milwaukee County and include the following:

- Taxicab Service

Taxicab service for general purpose travel by the general public in Milwaukee County is provided by five private companies including: All City Veteran Taxi, American United Taxi Cab Services, Balisteri Car Service, Yellow Cab Co-Op, and Yellow Cab of Milwaukee. The taxicab service provided by these companies is available 24-hours a day, seven days a week for trips made throughout Milwaukee County. One company, American United Taxi Service, has accessible taxicab vans for transporting disabled individuals using wheelchairs. In addition, 13 other private companies specialize in providing service to and from Milwaukee County's General Mitchell International Airport. Fares are mileage-based with additional charges for more than one passenger, waiting, and help with shopping bags or luggage.

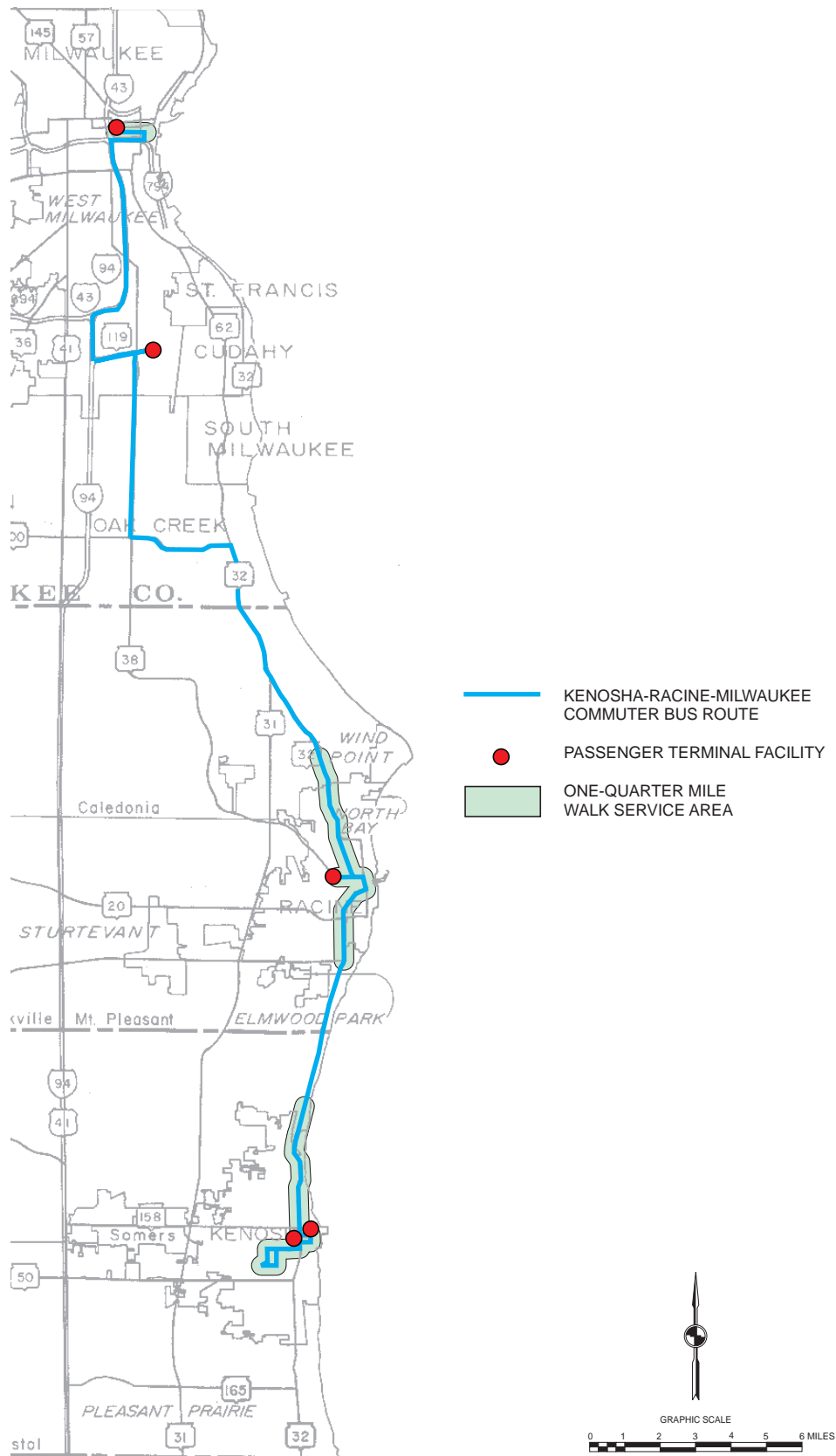
- Interregional Transit Services

At the end of 2004, interregional transit services serving Milwaukee County included both intercity passenger train and intercity bus services. Intercity passenger train service was provided by Amtrak over Canadian Pacific Railway trackage with a stop in the Milwaukee CBD. Amtrak operated seven weekday "Hiawatha Service" trains in each direction between Milwaukee and Chicago with a stop in the Village of Sturtevant in Racine County. Beginning in early 2005, these trains also stopped at a new passenger station near General Mitchell International Airport. Amtrak also operated one weekday train, the Empire Builder, in each direction between Chicago, Milwaukee, St. Paul-Minneapolis, and Seattle.

Intercity bus service was provided through Milwaukee County at the end of 2004 by four carriers: Badger Coaches, Inc.; Greyhound Lines, Inc.; Lamers Bus Lines, Inc.; and Coach USA, Inc. The bus service provided by Badger Coaches included six weekday round-trips between Madison and General Mitchell International Airport with other stops in Milwaukee County in the Milwaukee CBD and at IH 94 and S. 84th Street in West Allis. The bus service provided by Greyhound in Southeastern Wisconsin included a total of 23 weekday one-way bus trips serving Milwaukee with Greyhound using its Depot in the Milwaukee CBD as a regional hub where passengers have the opportunity to transfer between buses. Most of these trips were Chicago-based, going to and from Minneapolis, Green Bay, Marquette, and Calumet. The bus service

Map 30

KENOSHA-RACINE-MILWAUKEE COMMUTER BUS ROUTE: FALL 2004



Source: Wisconsin Coach Lines, Inc. and SEWRPC.

provided by Lamers Bus Lines on a daily basis included one bus trip in each direction between Milwaukee and Wausau via Fond du Lac. Daily service provided by Coach USA, Inc., included 14 round-trips between the Goerkes Corners Public Transit Station in Waukesha County and Chicago O'Hare International and Midway Airports with Milwaukee County stops at the Amtrak Depot in the Milwaukee CBD, the Coach USA bus terminal on S. 13th Street, and at General Mitchell International Airport. Together, the four intercity motor coach carriers operated a combined total of 65 weekday one-way bus trips.

- Employment-related Transportation Services

Special transit services serving employment-related trips are provided in Milwaukee County through three programs. The JobRide Program operated by the Milwaukee County Private Industry Council, A Workforce Development Board, Inc., (PIC-WDB) is the principal job access van program currently serving the Milwaukee area. The program was designed to address transportation problems within the Milwaukee metropolitan area that have developed as a result of an increasing mismatch between the place of residence of potential workers in central Milwaukee County and the location of new jobs in outlying portions of Milwaukee County or in the surrounding counties. The job locations served are in outlying locations that are poorly served or unserved by fixed-route bus service. The program has set eligibility requirements and also follows strict rules for service operation including the fares to be charged and areas and time periods served.

The Milwaukee Careers Cooperative (MCC) Inc., and Esperanza Unida, Inc., also provided job access van transportation services in the Milwaukee area. MCC has past experience as a contract service provider for the JobRide program and has developed its current service to address deficiencies in the JobRide service, in particular those related to limited periods of eligibility, restrictions prohibiting service for part-time workers, and the lack of flexibility in the fares charged or the time periods of service availability. The Esperanza Unida, Inc. van service is operated as part of the agency's employment center and services primarily Hispanic persons. The service serves jobs in Milwaukee and Waukesha Counties which are not served by public transit or JobRide.

- Specialized Transportation Services

Specialized transportation services serving the County's elderly and disabled population are also provided with the principal service provider being the Milwaukee County Department on Aging. The Department of Aging sponsors three programs that serve frail, ambulatory older adults aged 60 and who no longer drive a vehicle, have problems using a bus or walking to a bus stop, and are not eligible for the Transit Plus service or Title XIX transportation. These programs include:

1. Group Transportation Services which provides weekly grocery shopping services to eligible older persons who live at more than 65 congregate housing sites in Milwaukee County. Other service commitments include trips to the Asian American Community Center.
2. Individualized Transportation Services which provides service on a non-group basis for medical appointments, grocery shopping, Senior Meal Program nutrition sites, nursing home visitation, and a limited number of other trip purposes that require prior approval of the Department on Aging contract manager. Some non-medical trips occur as "shared" rides, for which the contract service provider charges substantially lower rates than for individual rides.
3. Meal Site Transportation Services which provides service for eligible older persons to designated meal sites of the Milwaukee County Senior Meal Program. Transportation services occur on a group basis.

Elderly Milwaukee County residents are determined to be eligible for service under these programs by ElderLink, the Department's information and assistance unit. Persons become eligible regardless of income. The services provided, however, are targeted to those having the greatest economic or social need. Each program provides service only on weekdays on an advanced-scheduled, door-to-door basis. Most trips, especially nonrepetitive individual rides, require scheduling three to five days in advance. Many repetitive trips, especially group grocery rides and Senior Meal Program nutrition rides, remain as "standing orders",

and only require notice of trip cancellation. Only trips made within Milwaukee County are served unless the trip request outside the County is authorized by the Department on Aging. A co-payment of \$2.00 is required each way for rides to medical appointments and contributions are accepted for all other rides. The Department on Aging contracts for service from Transit Express Service, Inc., a management company, that subcontracts with Transit Express, Inc., a private, for-profit transportation provider. The company uses a fleet of accessible vans to provide the service offered under each program. During 2004, the three programs provided a total of about 2,000 elders with about 128,000 one-way rides at a total cost of about \$1,286,000, or about \$10.04 per ride.

Specialized transportation services were also provided within the County by a number of public and private nonprofit agencies and organizations. Most of such services were provided on demand rather than on a fixed schedule, with eligibility for service usually limited to clientele of the sponsoring agency or organization, principally elderly or disabled individuals. The County was also served by over 50 private for-profit specialized medical vehicle (SMV) transportation companies. Most of the elderly and disabled individuals using these services are reimbursed for the cost of their trip through the Title XIX and Medicaid/Medicare programs.

SUMMARY

This chapter has presented pertinent information on the Milwaukee County Transit System, as well as on other major transit services provided in the study area during 2004. A summary of the most important findings concerning the transportation services identified follows.

1. The principal provider of public transit service in Milwaukee County is the Milwaukee County Transit System. The transit system has been owned by Milwaukee County since July 1975 when the County acquired the assets of the former private bus company serving the County. The system is operated by a private contract management firm, Milwaukee Transport Services, Inc., with oversight of the management firm provided by staff within the Milwaukee County Department of Public Works and the Milwaukee County Transportation, Public Works, and Transit Committee. Under this arrangement, the management firm assumes full responsibility for day-to-day transit system operating and management decisions while the County assumes the principal role in determining the transit budget and transit policy and is responsible for providing the management firm with the capital equipment and facilities and the public funds needed for operating the transit system.
2. In 2004, fixed route bus service was provided by the Milwaukee County Transit System over a system of 49 regular service bus routes serving Milwaukee County including nine rapid transit “freeway flyer” routes, 31 regular local and shuttle bus routes, and nine school day routes. The local routes form a grid that serves as the basic network of the transit system and are designed so that most passengers do not have to transfer more than once to reach their destination. A total of 21 of the 49 regular service routes (nine freeway flyer and 12 local bus routes) directly serve the Milwaukee CBD. Service over the freeway flyer routes is provided only during the weekday morning and afternoon peak periods and principally in the peak direction of travel. Regular local bus service is available seven days a week with most routes operating on both weekdays and weekends while local shuttle bus service is operated only during weekday peak periods. In general, the most frequent service is provided on the routes serving the central portion of the County where weekday headways for regular local bus service are generally between five and 20 minutes during peak periods, between 10 and 30 minutes during the midday period, and between 15 and 30 minutes during the evening period before 10:00 p.m. The transit system also operates contract bus services for other counties in the Milwaukee area and local business, and provides special event service using customized routes for professional sporting events, lakefront festivals, and the Wisconsin State Fair. The transit system maintains a fleet of 473 buses to provide all of its fixed-route services.

3. The base adult cash fare for using the local, shuttle and school day routes of the transit system in 2004 was \$1.75 per trip while a fare of \$2.05 per trip was charged for using the freeway flyer routes. Reduced fares were charged for elderly and disabled individuals and for students, and convenience fares were also available in the form of tickets and passes which offered a discount from cash fares. Free transfers between local routes and from freeway flyer routes to local routes were issued upon request at the time the fare is paid on the first route used. Transfers between local and freeway flyer routes are subject to a premium fare charged for using the freeway flyer service.
4. The transit system also provided the Transit Plus paratransit service to serve the travel needs of disabled individuals who were unable to use the fixed-route bus service provided by the Milwaukee County Transit System. Transit Plus service included curb-to-curb taxicab service for ambulatory disabled individuals who do not require an accessible vehicle and can travel with a minimal level of assistance, and door-to-door van service for disabled individuals who require an accessible vehicle and/or some driver assistance in making a trip. The Transit Plus paratransit service is available during the same service periods as the Milwaukee County Transit System fixed-route bus service, and serves trips made throughout Milwaukee County and small areas in adjacent Waukesha and Ozaukee Counties. Disabled individuals could also use the accessible bus service provided on all regular routes of the Milwaukee County Transit System.
5. For the most part, the transit system experienced steadily increasing transit ridership each year from 1975 through 1980 which was a period of major transit service improvement and expansion. There was a steady decline in ridership on the bus system during the years 1981 through 1994 with fare increases implemented in eight of the 14 years during this period contributing to the ridership decreases. From 1995 through 1999, there was a brief period when both ridership and service increased on the transit system as a result of an expansion of bus service and the effects of new pass programs, including the UPASS and the Commuter Value Pass, initiated to stimulate ridership. Since 2000, the predominant trend on the transit system has been one of service cuts and fare increases, as the number of regular bus routes and their route miles has been reduced by about 30 and 19 percent, respectively; average weekday service levels have been reduced by about 16 percent; adult cash fares have been increased twice from \$1.35 per ride in 1999 to \$1.75 per ride in 2004; and the price of a weekly pass has been raised three times from \$10.50 in 1999 to \$13.00 in 2004. Ridership on the bus system, consequently, declined by about 9 percent from about 52.9 million revenue passengers in 2000 to about 48.0 million revenue passengers in 2003, and service has declined by about 13 percent from about 19.9 million revenue vehicle miles in 2000 to about 17.4 million revenue vehicle miles in 2003. During 2004, ridership was estimated to decrease by about 3 percent and service levels were estimated to decrease by about 2 percent from those in 2003.

Other factors have also contributed to the general decline of ridership on the Milwaukee County Transit System since the early 1980s. These factors include the location of housing and jobs outside Milwaukee County, the primary service area for the system; the continued decline of population and employment density in the areas served; and the increase in automobile ownership and use, particularly in terms of the number of households with two or more vehicles. There has also been an inability, due to a lack of funding, to significantly improve and expand transit service to better serve Milwaukee County and more of the metropolitan area, provide faster service with more express and rapid routes, and increase service frequencies to make it reasonably convenient and attractive to use transit.

6. The ridership trends for paratransit service provided by the Transit Plus program and its predecessor the User-Side Subsidy Program were quite different from that for the County's fixed-route bus service, with the trend being one of regular increases in use over time. Paratransit ridership grew steadily from its inception through the mid-1980s, then grew only at a modest rate through the mid-1990s when changes were made to the program to start bringing it into compliance with the paratransit service requirements of the Americans with Disabilities Act of 1990 (ADA). Between 1997 and 2003, the number of trips made on the service almost doubled from about 533,800 rides in 1997 to about 1,060,500 rides in 2003 as more disabled individuals became aware of and started using the service. During this period, the service underwent a major restructuring, completed in 2000, to reach full compliance with ADA requirements.

Ridership on the Transit Plus service was estimated to have decreased by about 3 percent to about 1,023,000 rides during 2004. This ridership level represents about 2 percent of the total annual revenue passengers carried on the County's fixed-route and paratransit services combined.

7. Total operating expenses for the transit system have increased steadily since the system began public operation in 1975. Increases in operating expenses since 1990 reflect an expansion of bus service in several areas and modifications to the paratransit service to fully comply with Federal ADA service requirements. From 1999 through 2003, the average annual operating expenditures for the County bus and paratransit systems totaled about \$127.6 million. Of this total, about \$40.9 million, or 32 percent, came from farebox and other revenue. The remaining \$86.7 million, or 68 percent of total expenses, constituted the average annual public operating assistance which has been funded as follows: \$13.8 million, or 11 percent of total expenses, through Federal transit assistance programs; \$56.3 million, or 44 percent of total expenses, through State transit assistance programs; and 16.6 million, or 13 percent of total expenses, through County operating assistance funds generated by local property taxes. Approximately two-thirds of the County funds were used to support the operating costs of fixed route bus service, with the other one-third going toward the operating costs of paratransit service.
8. The average annual capital expenditures on the transit system over the five-year period 1999 through 2003 totaled about \$14.1 million. The vast majority of these funds were expended for bus fleet replacement or rehabilitation. Of this total, about \$11.4 million, or about 80 percent, came from Federal transit capital assistance programs, and the remaining \$2.6 million, or about 20 percent, came from Milwaukee County.
9. Notably, Milwaukee County increased the amount of Federal transit assistance funds used by the system from 1999 to 2003. This increase was possible because it had not fully spent the entire amount of Federal Transit Administration (FTA) Section 5307 formula program transit assistance funds it had been allocated in previous years, and the unspent funds from previous annual allocations had been carried forward and were still available to Milwaukee County. For the past few years, the transit system has been able to use these carryover Section 5307 funds to avoid the need for increases in County tax levy funding and to limit the extent of service reductions and fare increases. As the County increased its use of these Federal funds from 1999 through 2003, the balance of available Section 5307 carryover funds decreased from about \$32 million at the beginning of 1999 to about \$20.9 million at the beginning of 2004. Transit system officials have projected that the balance of available Section 5307 funds will be insufficient to fully fund all transit system needs in 2008. Extensive service cuts and additional fare increases are likely to be needed at that time if property taxes cannot be increased or an alternative source of funds is not established to finance the transit system.
10. Other publicly sponsored bus services that connect with the Milwaukee County Transit System were also identified as these services provide transit links to major activity centers, in particular job centers, in adjacent counties that serve as trip destinations for Milwaukee County residents. In 2004, these services included Ozaukee County Express bus and shuttle services, Washington County Commuter Express bus and shuttle services, the Waukesha County transit system, and Kenosha-Racine-Milwaukee commuter bus service.
11. Additional transit services for the general public were also provided within Milwaukee County in 2004. Taxicab service was provided by five private taxicab companies for general purpose travel by the general public in Milwaukee County and by 13 other private companies that specialized in service to and from Milwaukee County's General Mitchell International Airport. Interregional transit services serving Milwaukee County included both intercity passenger train service provided by Amtrak and intercity bus service provided through Milwaukee County by four carriers: Badger Coaches, Inc.; Greyhound Lines, Inc.; Lamers Bus Lines, Inc.; and Coach USA, Inc. Special transit services serving employment-related trips were provided in Milwaukee County through three programs including the JobRide Program operated by the Milwaukee County Private Industry Council and programs operated by the Milwaukee Careers Cooperative (MCC) Inc., and Esperanza Unida, Inc.

12. Specialized transportation services serving the County's elderly and disabled population are also provided in the County, with the principal service provider being the Milwaukee County Department on Aging. The Department sponsors three programs that serve frail, ambulatory older adults who are unable to use conventional public transit service: Group Transportation Services, Individualized Transportation Services, and Meal Site Transportation Services. All elderly Milwaukee County residents 60 years of age and older are eligible for service under these programs, although the service is targeted to those having the greatest economic or social need. Each program provides service only on weekdays on an advanced-scheduled, door-to-door basis.

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Chapter IV

PUBLIC TRANSIT SERVICE OBJECTIVES AND STANDARDS

INTRODUCTION

One of the critical steps in the preparation of a transit system development plan is the articulation of the objectives to be served by the transit system, together with the identification of supporting standards that can be used to measure the degree of attainment of the objectives. The objectives and standards provide the basis for assessing the performance of the existing transit system, identifying unmet transit service needs, designing and evaluating alternative transit system plans, and recommending service changes and improvements. The objectives and standards formulated under this study are intended to represent the level of transit performance desired by Milwaukee County.

This chapter presents the public transit service objectives, principles, and standards that were formulated and applied under the County's transit system development plan. The objectives and supporting standards set forth in this chapter may also be used by the County to guide in the design, operation, and review of its transit services after completion of this planning effort.

OBJECTIVES

The transit service objectives, principles, and standards set forth in this chapter are intended to reflect the underlying values of the elected officials and residents of Milwaukee County. One of the important functions of the Milwaukee County Public Transit Planning Advisory Committee was to articulate transit service objectives, principles, and supporting standards for the planning effort. By drawing upon the collective knowledge, experience, views, and values of the members of the Committee, it is believed that a meaningful expression of the performance desired for the Milwaukee County Transit System was obtained, and a relevant set of transit service objectives and supporting principles and standards was defined.

The specific objectives adopted envision a transit system that will effectively serve transit travel by Milwaukee County residents both within the County and between the County and other adjacent communities in the Milwaukee urbanized area. More specifically, the following objectives were adopted by the Advisory Committee:

1. The public transit system should effectively serve the existing land use pattern and support the implementation of planned land uses, meeting the demand and need for transit services, and particularly the needs of the transit-dependent population;

2. The transit system should promote effective utilization of transit service and operate service that is reliable and provides for user convenience and comfort;
3. The transit system should promote the safety and security of its passengers, operating equipment and facilities, and personnel;
4. The public transit system should promote efficiency in the total transportation system; and
5. The public transit system should be economical and efficient, meeting all other objectives at the lowest possible cost.

PRINCIPLES AND STANDARDS

Complementing each of the foregoing transit service objectives is a planning principle and two sets of service standards, as set forth in Table 32. The planning principle supports each objective by asserting its validity. Each set of standards is directly related to the transit service objective and serves several purposes. The service design and operating standards are intended to primarily provide guidelines for the design of new and improved services, the operation of the transit system, and the acquisition of capital equipment and construction of facilities. The service performance standards primarily facilitate the evaluation of the performance of the existing transit system and of alternative service improvements. For each performance standard, one or more criteria are identified which can be used to quantify the performance of the transit service for measurement against the standard.

The performance evaluation of the existing transit system undertaken for the current study included assessments of transit performance on both a systemwide basis and on an individual route basis. The performance standards set forth in Table 32 represent the specific standards and performance measures that were applied in conducting these evaluations. The performance standards in Table 32 include the transit system performance measures which the Wisconsin Department of Transportation utilizes to assess the performance of Wisconsin transit systems, and which the State requires be included in multi-year service and performance goals for each such transit system. Such measures include operating ratio, or farebox recovery rate; operating expense per passenger; passengers per capita; passengers per revenue vehicle hour of service; operating expenses per revenue vehicle hour of service; and revenue vehicle hours of service per capita. The performance standards and evaluation findings of this study can, therefore, provide guidance to the County in establishing the required multi-year service and performance goals.

OVERRIDING CONSIDERATIONS

The objectives, principles, and standards set forth in Table 32 were intended to be used to guide the evaluation of the performance of the existing transit system and the design and evaluation of alternative service improvements. In the application of the objectives, principles, and standards, several overriding considerations must be recognized.

First, it must be recognized that an overall evaluation of the existing public transit services and the alternative service plans must be made on the basis of cost and revenue. Such an analysis may show the attainment of one or more standards to be beyond the economic capability of the community and, therefore, the standards cannot be met practically and must be either modified or eliminated.

Second, it must be recognized that a transit system is unlikely to fully meet all the standards and that the extent to which each standard is met, exceeded, or violated must serve as the final measure of the ability of the system to achieve the objective that a given standard supports.

Third, it must be recognized that certain intangible factors, including the perceived value of the transit service to the County and its potential acceptance by the concerned elected officials, may influence the preparation and selection of a recommended plan. Inasmuch as transit service may be perceived as a valuable service, the County may decide to initiate or retain such services regardless of performance or cost. Only if a considerable degree of such acceptance exists will service recommendations be implemented and their anticipated benefits realized.

Table 32

PUBLIC TRANSIT SERVICE OBJECTIVES, PRINCIPLES, STANDARDS, AND PERFORMANCE MEASURES FOR BUS SERVICE PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM

Objective	Principle	Standards	Performance Measure												
1. The public transit system should effectively serve the existing land use pattern and support the implementation of planned land uses, meeting the demand and need for transit services, and particularly the needs of the transit-dependent population	Public transit is an essential element of the transportation system, connecting major land use activities and providing the accessibility essential to the support of these activities. Transit services are most cost-efficient when serving areas that are fully developed to medium and high densities. Transit also provides an important means of access to jobs and services for all segments of the population, but particularly for persons who must depend on transit as their primary means of travel. Accessible mainline bus service can promote flexible and cost-effective transit service by reducing expenditures for paratransit services.	<u>Service Design and Operating Standards</u>													
		1. The public transit system should serve travel demand generated within contiguous areas of urban development in the urbanized area and should be designed to provide for a higher degree of accessibility to areas of high density (7.0-17.9 dwelling units per net residential acre), and medium density (2.2-6.9 dwelling units per net residential acre) urban development than to areas of low-density development or which should be protected from development	1. --												
		2. Public transit services should be designed and operated so as to permit the orderly and efficient expansion of service to developing areas	2. --												
		3. Public transit services should be provided that address the varied travel and mobility needs of the County population and offer access to the major activity centers in the urbanized area. The transit services provided should include: a. Rapid and express service designed to reduce travel times for the longest trips made between component parts of the transit service area and to connect areas of high and medium density urban development to the Milwaukee central business district and the largest major activity centers b. Local service designed to provide transit within and between residential areas, to link residential areas with nearby major activity centers, and to provide for transfer connections with rapid, express, and other local services c. Local shuttle services designed to connect with rapid, express, and local services serving major activity centers d. Paratransit service designed to meet the needs of people with disabilities who are unable to use accessible mainline bus service	3. --												
		4. The public transit system should serve and connect major activity centers in the urbanized area that currently generate, or have the potential to generate, significant ridership including: a. Housing facilities serving transit-dependent persons who are living independently including elderly persons, people with disabilities, and low-income individuals b. Principal hospitals and medical centers c. Major retail shopping malls d. Principal colleges and universities e. Major Federal, State, and local governmental offices and institutions f. Major employers with more than 500 employees at one site g. Major industrial and office parks h. Major passenger terminals for intercity bus, passenger rail, and airline carriers i. Major public and private recreational centers hosting high attendance events	4. --												
		<u>Service Performance Standards</u>													
		1. The population served should be maximized, particularly those who are transit-dependent. The population shall be considered as served when it resides within the following distances of transit service: <u>Maximum Distance from a Bus Stop</u> <table><tr><td><u>Service Type</u></td><td><u>Walking</u></td><td><u>Driving</u></td></tr><tr><td>Rapid</td><td>1/2 Mile</td><td>3 Miles</td></tr><tr><td>Express</td><td>1/2 Mile</td><td>--</td></tr><tr><td>Local</td><td>1/4 Mile</td><td>--</td></tr></table>	<u>Service Type</u>	<u>Walking</u>	<u>Driving</u>	Rapid	1/2 Mile	3 Miles	Express	1/2 Mile	--	Local	1/4 Mile	--	1. The number of people residing within appropriate walking or driving distance of a bus stop and the percent of the total population represented
		<u>Service Type</u>	<u>Walking</u>	<u>Driving</u>											
		Rapid	1/2 Mile	3 Miles											
		Express	1/2 Mile	--											
Local	1/4 Mile	--													
2. The major activity centers and jobs served should be maximized. Major activity centers and jobs shall be considered as served when located within the following distance of transit service: <u>Maximum Walking</u> <table><tr><td><u>Service Type</u></td><td><u>Distance from a Bus Stop</u></td></tr><tr><td>Rapid</td><td>1/2 Mile</td></tr><tr><td>Express</td><td>1/2 Mile</td></tr><tr><td>Local</td><td>1/4 Mile</td></tr></table>	<u>Service Type</u>	<u>Distance from a Bus Stop</u>	Rapid	1/2 Mile	Express	1/2 Mile	Local	1/4 Mile	2. The number of major activity centers and jobs located within appropriate walking distance of a bus stop and the percent of the total activity centers and jobs represented						
<u>Service Type</u>	<u>Distance from a Bus Stop</u>														
Rapid	1/2 Mile														
Express	1/2 Mile														
Local	1/4 Mile														
3. The transit supportive land area served should be maximized. To be considered transit supportive, an area should have a density of at least 4 dwelling units per net residential acre, or at least 4 jobs per gross acre	3. The proportion of the transit supportive land area located within one-quarter mile of a local bus route														

Table 32 (continued)

Objective	Principle	Standards	Performance Measure
1. (continued)	(continued)	<div>4. The public transit system should provide service within the urbanized area that maximizes the population that is:<div>a. Within 45 minutes overall transit travel time of 40 percent of the jobs in the urbanized area</div><div>b. Within 35 minutes overall transit travel time of a major shopping mall</div><div>c. Within 40 minutes overall transit travel time of a major college or university</div><div>d. Within 30 minutes overall transit travel time of a major hospital or medical center</div><div>e. Within 40 minutes overall transit travel time of a major Federal, State, or local governmental office or public institutional center</div><div>f. Within 60 minutes overall transit travel time of a major passenger terminal for an intercity bus, passenger rail, or airline carrier</div><div>g. Within 60 minutes overall transit travel time of a major public or private recreational center hosting high attendance events</div></div>	<div>4. The number of people residing within each of the prescribed travel times and the percent of the total population represented</div>
2. The transit system should promote effective utilization of transit service and operate service that is reliable and provides for user convenience and comfort.	The benefits of a public transit system are, to a large extent, greatly related to the degree to which it is used as measured by transit ridership. Ridership is a function of the degree to which people have access to transit services which are reliable and provide for quick, convenient, and comfortable travel. Riders view transit services with these attributes as an effective and attractive alternative to the private automobile.	<div><u>Service Design and Operating Standards</u></div> <div>1. Public transit routes should have direct alignments with a limited number of turns, and should be arranged to minimize duplication of service and unnecessary transfers which would otherwise discourage transit use.</div>	<div>1. --</div>
		<div>2. Rapid and express transit routes should be extended as needed to perform a collection-distribution function at the ends of the route</div>	<div>2. --</div>
		<div>3. Public transit service that does not meet service performance standards may be warranted in special instances if it improves total system continuity and/or provides significant feeder service or transfer opportunities to other routes</div>	<div>3. --</div>
		<div>4. Bus stops should be clearly marked by easily recognized bus stop signs and located so as to minimize the walking distance to and from residential areas and major activity centers over an accessible path for all users including people with disabilities, and to facilitate connections with other transit services where appropriate. The suggested locations and spacing for stops are as follows:</div>	<div>4. --</div>
		<div><div><u>Service Type</u></div><div>Rapid</div><div>Express</div><div>Local</div></div> <div><div><u>Stop Locations and Spacing</u></div><div>At terminal areas and one-mile or more on line-haul sections</div><div>At terminal areas, intersecting transit routes, signalized intersections with arterial streets, and major activity centers</div><div>600 to 1,200 feet (two to three blocks) apart</div></div>	
		<div>5. The public transit system should be designed and operated so as to achieve the following minimum overall travel speeds by area based on average weekday conditions:<div><u>Travel Speed (miles per hour)</u></div><div><div><div><u>Service Type</u></div><div>Rapid</div><div>Express</div><div>Local</div></div><div><div><div><div></div><div>CBD</div></div><div><div>5-10</div><div>5-10</div><div>5-10</div></div><div><div>Central City</div><div>15-30</div><div>15-20</div><div>12-15</div></div><div><div>Outlying Areas</div><div>40-55</div><div>25-35</div><div>18-25</div></div></div></div></div></div>	<div>5. --</div>
		<div>6. The hours of service operation for the public transit system should serve the demand generated by the land use activities served by, and the function of, each route. Service periods should also accommodate the travel needs of those who depend on the transit system as their primary travel mode. The transit system should, therefore, strive to operate routes with service hours as follows:<div><u>Desirable Service Hours</u></div><div><div><div><div><u>Service Type</u></div><div>Rapid</div><div>Express</div><div>Local</div></div><div><div><div><div><u>Weekdays</u></div><div>6:00 a.m.-10:00 p.m.</div></div><div><div>5:00 a.m.-11:00 p.m.</div></div><div><div>5:00 a.m. - 1:00 a.m.</div></div></div><div><div><div><u>Saturdays</u></div><div>6:00 a.m.-10:00 p.m.</div></div><div><div>5:00 a.m.-11:00 p.m.</div></div><div><div>5:00 a.m. - 1:00 a.m.</div></div></div><div><div><div><u>Sundays/Holidays</u></div><div>6:00 a.m.-10:00 p.m.</div></div><div><div>5:00 a.m.-11:00 p.m.</div></div><div><div>5:00a.m. - 1:00 a.m.</div></div></div></div></div></div></div>	<div>6. --</div>
		<div>7. The availability of weekend and holiday service enhances the attractiveness of weekday service and positively affects system ridership by providing that regular weekday riders need not seek alternative travel modes. Therefore, a reasonable level of service should also be maintained on weekends and holidays.</div>	<div>7. --</div>
		<div>8. Operating headways for public transit fixed-route service should be capable of accommodating passenger demand at the recommended load standards, and should also provide for a convenient service so as to encourage transit use. The desirable headways presented below represent a frequency of transit service that would be desirable to provide a service of high quality and to promote transit ridership. Lower headways may be provided in the core service area^a for the system and high density corridors of heavy travel demand, while only higher headways may be feasible in areas of low and medium density.<div><u>Desirable Headway (minutes)</u></div><div><div><div><div><u>Service Type</u></div><div>Rapid</div><div>Express</div><div>Local</div></div><div><div><div><div><u>Weekday</u></div><div><div><div><div></div><div>Peak</div></div><div><div>Period</div></div></div><div><div>Off-Peak</div><div>Period</div></div></div><div><div>Weekend</div><div>Periods/Holidays</div></div></div></div><div><div>10</div><div>20</div><div>30</div></div><div><div>10</div><div>20</div><div>30</div></div><div><div>10</div><div>20</div><div>30</div></div></div></div></div></div>	<div>8. --</div>

Table 32 (continued)

Objective	Principle	Standards	Performance Measure																																																															
2. (continued)	(continued)	<div>8. (continued) Operating headways should not exceed the following maximum headways throughout the service area when service is offered: <div>Maximum Headway (minutes) <table><tr><th rowspan="2">Service Type</th><th colspan="2">Weekday</th><th>Weekend</th></tr><tr><th>Peak Periods</th><th>Off-Peak Periods</th><th>Periods/Holidays</th></tr><tr><td>Rapid</td><td>30</td><td>60</td><td>60</td></tr><tr><td>Express</td><td>30</td><td>60</td><td>60</td></tr><tr><td>Local</td><td>30</td><td>60</td><td>60</td></tr></table></div></div> <div>9. All transit vehicles should be equipped with padded seats, heating/air conditioning units, and wheelchair lifts/ramps that are in good working condition. Window treatments should maintain outward visibility for passengers. Vehicle interiors and exteriors should be cleaned and inspected daily with needed equipment repairs made on a timely basis</div> <div>10. Consideration should be given to rehabilitating or replacing each public transit vehicle at the end of its normal service life, which shall be defined as follows: <table><tr><th rowspan="2">Vehicle Type</th><th rowspan="2">Length (feet)</th><th colspan="2">Normal Service Life</th></tr><tr><th>Years</th><th>Mileage</th></tr><tr><td>Heavy-duty bus</td><td>35 or more</td><td>12</td><td>500,000</td></tr><tr><td>Heavy-duty bus</td><td>25-30</td><td>10</td><td>350,000</td></tr><tr><td>Medium-duty bus</td><td>25-30</td><td>7</td><td>200,000</td></tr><tr><td>Light-duty bus</td><td>25-30</td><td>5</td><td>150,000</td></tr></table></div> <div>11. Consideration should be given to providing passenger shelters of an attractive design at all bus stops where warranted by existing conditions including: boarding passenger counts, passenger waiting time, bus stop situation, exposure to weather conditions, and the facility or land use being served.^b Access to shelters for people with disabilities should be maintained.</div> <div>12. Park-ride facilities should be provided at appropriate stops on rapid and express services to serve transit users from medium and low density residential areas. Sufficient off-street automobile parking should be provided at park-ride facilities to accommodate the total parking demand generated by transit users and carpoolers</div> <div>13. Provisions for transporting bicycles on transit vehicles should be considered</div> <div>Service Performance Standards 1. Ridership on the transit system and the overall effectiveness of the services provided should be maximized.</div> <div>2. Ridership and service levels on each transit route should be monitored and service levels adjusted to be appropriate for demand levels unless special circumstances warrant otherwise^c.</div> <div>3. The minimum service effectiveness levels to warrant continued service operation shall be as specified below, unless special circumstances warrant otherwise^c: <table><tr><th>Service Period</th><th>Total Boarding Passengers Per Revenue Vehicle Hour</th></tr><tr><td>Weekdays</td><td>22^a</td></tr><tr><td>Saturdays</td><td>15^a</td></tr><tr><td>Sundays/Holidays</td><td>10^a</td></tr></table></div> <div>4. The average maximum load factor, measured as the ratio of passengers to bus seats at that point on a route where passenger loads are highest, should not exceed the following during any one-hour period: <table><tr><th rowspan="2">Service Type</th><th colspan="2">Average Maximum Load Factor</th></tr><tr><th>Peak Periods</th><th>All Other Times</th></tr><tr><td>Rapid</td><td>1.00</td><td>1.00</td></tr><tr><td>Express</td><td>1.33</td><td>1.00</td></tr><tr><td>Local</td><td>1.33</td><td>1.00</td></tr></table></div> <div>5. The transit system should be designed and operated to maximize schedule adherence and be "on-time" at least 90 percent of the time. On-time is defined as schedule adherence within the ranges of one minute early and three minutes late.</div> <div>6. Travel for public transit passengers should be reasonable in comparison to travel by private automobile for trips made between component parts of the service area. Transit travel distances and times should not be more than 1.5 times longer than with the automobile travel for comparable trips</div>	Service Type	Weekday		Weekend	Peak Periods	Off-Peak Periods	Periods/Holidays	Rapid	30	60	60	Express	30	60	60	Local	30	60	60	Vehicle Type	Length (feet)	Normal Service Life		Years	Mileage	Heavy-duty bus	35 or more	12	500,000	Heavy-duty bus	25-30	10	350,000	Medium-duty bus	25-30	7	200,000	Light-duty bus	25-30	5	150,000	Service Period	Total Boarding Passengers Per Revenue Vehicle Hour	Weekdays	22 ^a	Saturdays	15 ^a	Sundays/Holidays	10 ^a	Service Type	Average Maximum Load Factor		Peak Periods	All Other Times	Rapid	1.00	1.00	Express	1.33	1.00	Local	1.33	1.00	<div>9. --</div> <div>10. --</div> <div>11. --</div> <div>12. --</div> <div>13. --</div> <div>1a. Total passengers 1b. Total passengers per capita 1c. Revenue vehicle hours per capita 1d. Total passengers per revenue vehicle hour 1e. Total passengers per revenue vehicle mile</div> <div>2a. Total boarding passengers per revenue vehicle mile 2b. Total boarding passengers per revenue vehicle hour 2c. Productivity frequency index^d</div> <div>3. Total boarding passengers per revenue vehicle hour</div> <div>4. Average maximum load factor by route for the weekday peak hour of service</div> <div>5. Percent of scheduled bus trips on time</div> <div>6a. Ratio of transit to highway distance 6b. Ratio of transit to highway travel time</div>
Service Type	Weekday			Weekend																																																														
	Peak Periods	Off-Peak Periods	Periods/Holidays																																																															
Rapid	30	60	60																																																															
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Rapid	1.00	1.00																																																																
Express	1.33	1.00																																																																
Local	1.33	1.00																																																																

Table 32 (continued)

Objective	Principle	Standards	Performance Measure
2. (continued)	(continued)	7. Preventative maintenance policies and practices should be established to maximize the reliability of revenue vehicles so that: a. All of the vehicles required to operate peak service are available daily b. The number of breakdowns requiring a maintenance road call do not exceed one per 6,000 vehicle miles of service	7a. Number of buses available for weekday peak service versus peak bus requirement 7b. Percent of buses that miss scheduled pull-outs 7b. Vehicle miles between road calls
3. The transit system should promote the safety and security of its passengers, operating equipment and facilities, and personnel and project a positive image to the general public.	Accidents take a heavy toll in property damage and human suffering, and can contribute substantially to the overall costs of operation for the public transit system and, in particular, the public funds required. Incidences that jeopardize the security of passengers or transit system property may promote the perception that transit travel is not safe, thereby hampering the mobility of persons who must travel within areas the public deems unsafe. Therefore, every attempt should be made in the operation of the transit system to reduce the incidence and severity of accidents and to increase security for transit passengers, equipment and facilities, and personnel	<u>Service Design and Operating Standards</u> 1. Public transit service should not be operated over streets that exhibit conditions that may be hazardous for transit operations including steep grades, narrow traffic lanes, uncontrolled intersections, poor pavement conditions, or habitual problems with illegal parking	1. --
		2. Nearside bus stops facilitate passenger use of crosswalks and convenience in transferring between routes, provide for adequate sight considerations for vehicle operators, and allow transit vehicles to utilize the intersection to merge into traffic. The use of nearside locations for bus stops on a consistent basis is also favored by people with disabilities. Therefore, bus stops should generally be located at the nearside of intersections to promote passenger safety and the safe operation of transit vehicles. Stops may be located elsewhere if warranted by special circumstances	2. --
		3. Bus stops should not be located in areas without adequate pedestrian facilities such as sidewalks or adequately maintained roadway shoulders that provide for a safe and accessible travel path for all users including people with disabilities.	3. --
		4. The public transit system should promote the use of appropriate security equipment and practices—such as mobile radios, automatic vehicle location (AVL) hardware, cameras, passenger information kiosks with security call boxes, and security personnel—to enhance the security of passengers and transit system equipment, facilities, and personnel	4. --
		<u>Service Performance Standards</u> 1. The number of accidents on the public transit system should be minimized	1. The number of accidents on the transit system per 100,000 vehicle miles of service
		2. The number of security incidences on transit property should be minimized	2. The number of security incidences on the transit system per 100,000 vehicle miles of service
4. The public transit system should promote efficiency in the total transportation system	Public transit facilities and services can promote economy and efficiency in the total transportation system. The transit system has the potential to supply additional passenger transportation capacity, which can alleviate peak loadings on arterial street facilities and assist in reducing the demand for land necessary for parking facilities at major activity centers. Efficient transit service also has the potential to reduce energy consumption and air pollutant emissions	<u>Service Performance Standards</u> 1. The total amount of energy and the total amount of energy per passenger mile consumed in operating the total transportation system of which the public transit system is an integral part, particularly petroleum-based fuels, should be minimized 2. The amount of highway system capacity which must be provided to serve travel demand should be minimized	1. Passenger miles per gallon of motor fuel 2. Potential increase in vehicle traffic on surface streets if transit trips use automobile
5. The public transit system should be economical and efficient, meeting all other objectives at the lowest possible cost	The total financial resources of the County are limited and any investment of funds in public transit facilities and services must be weighed against other public investments. Therefore, total transit system costs should be minimized for the desired level of transit service and transit revenues should be maximized to maintain the financial stability of the services. The attainment of this objective may at times conflict with, and require the modification or elimination of, other standards	<u>Service Design and Operating Standards</u> 1. The total operating and capital investment for the public transit system should be minimized and reflect efficient utilization of resources 2. The fare policy for the public transit system should provide for premium fares for premium transit services, as well as special or discounted fares for priority population groups and frequent transit riders 3. Periodic increases in passenger fares should be considered to maintain the financial stability of the public transit system when: a. The farebox recovery rate for the transit system goes below levels determined to be acceptable by local officials b. Operating expenses for the transit system have increased by 10 to 15 percent since fares were last raised c. Projected levels of Federal and State operating assistance funds would require an increase in projected local operating assistance levels above that determined to be acceptable by local officials 4. Public transit service should not be extended to communities or major activity centers located outside the County at the direct expense of County taxpayers. The net local costs—total costs minus passenger revenues and Federal and/or state assistance funds—of such transit service shall be provided through sources other than County tax dollars unless special circumstances warrant otherwise	1. -- 2. -- 3. -- 4. --

Table 32 (continued)

Objective	Principle	Standards	Performance Measure
5. (continued)	(continued)	<p><u>Service Performance Standards</u></p> <p>1. The operating expense per unit of transit service, the operating expense per passenger, and the total operating assistance per passenger should be minimized for the public transit system as a whole. Annual increases in such costs should not exceed the average percentage increase experienced by comparable transit systems</p> <p>2. Public transit system operating revenues generated from passenger fares and private sources should be maximized.</p> <p>3. The total operating expense per passenger and total operating assistance per passenger should be minimized for the public transit system as a whole. Annual increases in such costs should not exceed the average percentage increase experienced by comparable transit systems</p> <p>4. Cost effectiveness levels on each transit route should be monitored and service levels adjusted to be appropriate for demand levels or the route eliminated unless special circumstances warrant otherwise^c. Cost effectiveness levels shall be measured using the total boarding passengers per revenue vehicle hour for each route.</p>	<p>1a. Operating expense per revenue and total vehicle mile</p> <p>1b. Operating expense per revenue and total vehicle hour</p> <p>1c. Operating expense per boarding passenger</p> <p>1d. Total operating assistance per boarding passenger</p> <p>2. Percent of operating expenses recovered through passenger and other operating revenues, excluding public operating assistance</p> <p>3a. Total operating expense per boarding passenger</p> <p>3b. Total operating assistance per boarding passenger</p> <p>4a. Total boarding passengers per revenue vehicle hour</p>

^aThe "core service area" for the transit system is the area bounded by Capitol Drive on the north, Oklahoma Avenue on the south, 76th Street on the west, and Lake Michigan on the east.

^bPotential bus shelter locations shall be reviewed and scored against criteria which are deemed to warrant the construction of a shelter, with a range of point values assigned to conditions for the criteria that rate the relative need for a shelter. The total point value for each location shall determine its rank in a prioritized listing of potential sites with a maximum possible total score of 100 points for each location. The criteria and conditions used to rank bus shelter locations are as follows:

Conditions Warranting Bus Shelter	Point Value	Conditions Warranting Bus Shelter	Point Value
<u>Boarding Passenger Counts</u>		<u>Facility or Land Use Being Served</u>	
Less than 25 passengers	0	(values are additive up to a maximum of 10 points)	
25-74 passengers	10	Not a transit trip generator.....	0
75-149 passengers	20	Commercial or shopping center.....	5
150-299 passengers	30	Industrial plant or office building.....	5
300 or more passengers	40	Park or recreation center.....	5
<u>Passenger Waiting Time</u>		Other significant transit trip generator.....	5
(one-half of the midday headway)		High density residential area	10
Less than 3.0 minutes.....	0	Facility or activity for elderly individuals.....	10
3.1-6.0 minutes	4	Facility or activity for people with disabilities.....	10
6.1-9.0 minutes	8	Hospital, medical center, or clinic.....	10
9.1-12.0 minutes	12	University, college, or public secondary school	10
12.1-15.0 minutes	16		
More than 15.0 minutes	20		
<u>Bus Stop Situation</u>			
Not a transfer point.....	0		
Transfer point.....	10		
<u>Exposure to Weather Conditions</u>			
None	0		
Minimum	5		
Average.....	10		
Full	20		

^cA reasonable period of time should be allowed for ridership to develop and stabilize before evaluating the performance of new transit services to determine if the service should be continued, modified, or eliminated. Generally, new transit services should achieve 40 percent of average performance levels for existing routes after six months of operation; 60 percent of average performance levels for existing routes after nine months of operation; and 80 percent of average performance levels for existing routes after one year of operation. The period for services that are funded through Federal or state transit demonstration grants may be extended to coincide with the period for the demonstration grant.

^dThe productivity frequency index (PFI) is an analytical tool developed by the Milwaukee County Transit System which measures the relationship between passengers per revenue vehicle hour of service and the service frequency, or headway on each bus route. The index is calculated for each route in the transit system by service period as follows:

$$PFI = \text{Boarding Passengers per Revenue Vehicle Hour} \times \frac{\text{Average Headway on Route}}{60 \text{ Minutes}}$$

The PFI values calculated for each route are compared against target values for the transit system to assist in determining if changes in the headways on the route should be considered.

^eDuring 2004, the transit system carried about 41 total passengers per revenue vehicle hour systemwide on all services and the regular routes operated on an average weekday carried about 35 total passengers per revenue vehicle hour.

Source: SEWRPC.

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Chapter V

EVALUATION OF THE EXISTING TRANSIT SYSTEM

INTRODUCTION

This chapter documents the results of an evaluation of the year 2005 Milwaukee County Transit System on a systemwide and route-by-route basis. The evaluation is intended to provide a comprehensive review of the service provided by the transit system, identifying areas of effective and efficient transit service operation, as well as areas of ineffective and inefficient operation. An assessment is also made of the transit service needs of Milwaukee County residents that are not being met, or are not being met well, by the transit system.

The following sections of this chapter present the findings of the evaluation. Presented first is an assessment of transit performance on a systemwide basis to ascertain the extent to which the transit system currently serves the population and jobs within Milwaukee County, and to assess the overall ridership and financial performance of the transit system. This is followed by an evaluation of the performance of the individual routes of the transit system with respect to operating headways and peak passenger loading characteristics, on-time performance, travel times, and ridership and effectiveness levels. The third section of the chapter presents an assessment of the unmet transit service needs of County residents.

This performance evaluation is a complement to the State management performance audit of the Milwaukee County Transit System which is conducted every five years, and was last conducted in 2003. The State audit focuses on a review of each functional area of the transit system—maintenance, scheduling, transportation, finance, human resources, management information systems, materials management, marketing, safety and security, research and planning, claims, labor relations, and telephone information services and complaints—identifying good management practices and areas for improvement. The State audit also includes comparison of transit system efficiency and effectiveness to its peers nationwide. A summary of the findings of the peer review and comparison of the Milwaukee County Transit System is included in the fourth section of this chapter, along with a discussion on the implications of continuing the recent trends in funding the local costs of system operation.

SYSTEMWIDE PERFORMANCE EVALUATION

Service to Existing Population, Employment, and Land Uses

The evaluation of the Milwaukee County Transit System with respect to the service it provides to the population, employment, and major land uses is intended to identify areas that are either not served or are underserved by the routes of the Milwaukee County Transit System. It is also intended to identify major activity centers and job concentrations outside Milwaukee County that are desirable destinations for Milwaukee County residents

but which cannot be reached by the transit system or connecting bus service provided by other transit operators. The performance measures utilized include estimates of the total population within the transit system local service area (the area within one-quarter mile of a local bus route); the coverage of areas with transit dependent and minority population concentrations provided by Milwaukee County bus routes; the number of jobs and major land use activity centers within one-quarter mile of a local route of the Milwaukee County Transit System and connecting bus services; and the amount of transit supportive land area in the County within one-quarter mile of the local bus routes. Ideally, the transit system should provide areal coverage of the residential concentrations of the general and transit-dependent population, employment concentrations, and the major land use activity centers in Milwaukee County. Where possible, the transit system should also provide connections with other transit services in the Milwaukee area to facilitate access by County residents to job concentrations and major activity centers in the adjacent counties. Such residential areas, major employment concentrations, and major activity centers were identified in Chapter II.

The evaluation was based principally upon the route structure, service areas, and service hours and availability of the Milwaukee County Transit System bus routes in Fall 2005. Map 31 displays the one-quarter mile walk access service area for the regular local and shuttle routes operated by the transit system on weekdays and the three-mile automobile drive access service area for the park-ride lots served on weekdays by the system's freeway flyer routes. The routes and service areas shown are for only the routes which are operated by the transit system to serve Milwaukee County residents and exclude contract service routes operated for other governmental units. The local walk access service area is the most widely accepted method in the transit industry for measuring the areal coverage of the routes of a transit system. Service Design Standard 6 of Objective 2 indicates that it is highly desirable to have local transit service available for 20 hours on weekdays from 5:00 a.m. to 1:00 a.m. Map 31, therefore, distinguishes between the areas which are served by local routes operating for 20 or more hours on weekdays and the areas served by local routes operating for fewer hours. Standard 6 also indicates that it is desirable to have freeway flyer transit service available for 16 hours on weekdays from 6:00 a.m. to 10:00 p.m. However, all of the freeway flyer routes currently operate only during the weekday morning and afternoon peak periods. A more detailed discussion of the service hours for each route in the transit system is presented in a later section of the chapter under the route performance evaluation.

The evaluation also considered where connecting bus services provided in Fall 2005 by other transit operators can be used by Milwaukee County residents for "reverse commute" travel to access jobs and major activity centers in the surrounding counties. These services included Route No. 143 and connecting shuttle services as sponsored by Ozaukee County; Wisconsin Coach Lines, Inc., Route No. 901 and connecting local bus routes operated by the City of Waukesha Metro Transit System, all as sponsored by Waukesha County; and the local bus routes of the Waukesha Metro Transit System. The service areas for these routes are shown on Map 32. Other connecting bus services operated between the Cities of Kenosha and Racine and downtown Milwaukee as sponsored by the City of Racine, between the West Bend, Jackson, and Germantown areas as sponsored by Washington County, and between the Oconomowoc-Delafield-Hartland, Mukwonago, and New Berlin areas as sponsored by Waukesha County were not considered for this analysis of population and employment served as the services are not operated with schedules that allow for travel by Milwaukee County residents for access to the jobs and activity centers in Kenosha, Racine, Washington, and western Waukesha Counties.

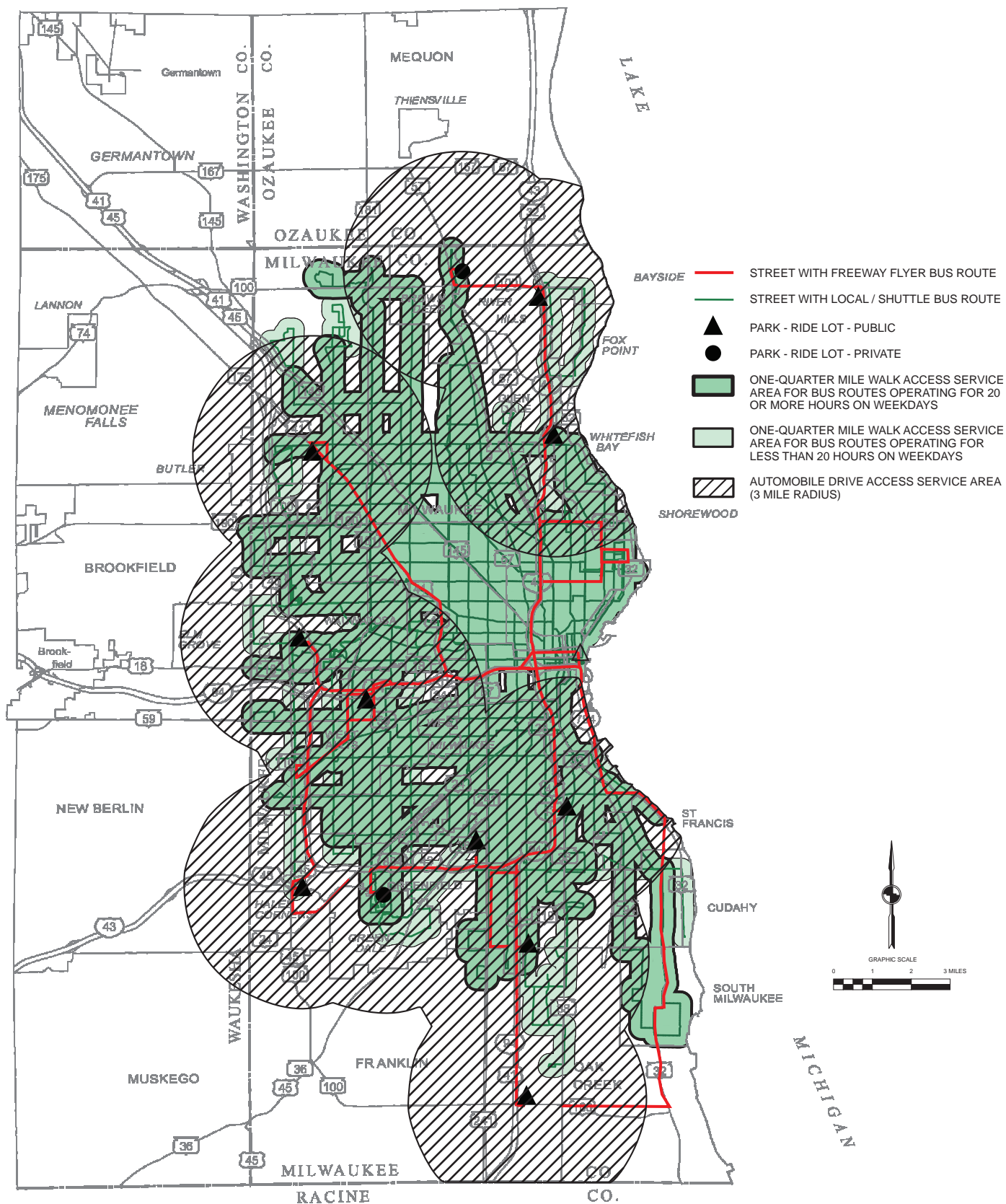
The bus services shown on Map 32 reflect two service changes from the connecting local bus services identified for Fall 2004 in Chapter III of this report. Milwaukee County Transit System Route No. 106, which served the Nor-X-Way industrial parks on the north side of the Village of Menomonee Falls, was discontinued by Waukesha County in July 2005. In October 2005, Washington County discontinued service over a route operated under contract by Rite-Way Bus Service, Inc. between northern Milwaukee County and the Maple Road Industrial Park in the Village of Germantown. These two routes were, therefore, not considered in the systemwide performance evaluation.

Population and Residential Areas Within the Transit Service Area

The total Milwaukee County population that is within convenient walking or driving distance of the existing local bus routes of the Milwaukee County Transit System is identified in Table 33. Map 33 displays residential areas in

Map 31

**WALK AND AUTOMOBILE DRIVE ACCESS AREAS FOR THE
MILWAUKEE COUNTY TRANSIT SYSTEM: 2005**



WALK ACCESS SERVICE AREAS FOR CONNECTING BUS SERVICES PROVIDED BY OTHER TRANSIT OPERATORS THAT CAN BE USED BY MILWAUKEE COUNTY RESIDENTS TO ACCESS JOBS AND MAJOR ACTIVITY CENTERS OUTSIDE MILWAUKEE COUNTY: 2005

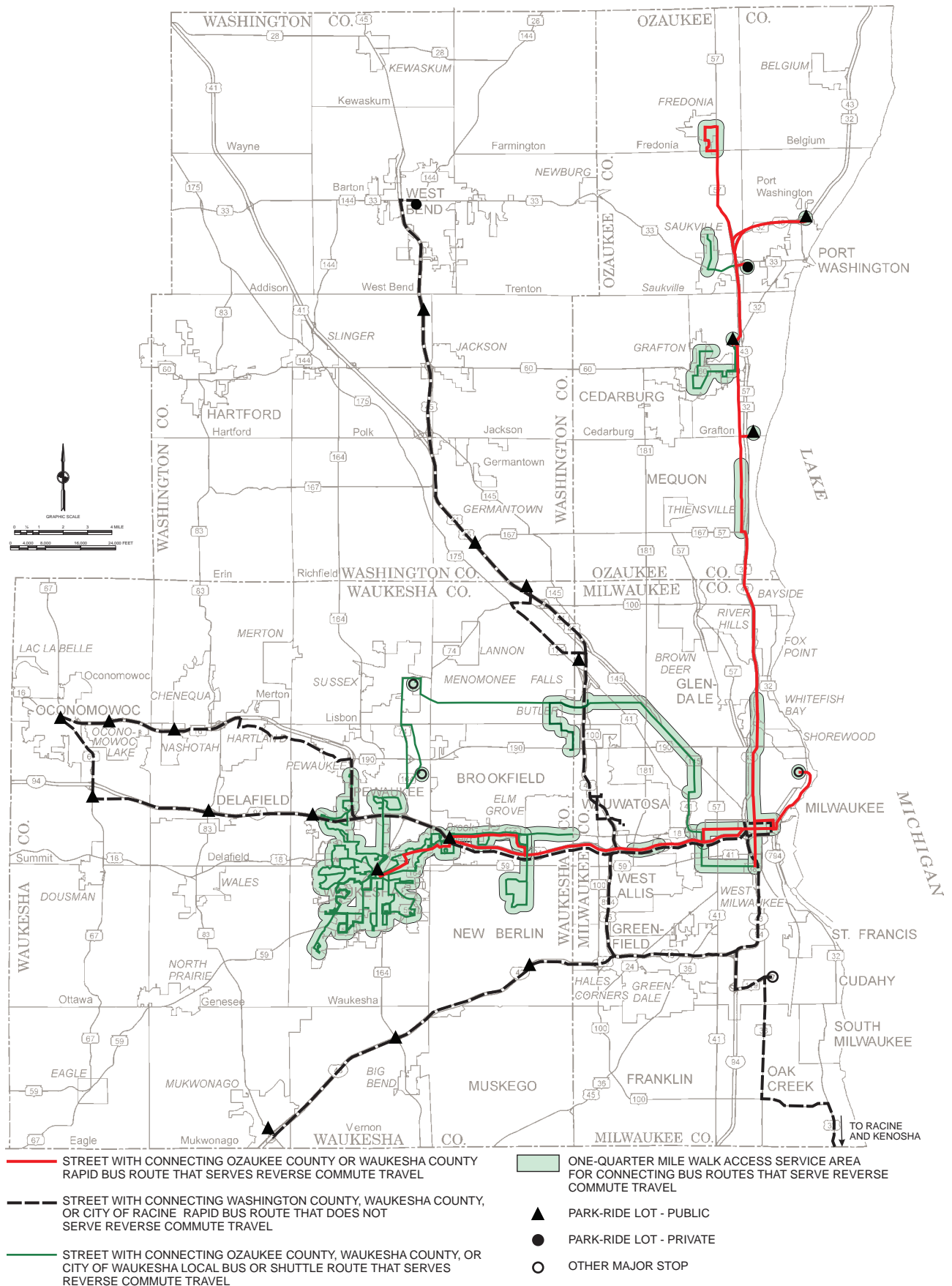


Table 33

**POPULATION WITHIN THE WALK AND AUTOMOBILE DRIVE ACCESS SERVICE AREAS FOR THE
WEEKDAY BUS SERVICES PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2005**

Service Area	Population ^a Within the Service Area in Milwaukee County	
	Number	Percent of Total Population ^b
Within Walk Access Service Area ^c		
For local/shuttle routes with weekday service hours meeting standards ^d	789,100	83.9
For local/shuttle routes with weekday service hours below standard	61,800	6.6
Total Walk Access Service Area	850,900	90.5
Within Automobile Drive Access Service Area ^c		
For freeway flyer routes with weekday service hours meeting standards ^d	- -	- -
For freeway flyer routes with weekday service hours below standards	699,300	74.3
Total Automobile Drive Access Service Area	699,300	74.3
Within Combined Walk/Drive Service Area ^e		
For all routes with weekday service hours meeting standards ^e	789,100	83.9
For all routes with weekday service hours below standards	129,500	13.8
Total	918,600	97.7

^aAll population figures are based on 2000 census data allocated to U.S. Public Land Survey quarter sections by Commission staff.

^bThe total population of Milwaukee County in the year 2000 was about 940,200 persons.

^cWalk access is based on the population within a one-quarter mile distance of regular local bus routes and automobile drive access is based on the population within a 3-mile radius of the park-ride lots served by freeway flyer bus routes, both as specified under Standard 1 of Objective 2.

^dStandard 6 of Objective 2 indicates that it is desirable to have local transit service available for 20 hours on weekdays from 5:00 a.m. to 1:00 a.m., and to have rapid transit service available for 16 hours on weekdays from 6:00 a.m. to 10:00 p.m.

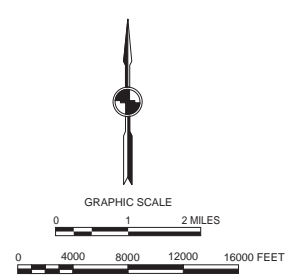
^eTotal population within the combined walk/drive service area does not equal the sum of the individual population figures shown for walk and drive access because these areas overlap. For the total combined walk/drive, service area, the population in these areas was only counted once.

Source: SEWRPC.

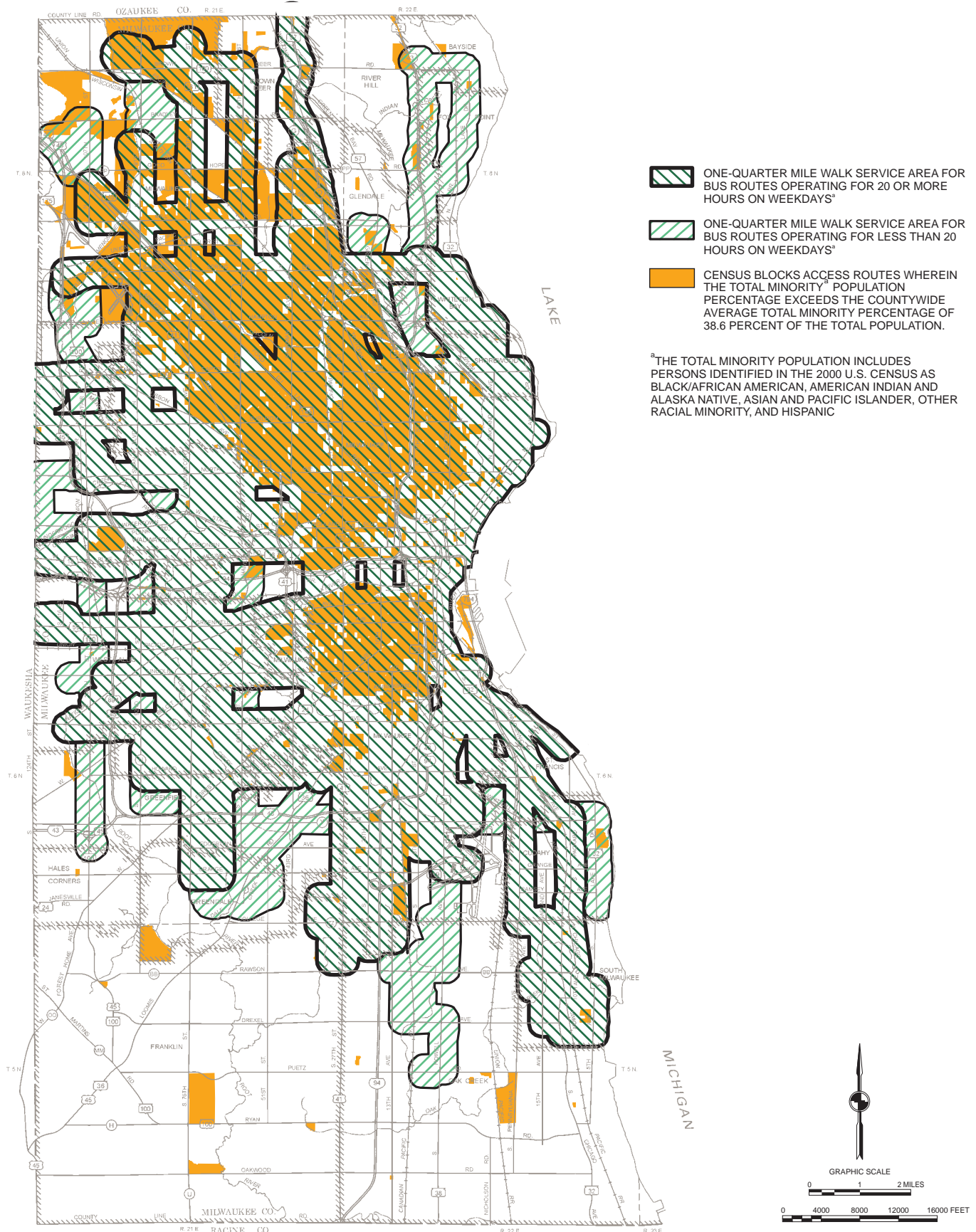
the County both within and outside the walk service areas identified for the 2005 system on Map 31. Maps 34 and 35 and Table 34 identify how well the existing local/shuttle routes of the transit system provide areal coverage of areas in the County with above average concentrations of minority and transit-dependent populations. The information in the tables and on the maps indicates that:

1. About 789,100 persons in Milwaukee County, or about 84 percent of the total County population, reside within a one-quarter mile walking distance of an existing local/shuttle route of the transit system that provides service for more than 20 hours on weekdays in accordance with the transit service standards. This area largely encompasses the eastern and north central sections of the County which have the highest residential densities and the most significant concentrations of transit-dependent persons. An additional 61,800 County residents, or about 7 percent of the County population, are within walking distance of the routes with shorter spans of service. These routes generally serve areas in the western third and the far northern and southern portions of the County on the fringes of the transit system service area. In total about 850,900 persons in Milwaukee County, or about 91 percent of the total County population, is within convenient walking distance of the existing local/shuttle routes, representing excellent overall coverage of the existing residential areas in the County.

**RESIDENTIAL AREAS IN MILWAUKEE COUNTY
WITHIN AND OUTSIDE THE WALK ACCESS SERVICE
AREAS FOR THE LOCAL/SHUTTLE ROUTES OF THE
MILWAUKEE COUNTY TRANSIT SYSTEM: 2005**

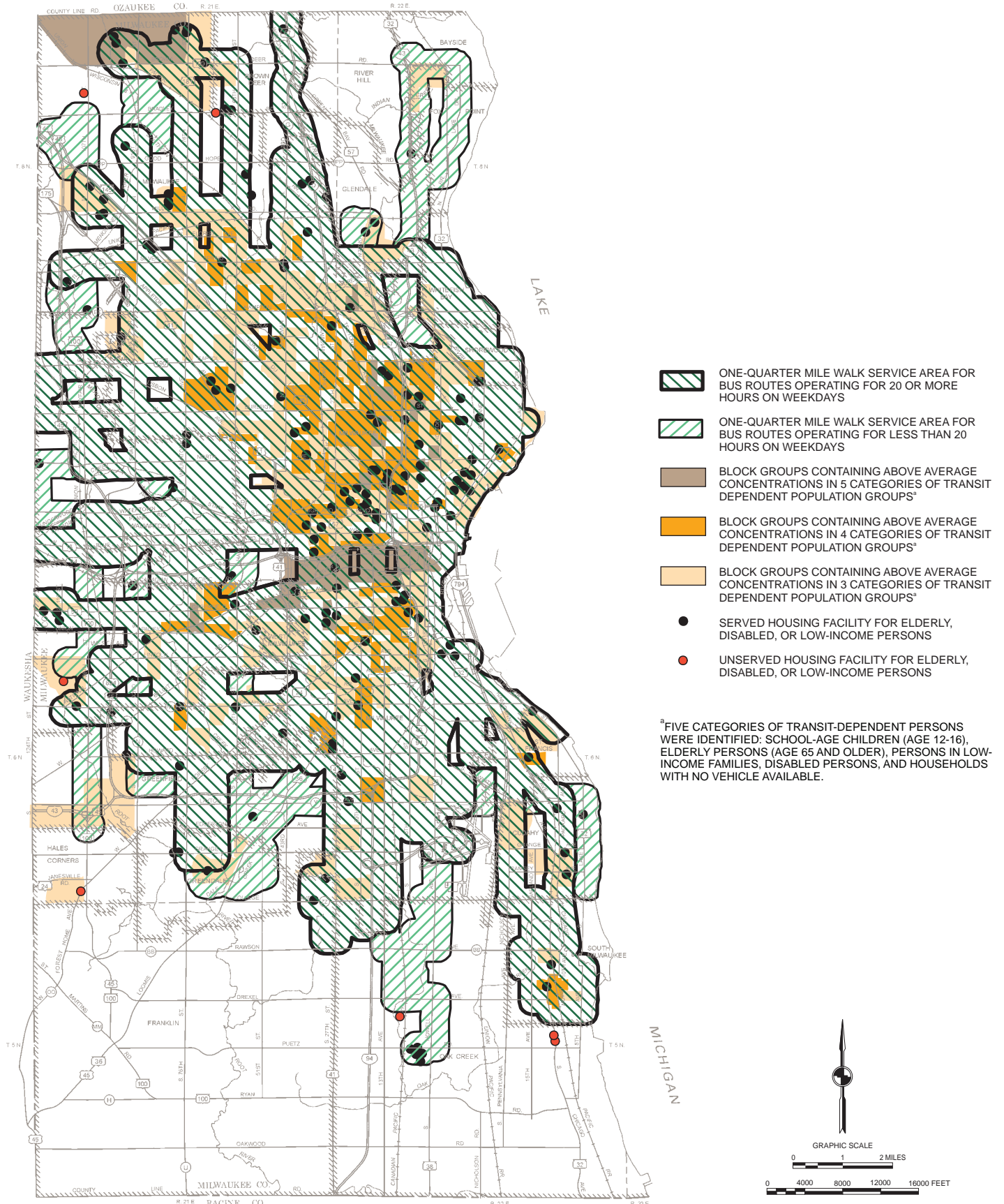


RESIDENTIAL CONCENTRATIONS OF THE TOTAL MINORITY POPULATION IN MILWAUKEE COUNTY WITHIN AND OUTSIDE THE WALK ACCESS SERVICE AREAS FOR THE LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2005



Source: Milwaukee County Transit System, U.S. Bureau of the Census and SEWRPC.

RESIDENTIAL CONCENTRATIONS OF THE TRANSIT-DEPENDENT POPULATION IN MILWAUKEE COUNTY WITHIN AND OUTSIDE THE WALK ACCESS SERVICE AREAS FOR THE LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2005



Source: Milwaukee County Transit System, U.S. Bureau of the Census and SEWRPC.

Table 34

WEEKDAY TRANSIT SERVICE PROVIDED TO MINORITY AND TRANSIT-DEPENDENT POPULATION GROUPS IN MILWAUKEE COUNTY BY THE LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: 2005

Category	Number Served (Within One-Quarter Mile of a Bus Route)	Percent of Total Served (Within One-Quarter Mile of a Bus Route)
Minority Population		
Census Blocks Where the Total Minority ^a Population Percentage Exceeds the Countywide Average Total Minority Percentage	3,319 of 3,355	98.9
Transit-Dependent Population		
Census Block Groups Where the Transit Dependent Population Percentage Exceeds the County Average Transit Dependent Population Percentage in 3 or More Categories of Transit-Dependent Persons ^b	315 of 320	98.4
Housing Facilities for Low-Income, Elderly and Disabled Persons ^c	176 of 180	97.7

^aThe total minority population includes persons identified in the 2000 U.S. Census as Black/African American, American Indian and Alaska Native, Asian and Pacific Islander, other racial minority, and Hispanic. Map 6 in Chapter II shows the areas with above average concentrations for the total minority population in the County.

^bFive categories of transit-dependent persons were identified: school-age children (age 12-16), elderly persons (age 65 and older), persons in low-income families, disabled persons, and households with no vehicle available. Map 7 in Chapter II shows the block groups with transit-dependent person concentrations that were above the Countywide average in at least three of the five transit-dependent population categories.

^cMap 8 in Chapter II shows the locations of the housing facilities in Milwaukee County serving elderly and disabled persons which were identified.

Source: SEWRPC.

- Most of the residential areas not within one-quarter mile of the local/shuttle routes of the transit system are in the suburban areas of the County. The largest such areas are in the southern one-quarter of the County in the Cities of Franklin, Greendale, Greenfield, and Oak Creek, and the Village of Hales Corners. Substantial residential areas that are not within one-quarter mile of the local/shuttle routes are also found in the Villages of Bayside, Brown Deer, and River Hills in the far northeast portion of the County, along with residential areas in the far northwest corner of the City of Milwaukee. As shown on Map 33, most of the residential areas that are completely outside the walk service areas have residential densities below seven dwelling units per net residential acre, densities which can not support local bus services with headways of 30 minutes or less. Small areas with higher densities that are not within one-quarter mile of the local/shuttle routes can be observed in several small "holes" in the walk service areas throughout the County and outside the existing walk service areas in the Cities of Franklin and Oak Creek. There are also small areas with densities above seven dwelling units per net residential acre that are not within one-quarter mile of local/shuttle routes with limited (less than 20) weekday service hours. Such sections of the County include the areas along N. Hawley Road, S. 60th Street, and Edgerton Avenue served by Route Nos. 64 and 35, and along S. Lake Drive served by Route No. 55. While these areas are considered underserved by the transit service standards, the transit system has found that ridership does not warrant the additional costs that would be incurred with operating longer service hours.
- About 699,300 persons in Milwaukee County, or about 74 percent of the total County population, reside within a three-mile driving distance of one of the 12 park-ride lots in the County that are served by the freeway flyer routes of the transit system. This population includes most of the population within a one-quarter mile walking distance of the local/shuttle routes but also persons residing in portions of the County outside the local walk access service area. Areas outside the drive access service area in the north central portion of the County generally have a limited need for park-ride facilities as they represent areas with low automobile ownership. However, there are large areas in the southern portion of the County without convenient access to park-ride facilities. This includes most of the Cities of Franklin and South Milwaukee and the eastern portions of the Cities of Cudahy and Oak Creek.

4. Including both walk and automobile drive access, about 918,600 persons in Milwaukee County, or about 98 percent of the total County population, are within the combined walk and drive service area for the Milwaukee County Transit System. About 44,900 persons residing in adjacent Ozaukee, Racine, and Waukesha Counties are also within the automobile drive access service areas of the park-ride lots served by Milwaukee County freeway flyer routes. The County's local/shuttle routes also serve some residents of the other counties with the vast majority being Waukesha County residents within one-quarter mile of the Milwaukee County local/shuttle bus routes operated along or near the Waukesha-Milwaukee County line. The total combined walk and drive service area for the transit system includes about 963,500 persons in Milwaukee, Ozaukee, Racine, Washington, and Waukesha Counties.
5. The walk access service area for the local/shuttle routes of the transit system provides excellent coverage of the residential concentrations of the total minority population (see Map 34) and the residential concentrations of transit dependent population (see Map 35) including special housing facilities identified for elderly, disabled, and low-income persons. Virtually all of the census tracts with minority population concentrations and all of the census block groups with concentrations of transit-dependent persons, or the portions of the tracts and block groups which contained the residential areas, were within the local walk access service area.

Employment Within the Transit Service Area

Table 35 identifies the total number of jobs in Milwaukee County and adjacent Ozaukee, Washington, and Waukesha counties that are within the walk access service areas of the existing 2005 Milwaukee County local and shuttle routes and connecting bus services provided by other transit operators. Map 36 identifies the job concentrations in the four-county Milwaukee area which are within and outside the walk service areas. The map displays the areal service coverage of jobs in the Milwaukee area relative to transit travel by Milwaukee County residents. The information in the table and on the map indicates that:

1. About 528,700 jobs in Milwaukee County, or about 85 percent of the total year 2000 employment in the County of about 624,600 jobs, are at locations that are within a one-quarter mile walking distance of an existing local/shuttle route of the transit system that provides service for more than 20 hours on weekdays in accordance with the transit service standards. This area largely encompasses the eastern and north central sections of the County which have the highest number and densities of jobs in the County. An additional 58,400 jobs, or about 9 percent of the total year 2000 employment in the County, are within walking distance of the routes with shorter spans of service operating in the western third or the far northern and southern portions of the County on the fringes of the transit system service area. In total about 587,100 jobs in Milwaukee County, or about 94 percent of the total number of jobs in the County, are within the walk access service areas for the existing local/shuttle routes. This represents excellent overall areal coverage of the existing job locations in the County.
2. As shown on Map 36, there are some job concentrations located more than a quarter-mile away from the local/shuttle routes of the transit system in outlying portions of the County. The most significant of these totally unserved job concentrations are located in the Franklin Industrial and Business Parks and the Southbranch Industrial Park in the southern portions of the Cities of Franklin and Oak Creek, and in the Towne Corporate Park of Granville in the far northwestern portion of the County. Other employment concentrations are partially within the walk service areas of the routes that operate each weekday or provide service for only a portion of the service day such as during weekday peak periods or for work shift changes. These underserved areas include: the Milwaukee Northwest Industrial Park, the Park Place office development, and the Mill Road industrial area in the northwestern sections of the City of Milwaukee; the Glendale Industrial Park and Milwaukee-Glendale industrial area in the northeast section of the County; the N. 124th Street and West Allis industrial areas in the western part of the County; and the Northbranch Industrial Park in the City of Oak Creek in the southern portion of the County. Bus service to many of these areas was provided during the last 10 years by regular or shuttle routes of the transit system. However, the services did not generate significant ridership and were discontinued as part of efforts to reduce total County property tax expenditures.

Table 35

**EMPLOYMENT WITHIN THE WEEKDAY WALK ACCESS SERVICE AREAS FOR THE
MILWAUKEE COUNTY TRANSIT SYSTEM LOCAL/SHUTTLE ROUTES AND CONNECTING
LOCAL/SHUTTLE SERVICES PROVIDED BY OTHER TRANSIT OPERATORS: 2005**

Service Area	Total Employment ^a Within the Service Area					
	Within Milwaukee County		Within Ozaukee, Washington, and Waukesha Counties		Total	
	Number	Percent of Total Employment ^b	Number	Percent of Total Employment ^c	Number	Percent of Total Employment
Within Walk Access Service Area ^d						
For local/shuttle routes with weekday service hours meeting standards ^e	528,700	84.6	3,800	1.0	532,500	52.8
For local/shuttle routes with weekday service hours below standards	58,400	9.3	300	0.1	58,700	5.8
For all local/shuttle routes	587,100	94.0	4,100	1.1	591,200	58.6
Within Walk Access Service Area for Connecting Local/Shuttle Bus Routes ^d	- -	- -	127,800	33.3	127,800	12.7
Within Combined Walk Service Area for Milwaukee County And Connecting Local/Shuttle Routes ^d	587,100	97.0	131,900	34.4	719,000	71.3

^aAll employment figures are based on 2000 data allocated to U.S. Public Land Survey quarter sections by Commission staff.

^bThe total employment in Milwaukee County in the year 2000 was approximately 624,600 jobs.

^cThe total employment within Ozaukee, Washington, and Waukesha Counties in the year 2000 was approximately 383,300 jobs.

^dWalk access is based on the employment within a one-quarter-mile distance of local and shuttle bus routes as specified under Service Performance Standard 2 of Objective 2.

^eStandard 6 of Objective 2 indicates that it is desirable to have local transit service available for 20 hours on weekdays from 5:00 a.m. to 1:00 a.m.

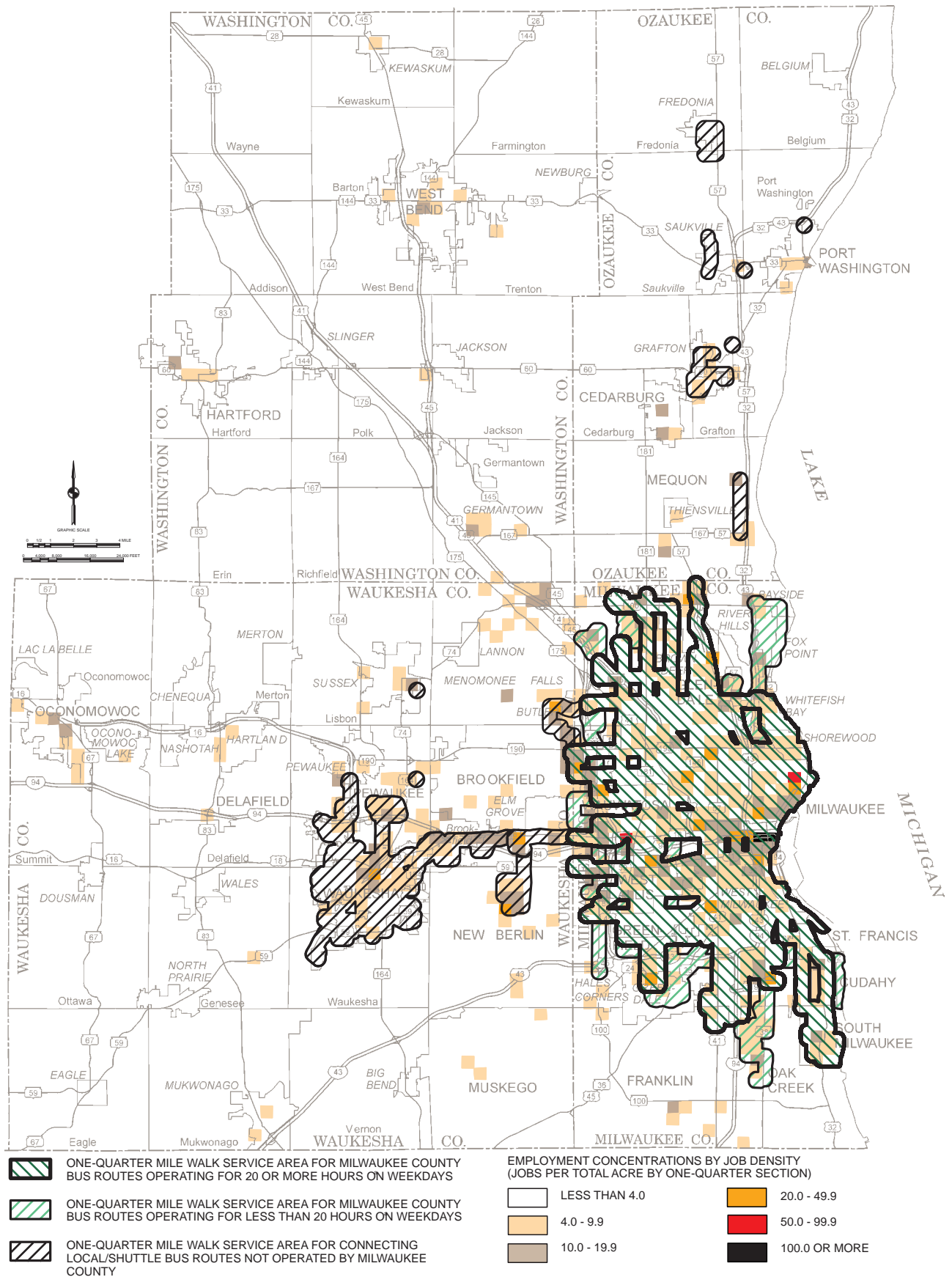
Source: SEWRPC.

- About 4,100 jobs in adjacent Waukesha County at employers near the Waukesha-Milwaukee County line are also within walking distance of the Milwaukee County Transit System local/shuttle routes. Milwaukee County residents also can use connecting bus and shuttle services operated by other transit operators to access jobs in Ozaukee, Washington, and Waukesha Counties, with about 127,800 jobs in these adjacent counties served by connecting routes. Except for within the City of Waukesha and in the Bluemound Road corridor, these connecting services are largely weekday peak hour services and, as such, do not provide access to jobs outside the Milwaukee County throughout the day. When the jobs in other counties are considered, a total of about 719,000 jobs, or about 71 percent of the total jobs in the four-county Milwaukee area, are accessible by some level of local bus/shuttle service to Milwaukee County residents.

Major Land Use Activity Centers Within the Transit Service Area

A total of 306 major land use activity centers were identified in Chapter II of this report (see Tables 12 through 19) which represented land uses and facilities that currently attract or have the potential to attract significant total person or transit person trips. The activity centers identified included not only those located in Milwaukee County, but also some located in adjacent portions of Ozaukee, Washington, and Waukesha Counties which may be desirable destinations for Milwaukee County residents. For the evaluation of the route coverage of these centers, the activity centers were reviewed in three groups: 1) Nonemployment activity centers, including the major shopping malls, the principal colleges and universities, the principal hospitals and medical centers, the major Federal, State,

EMPLOYMENT CONCENTRATIONS IN THE MILWAUKEE AREA WITHIN AND OUTSIDE THE WALK ACCESS SERVICE AREAS FOR THE LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM AND CONNECTING BUS SERVICES: 2005



and local governmental centers, major recreational centers, and major passenger terminals for intercity transit services; 2) major employers (over 500 employees); and 3) major office and industrial parks/areas. Table 36 and Map 37 identify the major activity centers that are within and outside the walk access service areas for the existing 2005 Milwaukee County local and shuttle routes and the connecting bus services provided by other transit operators. This analysis considered whether or not each center was served relative to transit travel by Milwaukee County residents. The map and table identify the unserved activity centers—those located totally outside the walk service areas—and the centers which are partially served—those located within the service area of a Milwaukee County route—excluding contract service routes—providing service for less than 20 hours per day. The information in the table and on the map indicates that:

1. The transit system provides excellent coverage of the nonemployment activity centers located in Milwaukee County, with 65 of the 70 such centers identified, or about 93 percent, within walking distance of an existing local/shuttle route of the transit system operating for 20 or more hours on weekdays. Of the other five activity centers, three are within the service area of routes that operate for less than 20 hours on weekdays and should be considered as partially served. The two unserved centers on weekdays include the Milwaukee County House of Correction in the City of Franklin, which is served on Saturdays, and the new Amtrak Station near Milwaukee County General Mitchell International Airport.
2. The transit system also provides very good coverage of the major employers with 500 or more jobs located in Milwaukee County, with 72 of the 86 employers identified, or about 84 percent, within walking distance of an existing local/shuttle route operating for 20 or more hours on weekdays. Of the other 14 employers, nine are partially served as they are within the areas served by routes with shorter service spans. Of the five unserved employers on weekdays, one is located one-half mile north of W. Brown Deer Road and Route No. 76, two are in the Franklin Industrial Park, and two are in isolated areas of the County with no surrounding development.
3. The transit system provides good coverage of the major office and industrial parks/areas in the County, with 17 of the 25 office and industrial parks/areas identified, or about 68 percent, within the walk access service areas of the existing local/shuttle routes that operate for 20 or more hours on weekdays. Of the other eight areas, five are partially or totally within the areas served by routes with shorter spans of service. The three unserved office and industrial parks/areas include the Franklin Industrial Park in the City of Franklin, the Southbranch Industrial Park in the City of Oak Creek, and the Towne Corporate Park of Granville along W. Brown Deer Road in the City of Milwaukee.
4. For Milwaukee County residents, most of the major activity centers identified in Ozaukee, Washington, and Waukesha Counties cannot be reached by the existing public transit services. Only eight of the 13 nonemployment activity centers, 21 of the 48 major employers, and 17 of the 64 office and industrial parks/areas are within the areas served by the connecting bus services provided by other transit operators.
5. Map 38 identifies the transit service coverage provided by the Milwaukee County Transit System of major activity centers serving the elderly and disabled population including senior centers, nutrition sites, and rehabilitation centers. The transit system serves the vast majority of such activity centers located in Milwaukee County.

Transit Supportive Land Areas Served

The areas in Milwaukee County with the residential densities needed to support fixed-route bus service operating with headways of 30 minutes or less were identified in Chapter II, along with areas in the four-county Milwaukee area with employment densities that could potentially support fixed-route bus service (see Map 17 in Chapter II). Map 39 displays the transit supportive areas which are currently within and outside the walk access service areas for the Milwaukee County Transit System and the connecting bus services provided by other transit operators. The map shows that the local/shuttle routes of the Milwaukee County Transit System cover the majority of the transit supportive areas in Milwaukee County. Small unserved transit supportive areas can be observed in the central portion of the County in the same areas identified with respect to unserved residential areas and in the far southern portion of the County in the Franklin and Southbranch industrial parks. Larger underserved transit

Table 36

**MAJOR ACTIVITY CENTERS IN THE MILWAUKEE AREA NOT SERVED^a BY THE MILWAUKEE COUNTY TRANSIT SYSTEM
OR CONNECTING LOCAL/SHUTTLE SERVICES PROVIDED BY OTHER TRANSIT OPERATORS: 2005**

Number on Map 37	Name	Partially Served ^b	Type of Major Activity Center						
			Employment Center		Non-employment Center				
			Major Employer	Major Office or Industrial Park	Major Retail Shopping Mall	Principal College or University	Principal Hospital or Medical Center	Major Governmental Office or Institution	Major Intercity Passenger Terminal
	<u>Milwaukee County</u>								
1	AMTRAK Station-General Mitchell International Airport	--	--	--	--	--	--	--	X
2	Astral Aviation, Inc.	X	X	--	--	--	--	--	--
3	Cardinal Stritch University	X	X	--	--	X	--	--	--
4	Clear Channel Inc.	--	X	--	--	--	--	--	--
5	Delphi Energy & Engine Systems	X	X	--	--	--	--	--	--
6	Efunds Corporation	X	X	--	--	--	--	--	--
7	Franklin Industrial Park and Franklin Business Park	--	--	X	--	--	--	--	--
8	GE Medical Systems Information	X	X	--	--	--	--	--	--
9	Glendale Industrial Park	X	--	X	--	--	--	--	--
10	JDC Logistics, Inc.	--	X	--	--	--	--	--	--
11	Krones, Inc.	--	X	--	--	--	--	--	--
12	Milwaukee Area Technical College-South Campus	X	--	--	--	X	--	--	--
13	Milwaukee House of Correction	--	--	--	--	--	--	X	--
14	Milwaukee Northwest Industrial Park	X	--	X	--	--	--	--	--
15	Northbranch Industrial Park	X	--	X	--	--	--	--	--
16	Northwestern Mutual Life	--	X	--	--	--	--	--	--
17	Park Place	X	--	X	--	--	--	--	--
18	PPG Industries, Inc.	--	X	--	--	--	--	--	--
19	St. Francis Airport Industrial Park	X	--	X	--	--	--	--	--
20	St. Luke's South Shore	X	--	--	--	--	X	--	--
21	Signicast Corporation	--	X	--	--	--	--	--	--
22	Southbranch Industrial Park	--	--	X	--	--	--	--	--
23	Towne Corporate Park of Granville	--	--	X	--	--	--	--	--
24	United Parcel Service, Inc.	X	X	--	--	--	--	--	--
25	United States Postal Service-Oak Creek	X	X	--	--	--	--	--	--
26	Washington Mutual, Inc.	X	X	--	--	--	--	--	--
	<u>Ozaukee County</u>								
27	Allen Edwards Shoe Corporation	X	X	--	--	--	--	--	--
28	Belgium Industrial Park-North	--	--	X	--	--	--	--	--
29	Belgium Industrial Park-South	--	--	X	--	--	--	--	--
30	Cedarburg Business Park-North	--	--	X	--	--	--	--	--
31	Concordia University	--	X	--	--	--	--	--	--
32	Lake of Mequon Park	--	--	X	--	--	--	--	--
33	Mequon Business Park	--	--	X	--	--	--	--	--
34	Milwaukee Area Technical College-Mequon Campus	--	--	--	--	X	--	--	--
35	Ozaukee County Job Center	--	--	--	--	--	--	X	--
36	Port Washington Industrial Park	--	X	--	--	--	--	--	--
37	Rockwell Automation-Allen Bradley Corporation	--	X	--	--	--	--	--	--
38	Simplicity Manufacturing, Inc.	--	X	--	--	--	--	--	--

Table 36 (continued)

Number on Map 37	Name	Partially Served ^b	Type of Major Activity Center						
			Employment Center		Non-employment Center				
			Major Employer	Major Office or Industrial Park	Major Retail Shopping Mall	Principal College or University	Principal Hospital or Medical Center	Major Governmental Office or Institution	Major Intercity Passenger Terminal
	<u>Washington County</u>								
39	Broan-Nutone, LLC	--	X	--	--	--	--	--	--
40	Dodge Industrial Park	--	--	X	--	--	--	--	--
41	Donges Bay Industrial Park	--	--	X	--	--	--	--	--
42	Hartford Industrial and Western Industrial Parks	--	--	X	--	--	--	--	--
43	Hartford Job Center	--	--	--	--	--	--	X	--
44	Jackson Northwest Business Park	--	--	X	--	--	--	--	--
45	Maple Road Industrial Park	--	--	X	--	--	--	--	--
46	Regal Ware, Inc.	--	X	--	--	--	--	--	--
47	Serigraph, Inc.	--	X	--	--	--	--	--	--
48	Seven Hills Business Park	--	--	X	--	--	--	--	--
49	Signicast Corporation	--	X	--	--	--	--	--	--
50	Slinger Business Park	--	--	X	--	--	--	--	--
51	Slinger Crossroads Center	--	--	X	--	--	--	--	--
52	St. Joseph's Community Hospital	--	X	--	--	--	--	--	--
53	Sysco Corporation	--	X	--	--	--	--	--	--
54	Weasler Engineering	--	X	--	--	--	--	--	--
55	West Bend Company	--	X	--	--	--	--	--	--
56	West Bend Corporate Center	--	--	X	--	--	--	--	--
57	West Bend Industrial Park-East	--	--	X	--	--	--	--	--
58	West Bend Industrial Park-South	--	--	X	--	--	--	--	--
59	West Bend Mutual Insurance	--	X	--	--	--	--	--	--
60	West Bend Job Center	--	--	--	--	--	--	X	--
61	Wingate Creek Business Center	--	--	X	--	--	--	--	--
	<u>Waukesha County</u>								
62	Arandell Corporation	X	X	--	--	--	--	--	--
63	Bahl Business Park	--	--	X	--	--	--	--	--
64	Bark River and Geason Commerce Centers	--	--	X	--	--	--	--	--
65	Big Bend Industrial Park	--	--	X	--	--	--	--	--
66	Blue Mound and Blue Mound East Industrial Parks	--	--	X	--	--	--	--	--
67	Bowling Green Industrial Park	--	--	X	--	--	--	--	--
68	Brookfield Industrial Park	--	--	X	--	--	--	--	--
69	Citation Custom Products Corporation	--	X	--	--	--	--	--	--
70	Community Memorial Hospital of Menomonee Falls	--	X	--	--	--	X	--	--
71	Eagle Industrial Park	--	--	X	--	--	--	--	--
72	Elmbrook Memorial Hospital	--	X	--	--	--	--	--	--
73	Gateway West Commerce Center	--	--	X	--	--	--	--	--
74	Generac Power Systems, Inc.	--	X	--	--	--	--	--	--
75	Harley-Davidson Motor Company	--	X	--	--	--	--	--	--
76	Hartland/Lake Country Business Park	--	--	X	--	--	--	--	--
77	Kettle Moraine Business Park	--	--	X	--	--	--	--	--

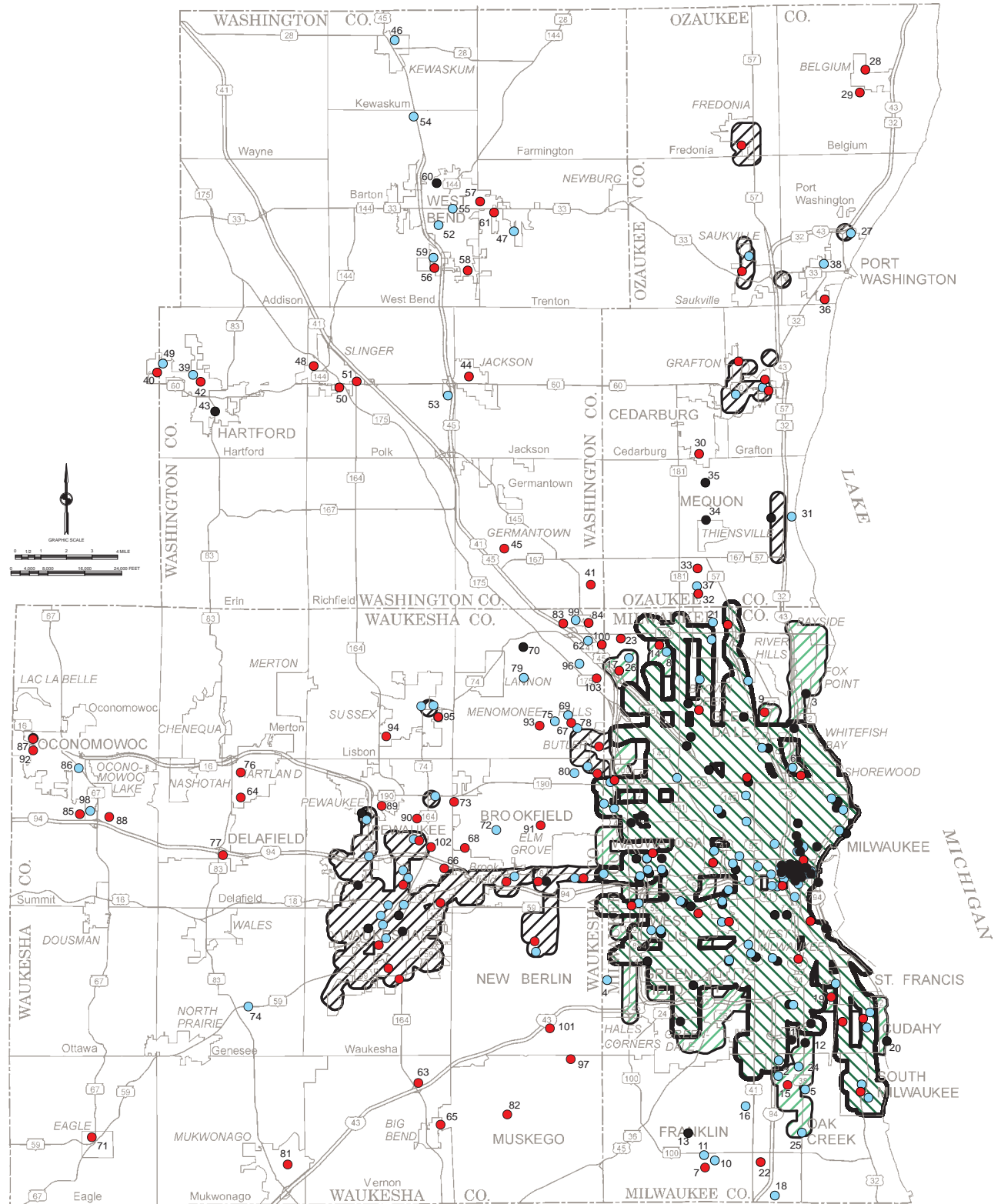
^aMajor activity centers were considered to have been served by the transit system if they were located within one-quarter mile of a bus route.

^b"Partially Served" major activity centers are served by local bus routes operating for less than 20 hours a day.

Source: SEWRPC.

Map 37

MAJOR ACTIVITY CENTERS IN THE MILWAUKEE AREA IN RELATION TO THE WALK ACCESS SERVICE AREAS FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM AND CONNECTING BUS SERVICES: 2005



MAJOR ACTIVITY CENTER

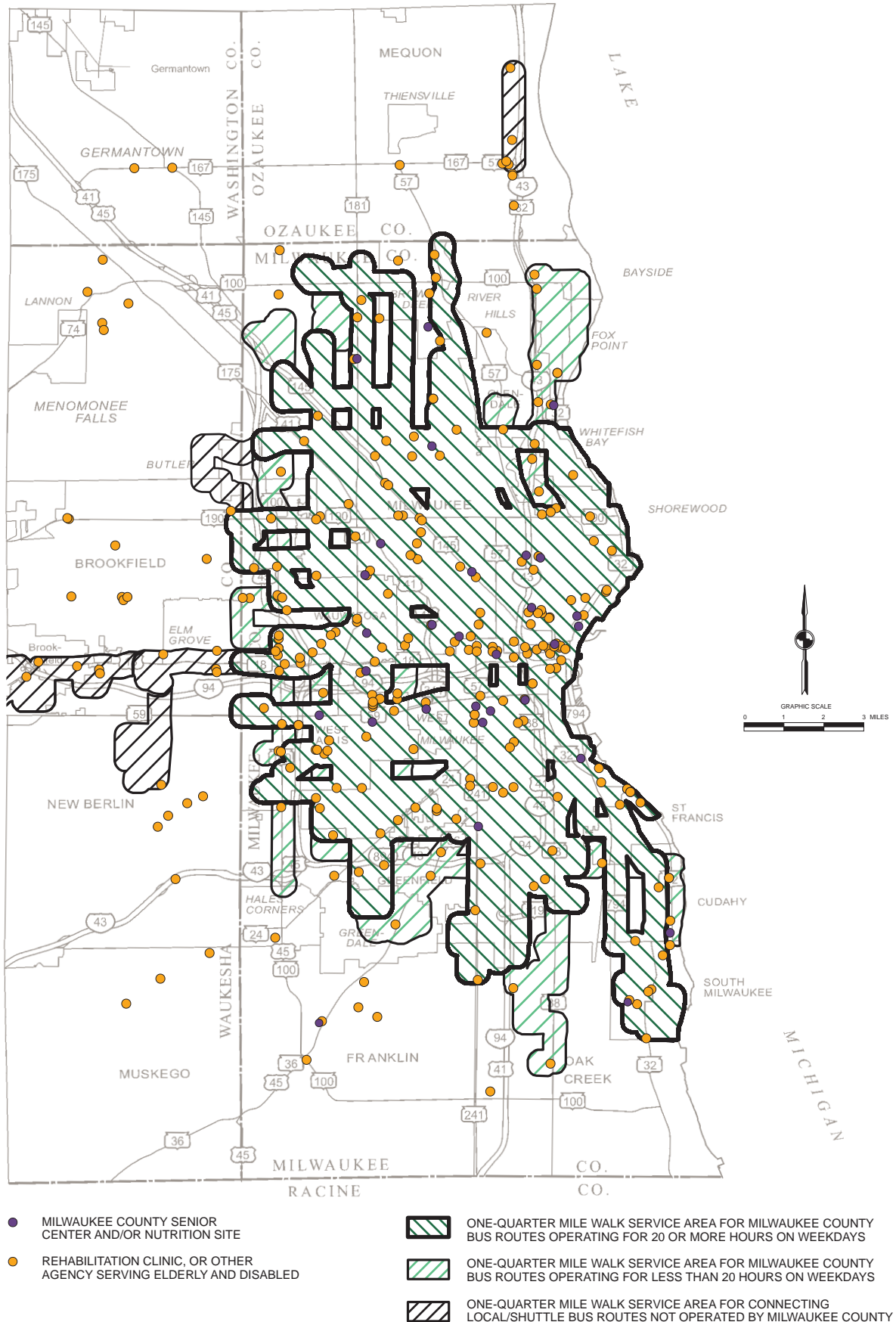
- NON-EMPLOYMENT CENTER
- MAJOR EMPLOYER
- MAJOR OFFICE AND INDUSTRIAL PARK/AREA
- 24 IDENTIFICATION NUMBER FOR UNSERVED ACTIVITY CENTERS (SEE TABLE 36)

- ONE-QUARTER MILE WALK SERVICE AREA FOR MILWAUKEE COUNTY BUS ROUTES OPERATING FOR 20 OR MORE HOURS ON WEEKDAYS
- ONE-QUARTER MILE WALK SERVICE AREA FOR MILWAUKEE COUNTY BUS ROUTES OPERATING FOR LESS THAN 20 HOURS ON WEEKDAYS
- ONE-QUARTER MILE WALK SERVICE AREA FOR CONNECTING LOCAL/SHUTTLE BUS ROUTES NOT OPERATED BY MILWAUKEE COUNTY

Source: SEWRPC.

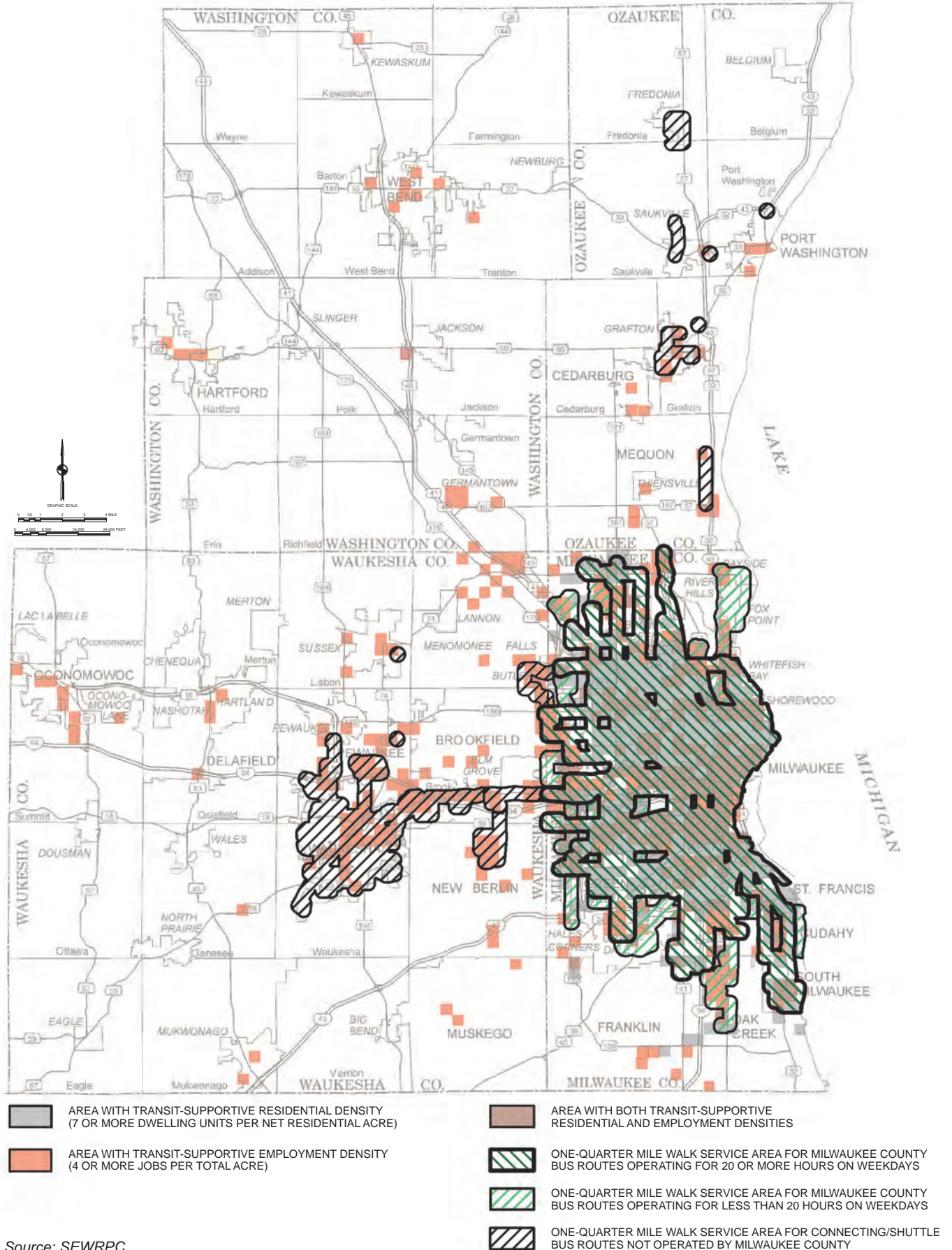
Map 38

MAJOR PUBLIC SENIOR CENTERS, NUTRITION SITES, AND REHABILITATION CENTERS IN RELATION TO THE WALK-ACCESS SERVICE AREA FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM AND CONNECTING BUS SERVICES: 2005



Source: SEWRPC.

TRANSIT SUPPORTIVE AREAS IN THE MILWAUKEE AREA WITHIN AND OUTSIDE THE WALK ACCESS SERVICE AREAS FOR THE LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM AND CONNECTING BUS SERVICES: 2005



supportive areas exist along the local/shuttle routes of the transit system that operate for less than 20 hours on weekdays. Such areas occur in the western half of the County along the area served by Route No. 28; in the south-central portion of the County along the areas served by Route Nos. 64 and 35; in the southern portion of the County along the area served by Routes No. 19, 80, and 280; and in the southeastern portion of the County along the areas served by Route Nos. 15 and 55.

Most of the areas with transit supportive employment densities outside Milwaukee County are small and widely scattered. The largest areas in proximity to Milwaukee County include the Nor-X-Way industrial parks in the northern section of the Village of Menomonee Falls, and the Maple Road Industrial Park in the center of the Village of Germantown. Transit service to both of these areas from Milwaukee County was discontinued in 2005 by Waukesha and Washington Counties, respectively, in order to reduce transit expenditures. Other areas in Waukesha County which have developed since 2000 and which may have transit supportive employment densities in 2005 include the Silver Spring Corporate Park along Silver Spring Drive in the Village of Menomonee Falls, and the Westridge and Towne Business Parks at the intersection of IH 43 and Moorland Road in the City of New Berlin. Providing bus service to these areas would be the responsibility of Waukesha County.

Areas Meeting Transit Travel Time Standards

The Milwaukee County Transit System was also evaluated with respect to the travel time by transit required for Milwaukee County residents to access employment and other activity centers. The timeliness of travel by transit is a major factor in maintaining and increasing transit ridership and reflects both the level and attractiveness of public transit. Service Performance Standard 4 under Objective 1 states that the transit system should provide service that maximizes the population that is within prescribed overall transit travel times¹ of jobs and the major activity centers in the area. Peak period travel times were used for measuring accessibility to schools and for employment while midday off-peak travel times were used for measuring accessibility to all other activity centers. Tables 37 and 38 and Map 40 show the results of applying this standard using the estimated 2005 transit travel times.

None of these travel time accessibility standards are fully met, with accessibility currently being best provided to job service offices with about 65 percent of the County population within the specified travel time. About one-half of the County population is within the specified travel times for hospitals and major public colleges and universities. No area of the County is within 45 minutes of 40 percent of the jobs in the Milwaukee urbanized area. This is a result of not all jobs being served by public transit (as shown earlier in this chapter, only about 34 percent of jobs in Ozaukee, Washington, and Waukesha Counties are served by public transit) along with headways and travel times to many jobs that are served by public transit. Somewhat better job accessibility is provided if only jobs within Milwaukee County are considered, with 8 percent of the population within Milwaukee County being within 45 minutes travel time of 40 percent of Milwaukee County jobs.

¹Overall travel time is defined as the total door-to-door time for traveling between a trip origin and destination. For transit travel, this time includes the time spent out of the transit vehicle in walking to a transit stop, waiting for the first transit vehicle, transferring between routes, including waiting for each subsequent vehicle needed, and walking to a trip destination, plus the over the road travel time in the transit vehicle. For this analysis, the transit travel times assumed that the waiting time for the first route used would not exceed 15 minutes, but the waiting time for subsequent routes transferred to would be equal to one-half the headway on the route being transferred to. Depending on the location, transferring between routes would also entail one to two minutes of time for walking to the boarding location for the transfer route.

Table 37

**MILWAUKEE COUNTY POPULATION MEETING TRANSIT TRAVEL TIME STANDARDS
TO SELECTED ACTIVITY CENTERS AND EMPLOYMENT LOCATIONS: 2005**

Major Activity Centers	Milwaukee County Population Meeting Travel Time Standard ^a	Percent of Total Population
Major Shopping Mall	342,900	36.5
Major College or University	458,200	48.7
Major Hospital or Medical Center	466,400	49.6
Major Downtown Recreational Centers	299,000	31.8
General Mitchell International Airport	223,900	23.8
Job Services	608,900	64.8
Employment	- -	- -

^aService Performance Standard 4 under Objective 1 states that the transit system should provide service that maximizes the population that is within:

- a. 45 minutes overall transit travel time of 40 percent of the jobs in the urbanized area;
- b. 35 minutes overall transit travel time of a major shopping mall;
- c. 40 minutes overall transit travel time of a major college or university;
- d. 30 minutes overall transit travel time of a major hospital or medical center;
- e. 40 minutes overall transit travel time of a major Federal, State, or local governmental office or public institutional center
- f. 60 minutes overall transit travel time of General Mitchell International Airport; and
- g. 60 minutes overall transit travel time of a major public or private recreational center hosting high attendance events

The activity centers considered for this analysis are shown in Table 38.

Source: SEWRPC.

ROUTE PERFORMANCE EVALUATION

This section of the report evaluates the performance of the individual routes of the transit system. Desirably, transit routes should be operated throughout the day and evening at convenient service frequencies, operate on schedule and without overcrowding, and provide for reasonable travel times between trip origins and destinations. This section of the report reviews the hours of operation and service frequency for each route, the schedule adherence and passenger loading on each route, and transit travel times between selected locations in Milwaukee County. Also, the ridership and service efficiency and effectiveness of each route are reviewed.

Hours of Operation

The service standards indicate that it is highly desirable to have local transit service available for 20 hours from 5:00 a.m. to 1:00 a.m., express transit service available for 18 hours from 5:00 a.m. to 11:00 p.m., and freeway flyer transit service available for 16 hours from 6:00 a.m. to 10:00 p.m. The service hours for all the routes in the Milwaukee County Transit System in fall 2004 were compared against these desirable hours of operation. The fall 2004 service hours for the bus routes operated by the transit system on weekdays and on weekends are graphically summarized in Figure 10 for the main portion of each route. Maps 41 and 42 also display the service hours on weekdays and on weekends for the routes of the system and indicate the hours of operation on some segments of some routes where there are branches or turn-backs and reduced service hours. The hours of operation displayed on Maps 41 and 42 and in Figure 10 may be placed in the following categories:

- 20 or more hours - desirable, including daytime through early morning service the next day
- 17-19 hours - extensive, including daytime through late evening service
- 14-16 hours - extended daytime, including daytime through early evening service

Table 38

**ACTIVITY CENTERS CONSIDERED IN MILWAUKEE COUNTY
TRANSIT SYSTEM TRAVEL TIME ACCESSIBILITY ANALYSIS**

Major Activity Center	Address	Civil Division
<u>Shopping Malls</u>		
Bay Shore Mall	5900 N. Port Washington Road	Glendale
Brookfield Square Shopping Center	95 N. Moorland Road	Brookfield
Mayfair Mall	2500 N. Mayfair Road	Wauwatosa
The Shops of Grand Avenue	275 W. Wisconsin Avenue	Milwaukee
Southridge Mall	5300 S. 76 th Street	Greendale
<u>Colleges and Universities</u>		
Milwaukee Area Technical College		
Mequon Campus	5555 W. Highland Road	Mequon
Milwaukee Campus	700 W. State Street	Milwaukee
West Campus	1200 S. 71 st Street	Milwaukee
South Campus	6665 S. Howell Avenue	Oak Creek
University of Wisconsin-Milwaukee	2200 E. Kenwood Boulevard	Milwaukee
<u>Hospitals and Medical Centers</u>		
Aurora Sinai Medical Center	945 N. 12 th Street	Milwaukee
Children's Hospital of Wisconsin	9000 W. Wisconsin Avenue	Wauwatosa
Columbia St. Mary's		
Columbia Campus	2025 E. Newport Avenue	Milwaukee
Milwaukee Campus	2350 N. Lake Drive	Milwaukee
Froedtert Memorial Lutheran Hospital	9200 W. Wisconsin Avenue	Wauwatosa
St. Francis Hospital	3237 S. 16 th Street	Milwaukee
St. Joseph's Regional Medical Center	5000 W. Chambers Street	Milwaukee
St. Luke's Medical Center	2900 W. Oklahoma Avenue	Milwaukee
St. Luke's South Shore	5900 S. Lake Drive	Cudahy
St. Michael Hospital	2400 W. Villard Avenue	Milwaukee
West Allis Memorial Hospital	8901 W. Lincoln Avenue	West Allis
<u>Major Recreation Center</u>		
Bradley Center	1001 N. 4 th Street	Milwaukee
Midwest Airlines Center	400 W. Wisconsin Avenue	Milwaukee
Milwaukee Theatre	500 W. Kilbourn Avenue	Milwaukee
U.S. Cellular Arena	400 W. Kilbourn Avenue	Milwaukee
<u>Airport</u>		
Milwaukee County General Mitchell International Airport	5300 S. Howell Avenue	Milwaukee
<u>Job Services</u>		
Wisconsin Department of Workforce Development, Job Centers		
Job Center North	4030 N. 29 th Street	Milwaukee
Job Center Northwest	6550 N. 76 th Street	Milwaukee
Job Center Southeast	2701 S. Chase Avenue	Milwaukee
Job Center Southwest	1304 S. 70 th Street	Milwaukee
Job Center Teutonia	6091 N. Teutonia Avenue	Milwaukee
Job Center YWCA	1915 N. Martin Luther King Drive	Milwaukee

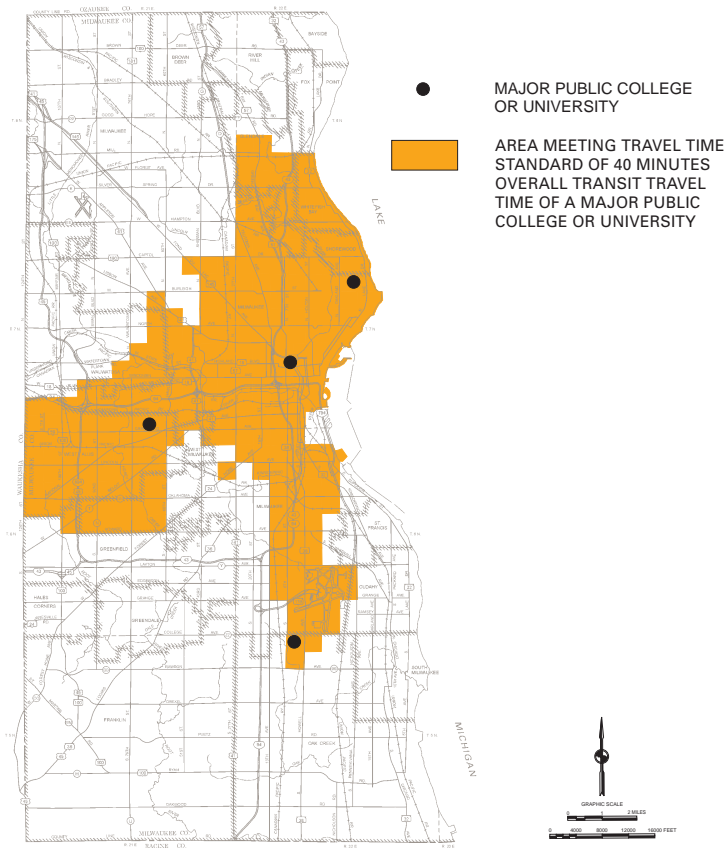
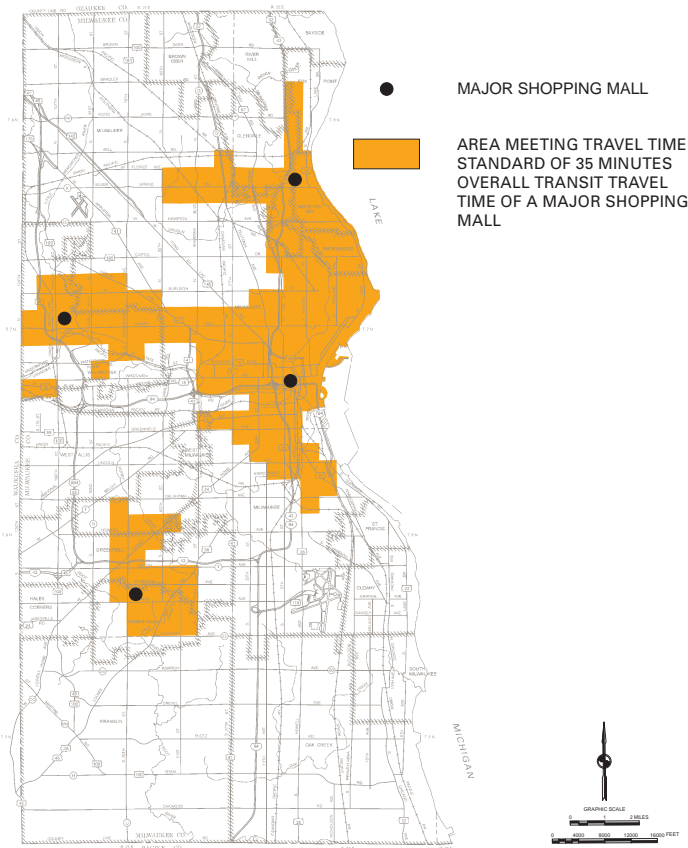
Source: SEWRPC.

- 12-13 hours - daytime service only
- 4-11 hours - limited, including peak-hour service
- 3 or less hours - minimal, including one or two bus trips

AREAS IN MILWAUKEE COUNTY MEETING TRANSIT TRAVEL TIME STANDARDS: 2005 ESTIMATED

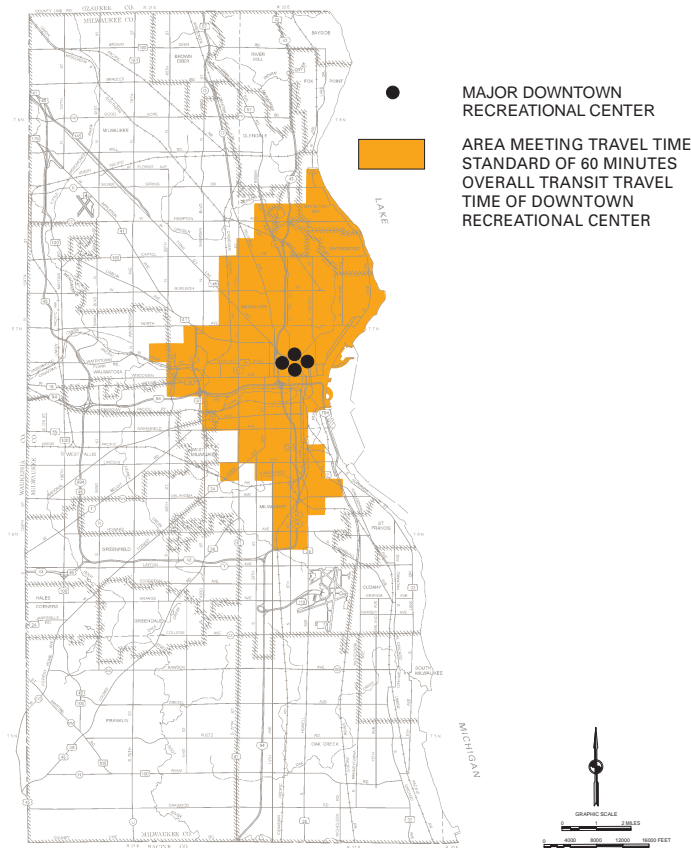
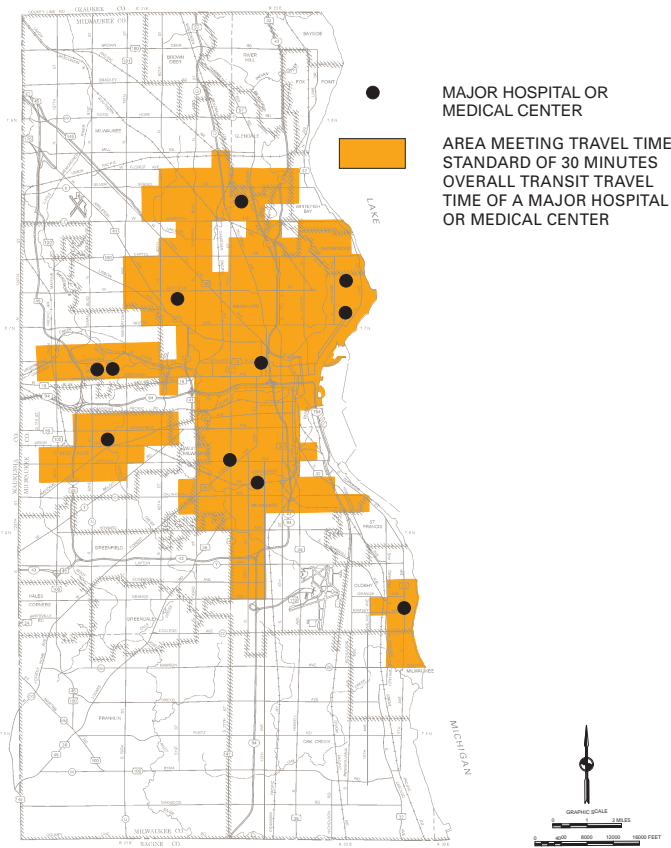
MAJOR SHOPPING MALL

MAJOR PUBLIC COLLEGE OR UNIVERSITY



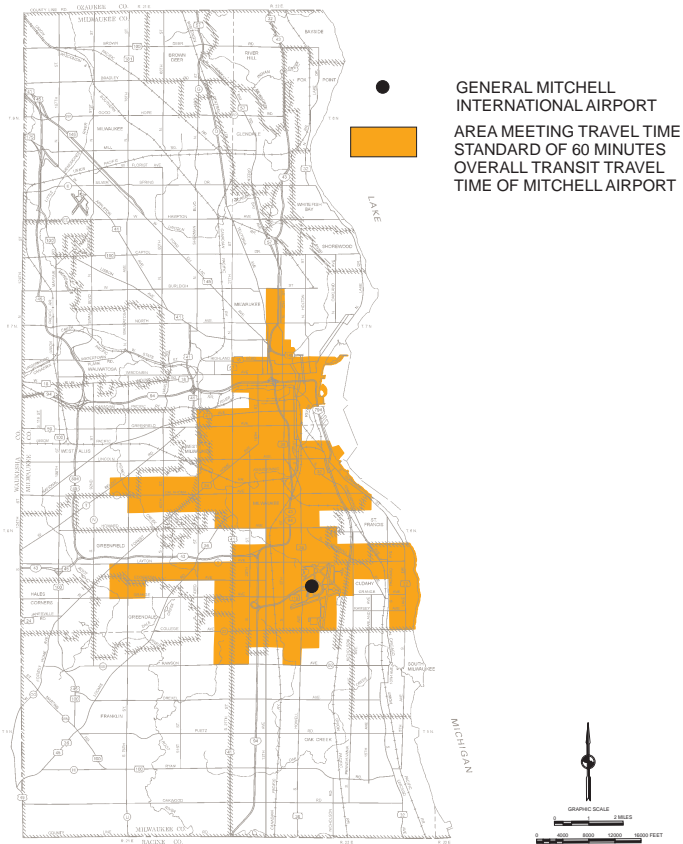
MAJOR HOSPITALS AND MEDICAL CENTERS

MAJOR DOWNTOWN RECREATIONAL CENTERS

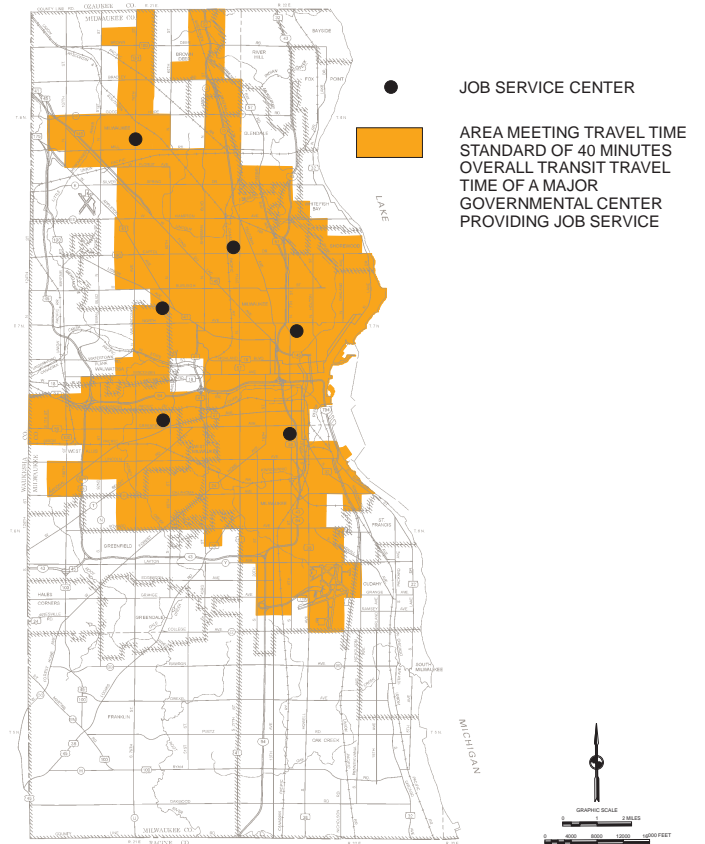


Map 40 (continued)

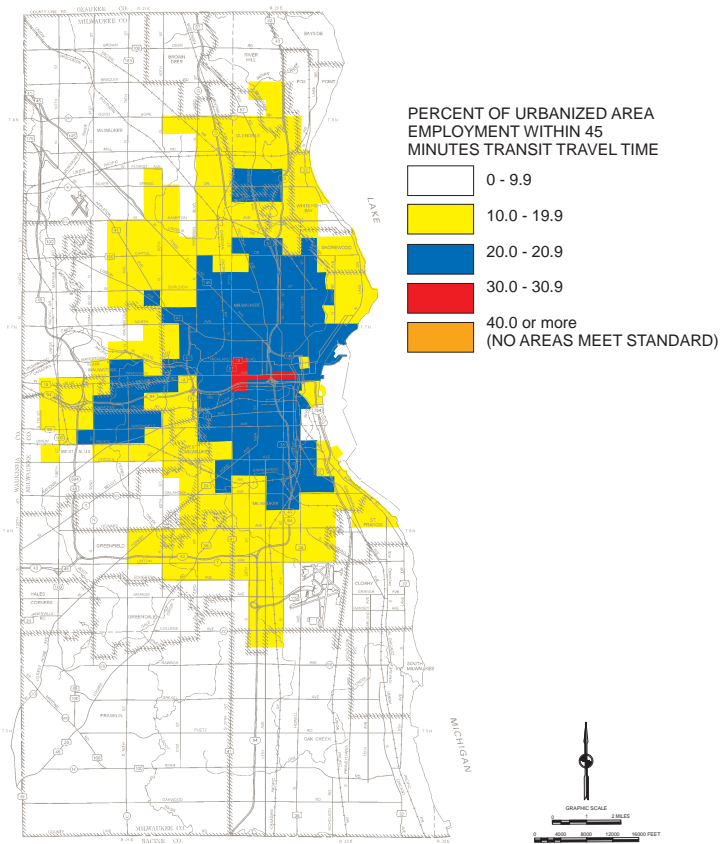
AIRPORT



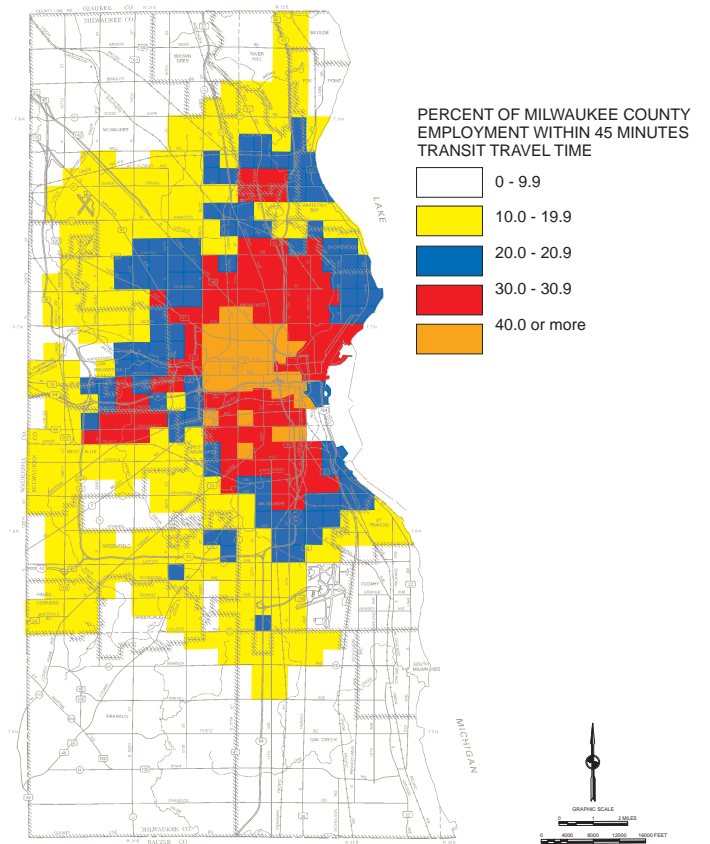
JOB SERVICES



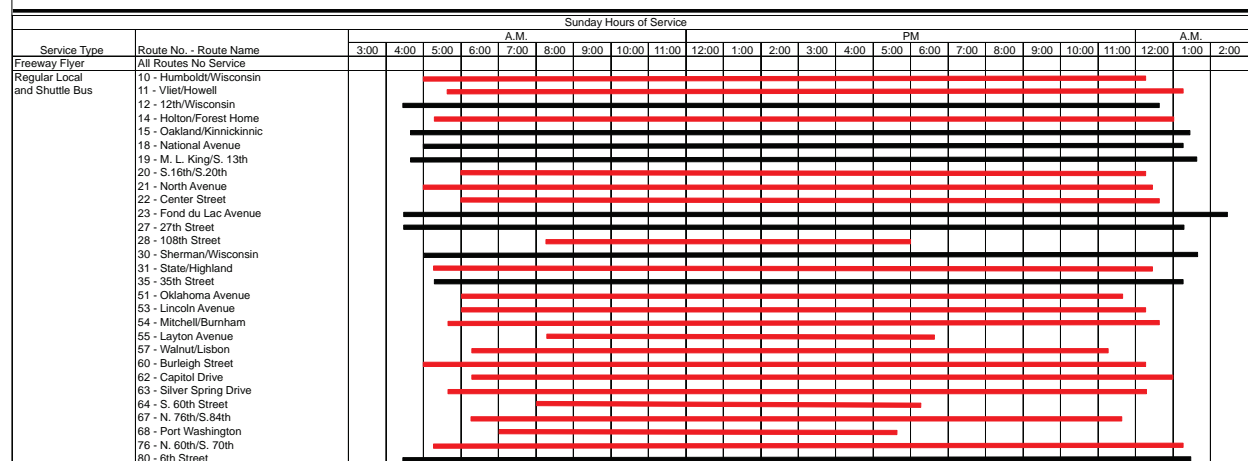
EMPLOYMENT - URBANIZED AREA



EMPLOYMENT - MILWAUKEE COUNTY



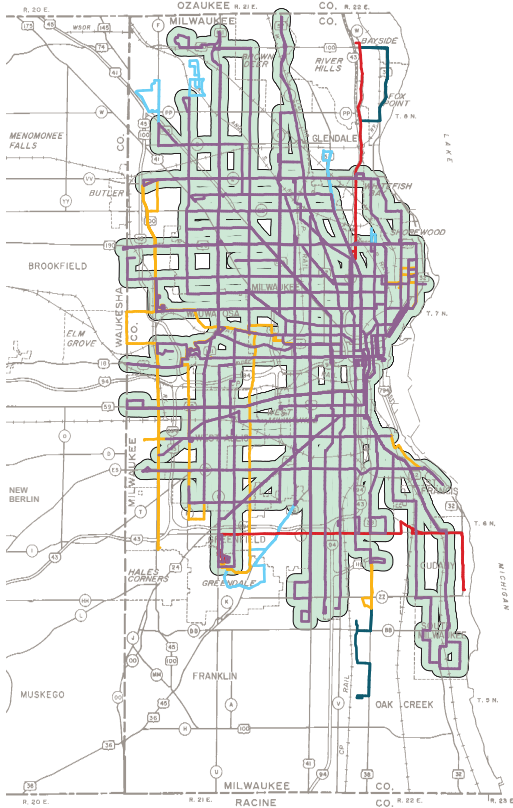
SERVICE HOURS FOR THE REGULAR ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004



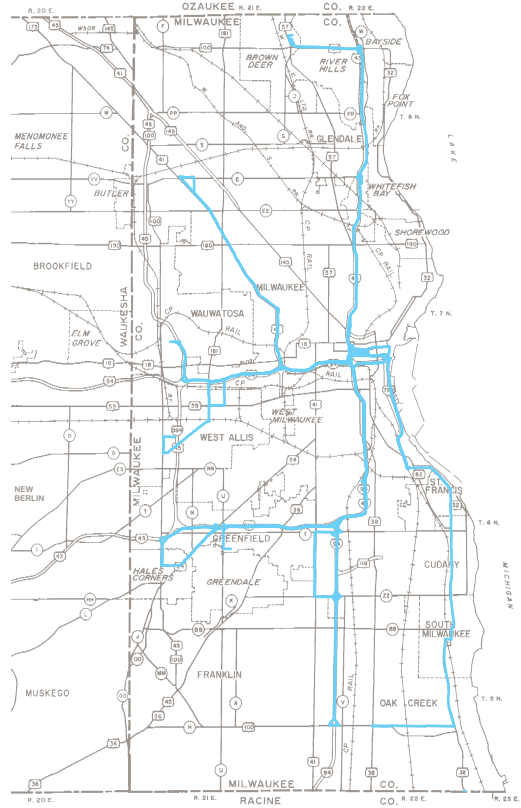
Source: Milwaukee County Transit System and SEWRPC.

WEEKDAY HOURS OF SERVICE FOR MILWAUKEE COUNTY TRANSIT SYSTEM BUS ROUTES: FALL 2004

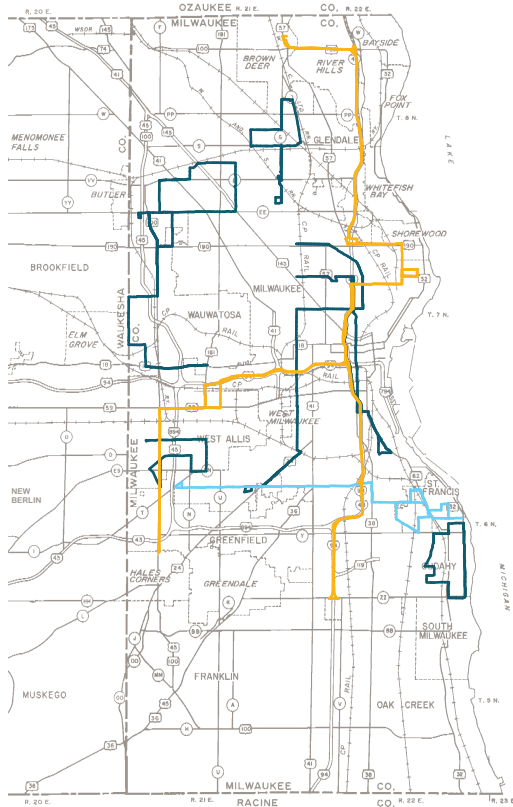
REGULAR ROUTES



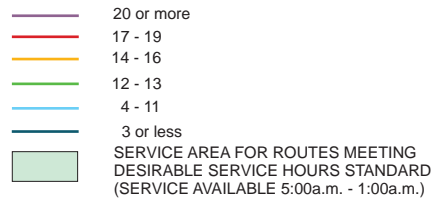
FREEWAY FLYER ROUTES



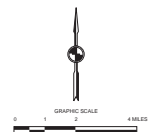
UBUS AND SCHOOL DAY ROUTES



**MAXIMUM HOURS OF SERVICE
ON ROUTE SEGMENT^a**



^a WHERE MORE THAN ONE ROUTE OPERATES OVER A STREET SEGMENT, THE MAPS DISPLAY INFORMATION FOR THE ROUTE HAVING THE LONGEST SERVICE HOURS.

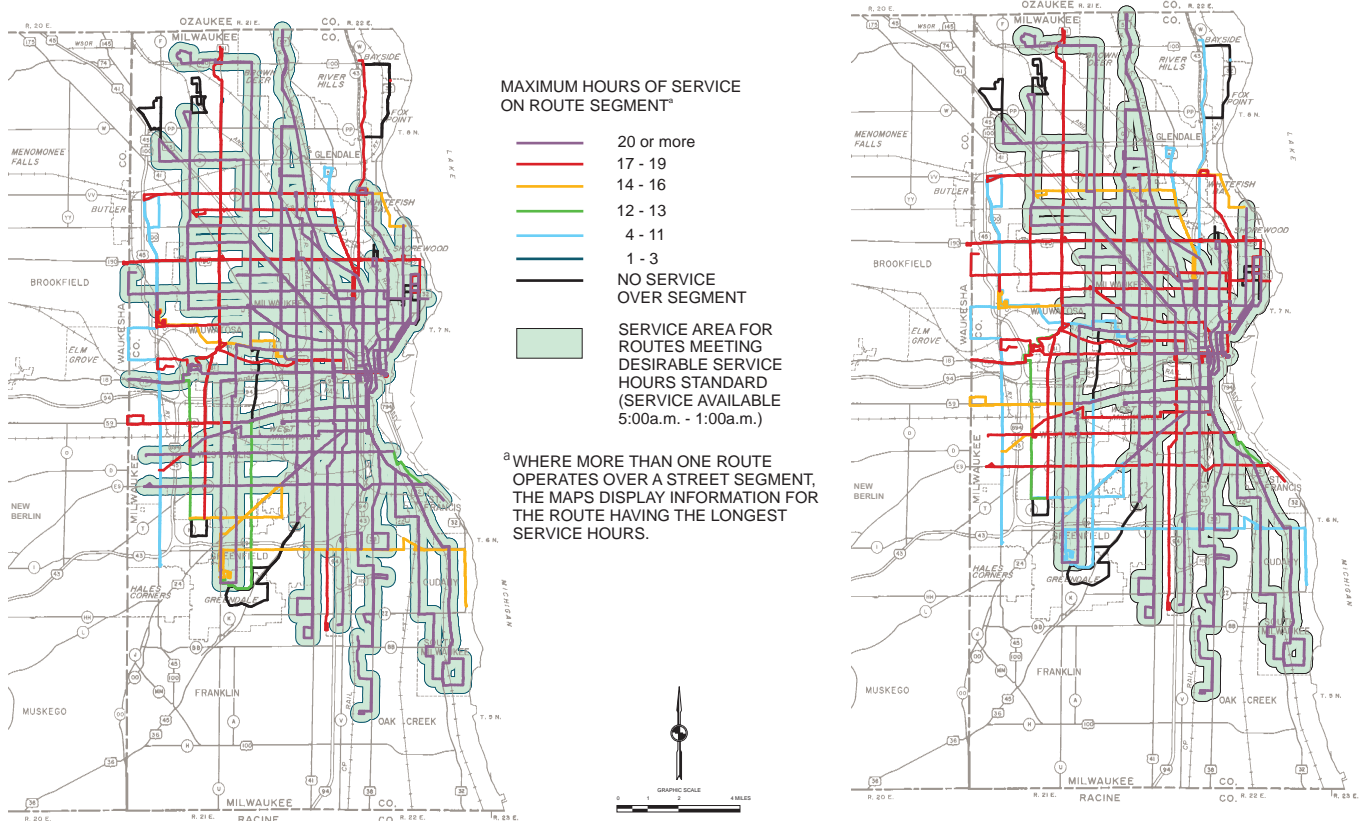


Map 42

WEEKEND HOURS OF SERVICE FOR MILWAUKEE COUNTY TRANSIT SYSTEM BUS ROUTES: FALL 2004

SATURDAY REGULAR ROUTES

SUNDAY REGULAR ROUTES



Source: Milwaukee County Transit System and SEWRPC.

The following conclusions may be made based upon the service hour information:

1. The weekday hours of operation for the majority of the local/shuttle routes of the transit system provide for the desirable 20 or more hours of service. Only five of the 30 local/shuttle routes operated on weekdays—Route Nos. 28, 55, 64, 68, and 219 have spans of service that are less than 20 hours over the entire route. Six routes—Route Nos. 23, 27, 31, 35, 53, and 80—have segments which operate for less than 20 hours. On Routes No. 23, 27, and 80, the segments represent extensions of the route to serve industrial and office parks during work shift changes.
2. The weekend hours of operation for the local/shuttle routes generally do not meet the desirable service hours. Only 14 of the 30 local routes operated on Saturday and nine of the 29 local routes operated on Sunday provide 20 or more hours of service. In addition, service is not operated at all over portions of Route Nos. 23, 35, 64, and 68. Service hours that meet the standards are maintained over several routes providing service to areas with the highest concentrations of the minority and transit-dependent populations.
3. The current service hours for freeway flyer routes are considerably less than the desirable service hours specified in the service standards. The service hours for freeway flyer routes, along with weekend hours on the local routes, represent areas where service expansion should be considered. The service hours for the UBUS routes fall short of the desirable hours along with those for the school day routes serving high and middle schools. However, the hours for these school services are not considered to be a problem as these routes are largely operated to provide additional capacity to complement the service provided by the regular local routes during the hours when student demand for the services is present.

Operating Headways

The service standards indicate that it is highly desirable to have the routes of the transit system operate on weekdays with headways of no more than 10 minutes during peak periods and 20 minutes during all off-peak periods, and on weekends and holidays with headways of no more than 30 minutes. Headways should also not exceed maximums of 30 minutes during weekday peak periods and 60 minutes during all other times of route operation. For this analysis, the average operating headways over each route were examined for five time periods on weekdays—the morning peak period, the midday off-peak period, the afternoon peak period, the early evening period, and the late evening period—and for Saturdays and Sundays based on fall 2004 average headways for the regular local routes as provided by the transit system and headways for the freeway flyer and UBUS routes as developed by Commission staff. The special school day routes operated by the transit system to serve high schools and middle schools were not included in this analysis as they operate only one or two trips during the morning and afternoon peak periods, service levels which cannot be translated into meaningful headways. Analysis of the headways on the contract service routes operated for Waukesha and Ozaukee Counties was not performed as the service levels on these routes are determined by the contracting governmental unit rather than Milwaukee County.

The average headways for the weekday service provided by the routes of the transit system in Fall 2004 are displayed on Map 43 by service type and by service period. Also shown on the map is the one-quarter mile walk access service area for the routes meeting the desirable weekday headways. The headways displayed on Map 43 may be placed in the following categories:

- 10 minutes or less - desirable, very frequent service where passengers do not need schedules
- 11-15 minutes - frequent service where passengers need schedules
- 16-20 minutes - acceptable service where the wait time is reasonable if a bus is missed
- 21-30 minutes - moderately unattractive service, particularly to choice riders
- 31-60 minutes - unattractive service to most riders with service generally available once per hour
- Over 60 minutes - minimal service including one or two bus trips during time period

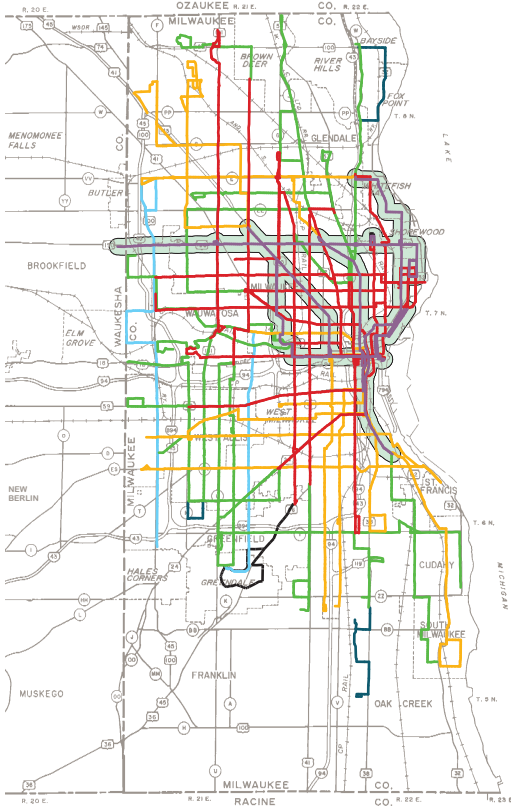
Table 39 identifies the population and jobs in Milwaukee County that are within the one-quarter mile walk access service area for the local/shuttle routes and route segments with weekday headways meeting the desirable headway standard. The following observations may be made after reviewing the information on the maps and in the table:

1. In terms of service which operates with desirable headways, the local routes of the transit system perform best during weekday off-peak periods when approximately 62 percent of the County population and jobs are served by the routes and route segments operating with headways of 20 minutes or less. However, during weekday peak periods when most work and school trips are made, only about 23 to 30 percent of the County population, and about 35 to 37 percent of the jobs in the County are within the one-quarter mile walk access service area for the local routes and route segments operating with headways of 10 minutes or less. None of the freeway flyer and UBUS routes have headways that conform with the desirable headways. Upgrading weekday service frequencies could be expected to have a major impact on ridership.
2. The best service levels on the local/shuttle routes occur in the central portion of the County bordered by Capitol Drive on the north, Oklahoma Avenue on the south, Lake Michigan on the east and 68th Street on the west. This area also has the highest concentrations of minority and transit dependent persons. Headways in this area are generally 15 minutes or less during weekday peak periods and less than 20 minutes during the weekday midday and early evening periods. The poorest service in terms of headways occurs in the area north of Silver Spring Drive and east of 43rd Street, in the area south of IH 94 and west of 68th Street, and in the Cities of Cudahy and South Milwaukee. Many of the routes in these areas are operated with headways between 21 and 60 minutes during weekday peak periods and between 31 and 60 minutes during the weekday midday and early evening periods.
3. Several route segments in the transit system have headways which exceed the maximum weekday off-peak headway of 60 minutes specified under the service standards. These include segments on local Route Nos.

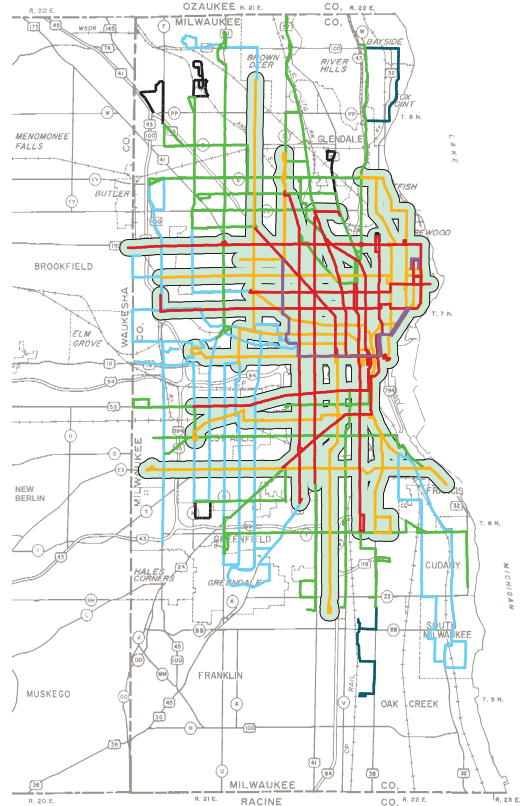
Map 43

**WEEKDAY HEADWAYS FOR MILWAUKEE COUNTY
TRANSIT SYSTEM BUS ROUTES: FALL 2004**

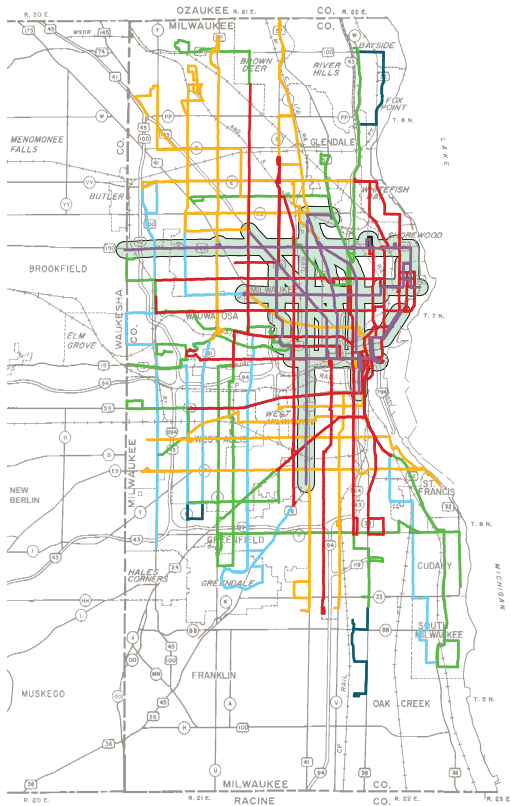
**LOCAL / SHUTTLE ROUTES - MORNING
PEAK PERIOD (6:00 A.M. - 8:59 P.M.)**



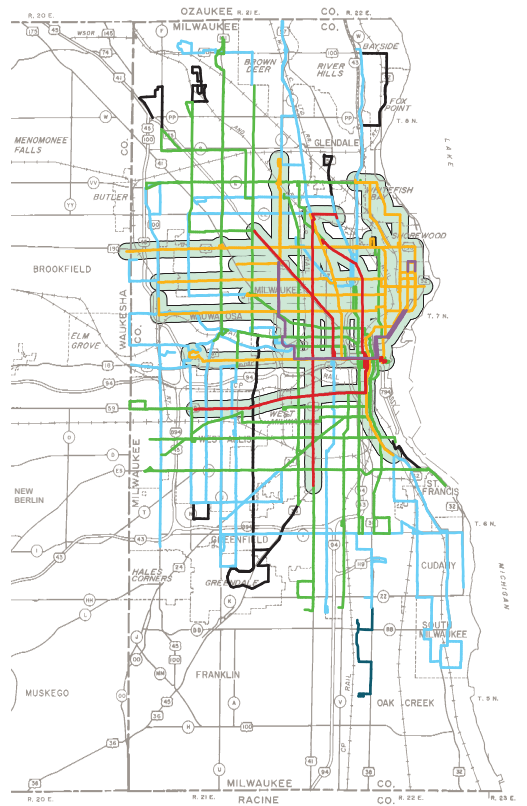
**LOCAL / SHUTTLE ROUTES - MIDDAY
PERIOD (9:00 A.M. - 2:59 P.M.)**



**LOCAL / SHUTTLE ROUTES - AFTERNOON
PEAK PERIOD (3:00 P.M. - 5:59 P.M.)**

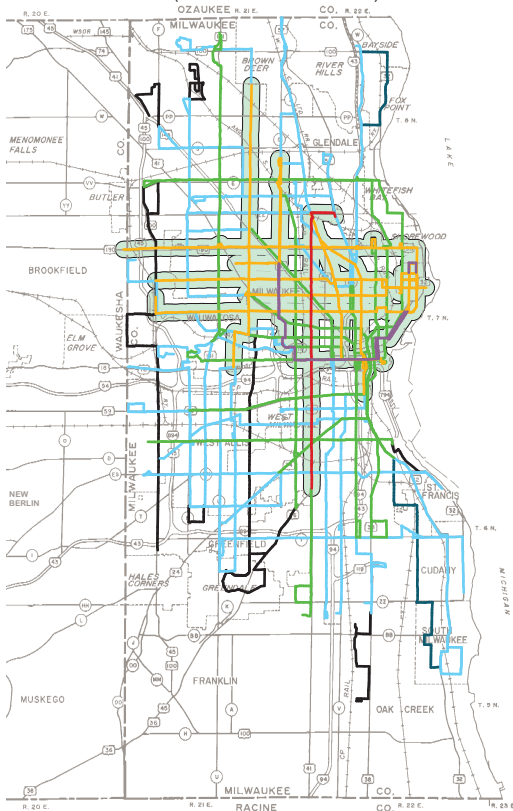


**LOCAL / SHUTTLE ROUTES - EARLY
EVENING PERIOD (6:00 P.M. - 9:59 P.M.)**

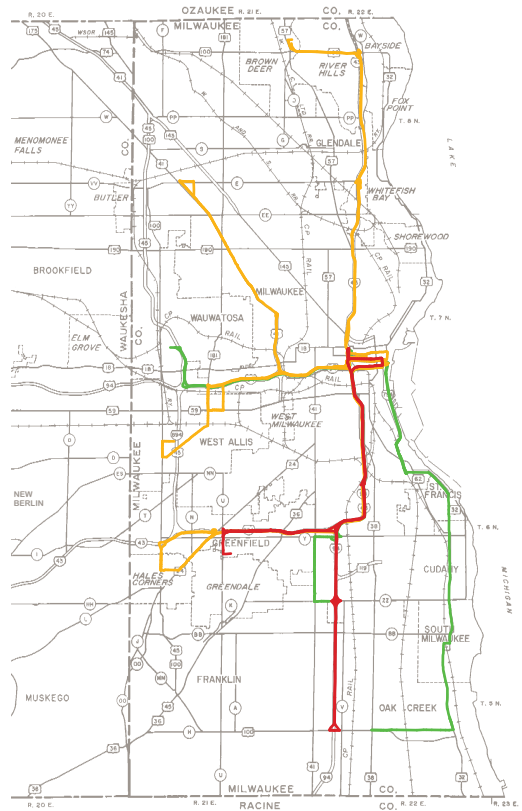


Map 43 (continued)

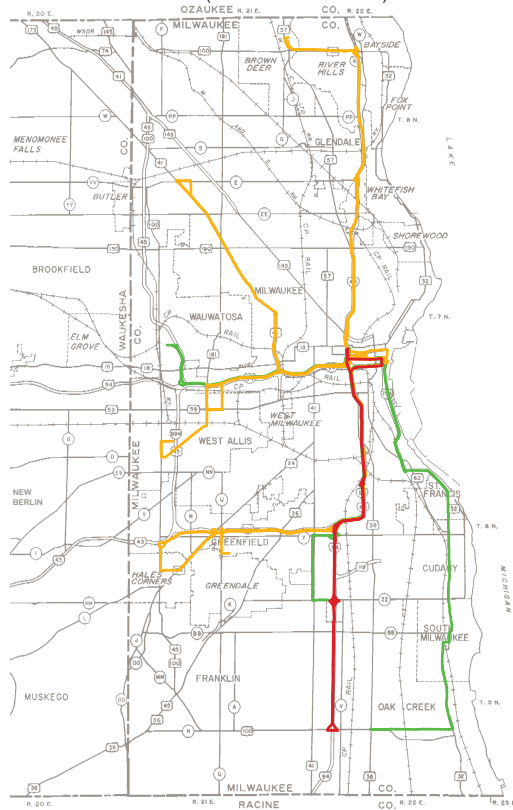
LOCAL / SHUTTLE ROUTE - LATE EVENING
PERIOD (10:00 P.M. AND LATER)



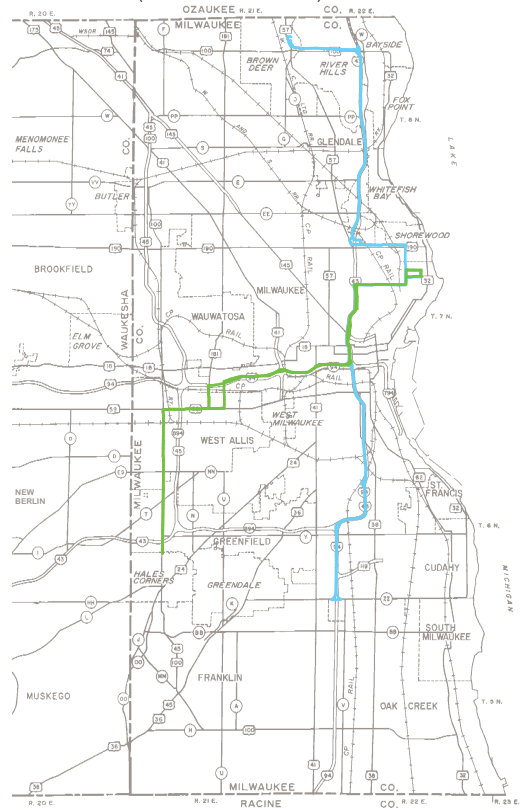
FREEWAY FLYER ROUTES - MORNING
PEAK PERIOD (6:00 A.M. - 8:59 A.M.)



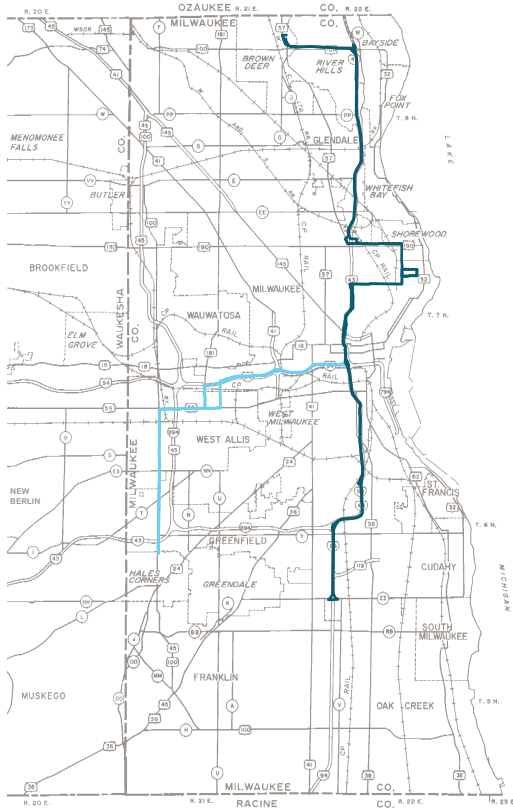
FREEWAY FLYER ROUTES - AFTERNOON
PEAK PERIOD (3:00 P.M. - 5:59 P.M.)



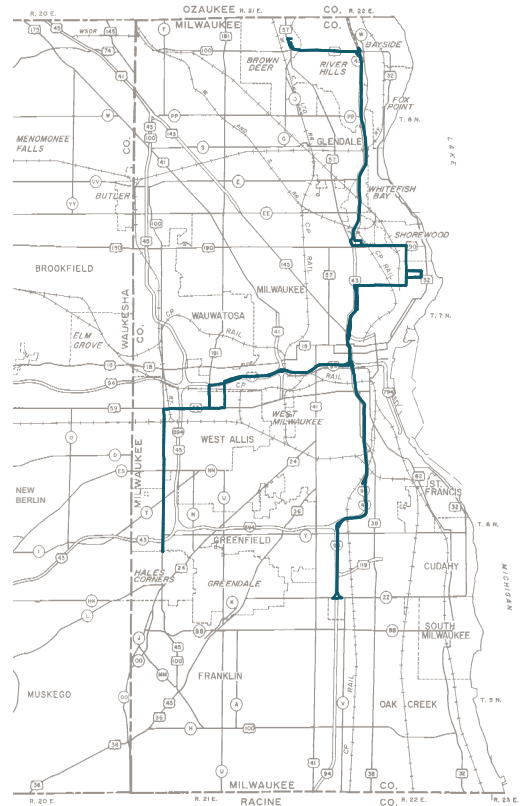
UBUS ROUTES - AM PEAK
PERIOD (6:00 A.M. - 8:59 A.M.)



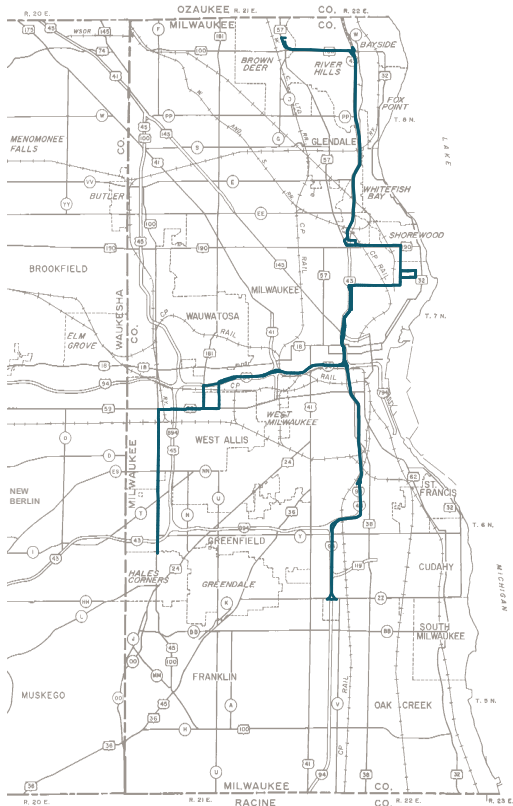
UBUS ROUTES - MIDDAY OFF-PEAK
PERIOD (9:00 A.M. - 2:59 P.M.)



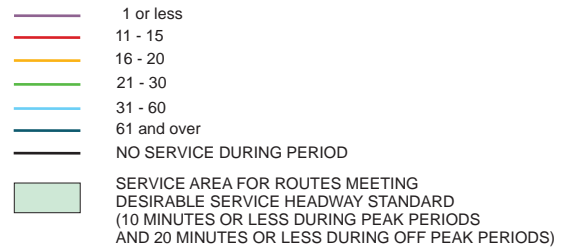
UBUS ROUTES- PM PEAK
PERIOD (3:00 P.M. - 5:59 P.M.)



UBUS ROUTES - EARLY EVENING
PERIOD (6:00 P.M. - 10:00 P.M.)



LOWEST HEADWAY (MINUTES)
ON ROUTE SEGMENT*



*WHERE MORE THAN ONE ROUTE OPERATES OVER A STREET SEGMENT, THE MAPS DISPLAY INFORMATION FOR THE ROUTE HAVING THE LOWEST OPERATING HEADWAY.

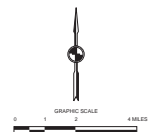


Table 39

**MILWAUKEE COUNTY POPULATION AND EMPLOYMENT WITHIN THE WALK ACCESS SERVICE AREAS
FOR LOCAL/SHUTTLE ROUTES MEETING THE STANDARD FOR DESIRABLE HEADWAYS: 2004**

Area	Population			Employment		
	Number	Percent of Total County Population	Percent of Total Walk Access Service Area Population	Number	Percent of Total County Employment	Percent of Total Walk Access Service Area Employment
Milwaukee County	940,200	100.0	- -	624,600	100.0	- -
Total Walk Access Service Area	850,900	90.5	100.0	587,100	94.0	100.0
Walk Access Service Area for Routes Meeting Standard for Desirable Headways ^a						
Morning Peak Period.....	213,100	22.7	25.0	219,800	35.2	37.4
Midday Period	583,800	62.1	68.6	385,500	61.7	65.7
Afternoon Peak Period.....	277,100	29.5	32.6	232,400	37.2	39.6
Early Evening Period.....	418,400	44.5	49.2	308,800	49.4	52.6
Late Night Period	383,600	40.8	45.1	270,600	43.3	46.1

^aService Design Standard 8 of Objective 2 indicates that it is highly desirable to have the local routes of the transit system operate on weekdays with headways of no more than 10 minutes during peak periods and 20 minutes during all off-peak periods,

Source: SEWRPC.

28 and 64 (morning and afternoon peak periods), Route Nos. 35 and 67 (afternoon peak periods), and Route No. 15 (afternoon peak and late evening periods). While some UBUS routes also have headways which exceed the specified maximums, the schedules for these routes have been customized to serve the class times at the University of Wisconsin-Milwaukee and should not be adjusted.

- Map 42 also identifies where service is not operated over local routes during each time period. In some cases as with segments on Route Nos. 23, 27, and 67, the map reflects where service is provided only during peak periods to serve employment centers and schools. Some local routes, including Route Nos. 28, 35, and 64 have segments where service is not operated during certain periods on weekdays and weekends. A review of these route segments should be made to determine if providing service during these periods would be warranted.

Compliance with Passenger Loading Standards

Service Performance Standard No. 4 of Objective No. 2 identifies peak period passenger loading standards of no more than 1.33 for local bus service and 1.00 for freeway flyer service. At all other times, passenger loading standards should not exceed 1.00 for all bus service. The peak, or maximum, load factor is defined as the ratio of passengers to bus seats measured at the point on the route where passenger loads are highest, with that point defined as the peak load point. The maximum load factor provides a measure of the quality of bus service by indicating the number of passengers who must stand on the bus on a given route.

The load factors for the Milwaukee County Transit System bus routes used in measuring performance against this standard were calculated by dividing the average peak passenger loads by bus trip on each route for one-half hour periods by the average number of seats per bus provided on each route during the same periods. The passenger load data used for this analysis were provided by the transit system from a sample of fall 2005 passenger counts which provided complete data for all local/shuttle routes except Route Nos. 28, 64, 80, and 219; peak period data for all freeway flyer routes; peak period and off-peak data for all UBUS routes; and peak period data for the high school and middle school routes except Route Nos. 61 and 87. Where the 2005 passenger data was missing or incomplete,

fall 2004 weekday data were used. It was assumed that all routes were operated with buses having a seated capacity of 39 passengers except Route Nos. 28, 48, 55, 68, 87, 88, 89, and 219 where smaller buses with a seated capacity of 25 passengers are typically used. Load factors were calculated for the morning and afternoon peak periods and the midday off-peak period, then compared against the maximum load factors specified in the standard. The load factors for the transit system routes are displayed in Figures 11 and 12. The peak load points for the local routes are shown on Map 44. The passenger load factors shown for each route in the graphs can be viewed in categories which indicate a level of service as follows:

- 0.01-0.50 - no passengers need to sit next to each other
- 0.51-0.75 - passengers can choose where they want to sit
- 0.76-1.00 - all passengers can have a seat
- 1.01-1.33 - comfortable standee load
- 1.34 - 1.5 - uncomfortable for standing passengers
- Greater than 1.5 - Crush load, uncomfortable for all passengers

The data indicates that the routes of the transit system largely meet the passenger loading standards. All the local routes met the loading standard except Route No. 55, which had a peak passenger load factor of 1.35 during the afternoon peak period compared with the standard of 1.33 for weekday peak periods, and Route Nos. 12 and 23 which had peak passenger load factors of 1.13 and 1.03, respectively, during the midday period compared with the standard of 1.00 for off-peak periods. None of these load factors above standards were considered to be a serious problem. The loads on Route Nos. 12 and 23 occurred on the last bus trips of the midday period as ridership and service transition into peak period service for which higher load factors are specified in the service standards. Load factors for the peak period freeway flyer routes all were below the standard of 1.00, and passenger loads on the UBUS and school day routes were all at or below the specified loading standards.

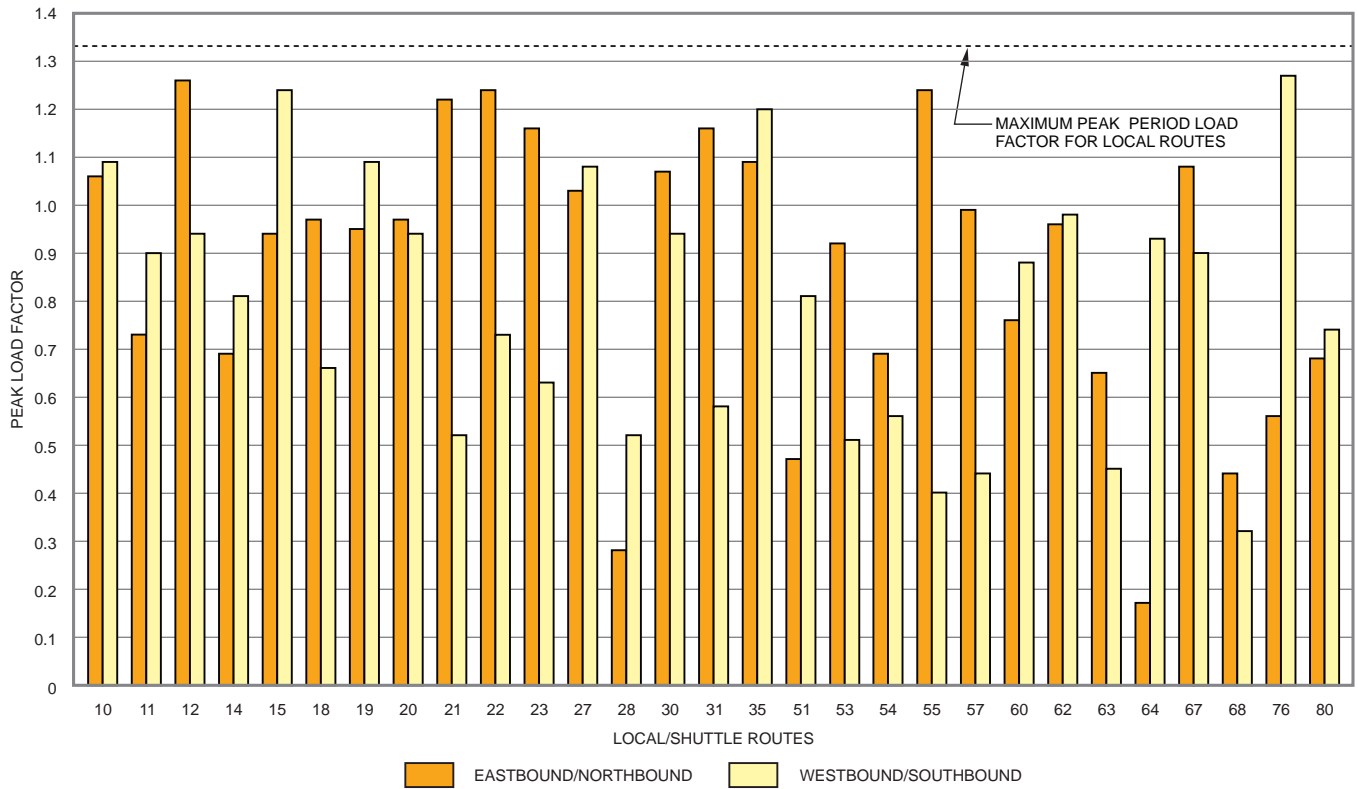
While the load factors calculated by one-half hour periods do not show serious loading problems for transit system routes, this may reflect the averaging of peak loads on the individual bus trips made within each one-half hour period. Higher passenger loads are sometimes carried on selected bus trips on high ridership local and school day routes. To determine the extent that high passenger loads on individual bus trips occur on the system, Commission and transit system staff reviewed reports by bus operators concerning overloaded buses and complaints made by passengers to the transit system. During the period September 6 through October 7, 2005, drivers made approximately 500 reports of overloaded conditions to the dispatcher, representing about 15 calls per day. The transit system also received approximately 100 complaints from passengers over this period, representing about three complaints per day. The routes most often identified included Route Nos. 12, 14, 15, 19, 23, 27, 30, 62, 76, and 80 which together accounted for about 73 percent of the bus operator reports of overloaded conditions. This information would indicate problems did exist with overcrowding on selected bus trips during the peak hours of operation on weekdays.

The overcrowding on some bus routes observed in fall 2005 has been attributed in part to changes in class schedules at high schools and middle schools implemented by the Milwaukee Public School system for fall 2005. The changes moved back the dismissal times for students by about one hour from about 2:45 p.m. to 3:45 p.m. which placed many students on buses that are also used by the general public during peak rush hours and created overloaded conditions on routes serving schools. A second factor was increases in general ridership caused by the increases in motor fuel prices that occurred in August and September. The transit system has attempted to alleviate the overcrowding that has occurred on selected individual trips on some bus routes by adding bus trips to the fall 2005 schedules. This has included additional morning trips on Route Nos. 10, 14, 15, 19, 22, 23, 27, 30, 60, 62, 76 and some school day routes. While more service is desirable on some routes, transit system staff have indicated that its response is limited by the financial resources it has available to put additional buses into service during the morning and afternoon peak ridership periods.

Figure 11

**MAXIMUM LOAD FACTORS FOR THE WEEKDAY SERVICE PROVIDED ON
THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2005**

MORNING PEAK PERIOD (6:00 A.M. - 8:59 A.M.)



MIDDAY PERIOD (9:00 A.M. - 2:59 P.M.)

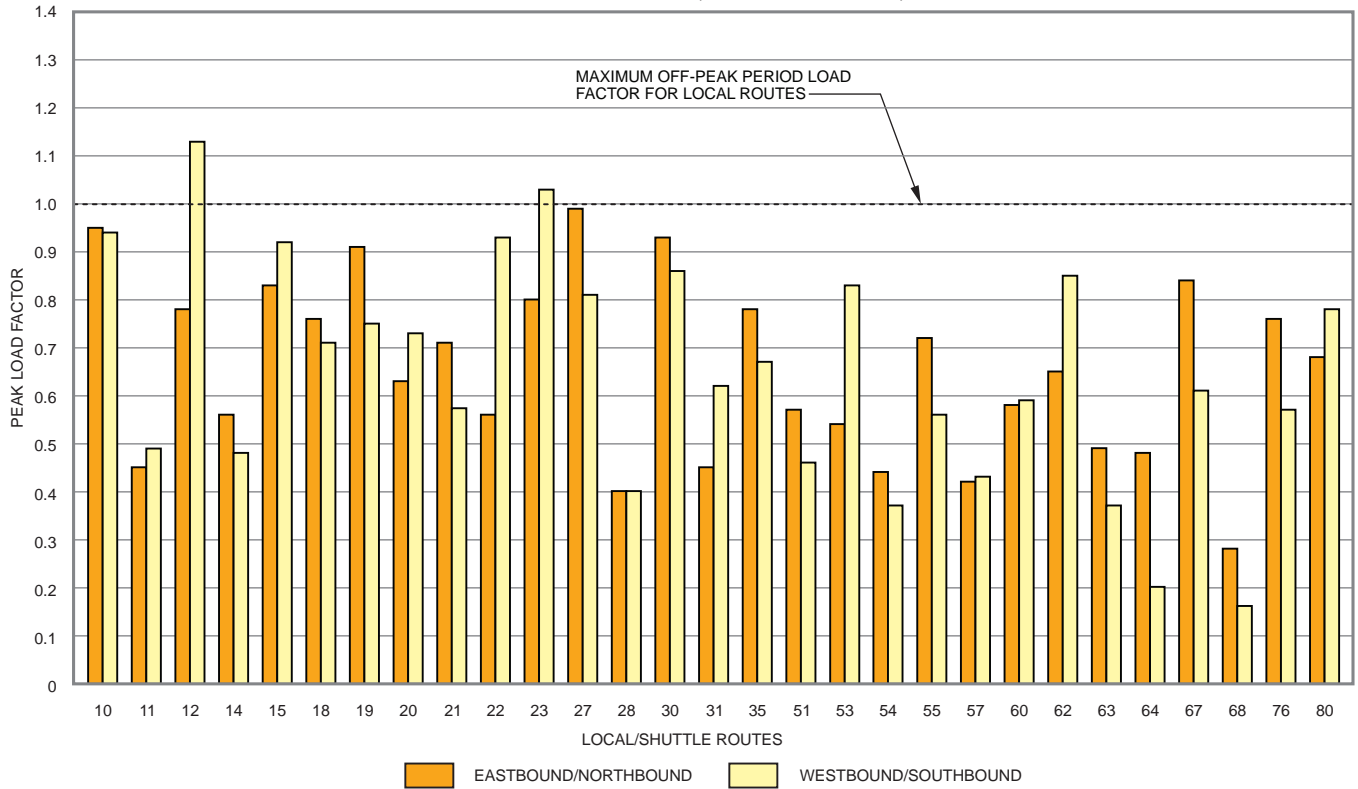
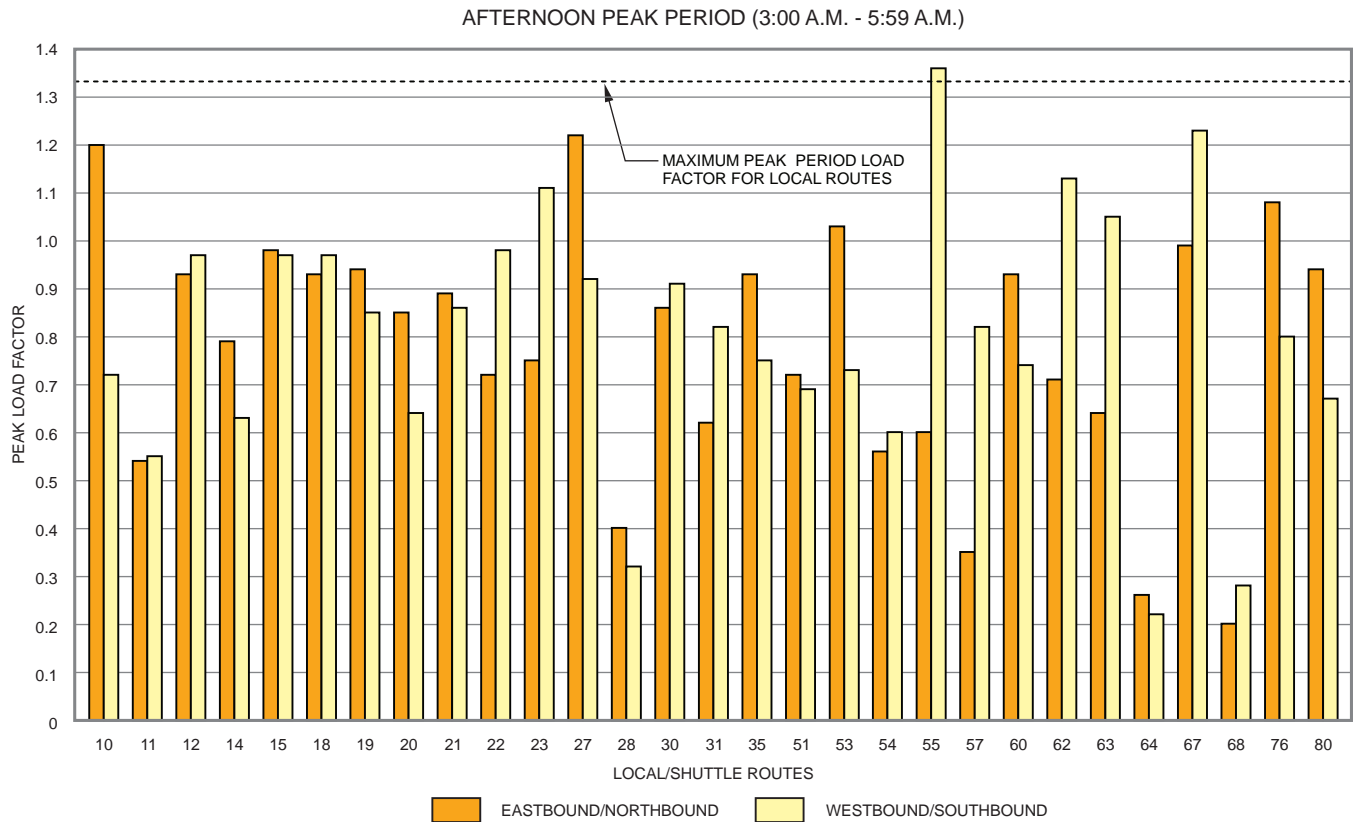


Figure 11 (continued)



Source: Milwaukee County Transit System and SEWRPC.

Schedule Adherence

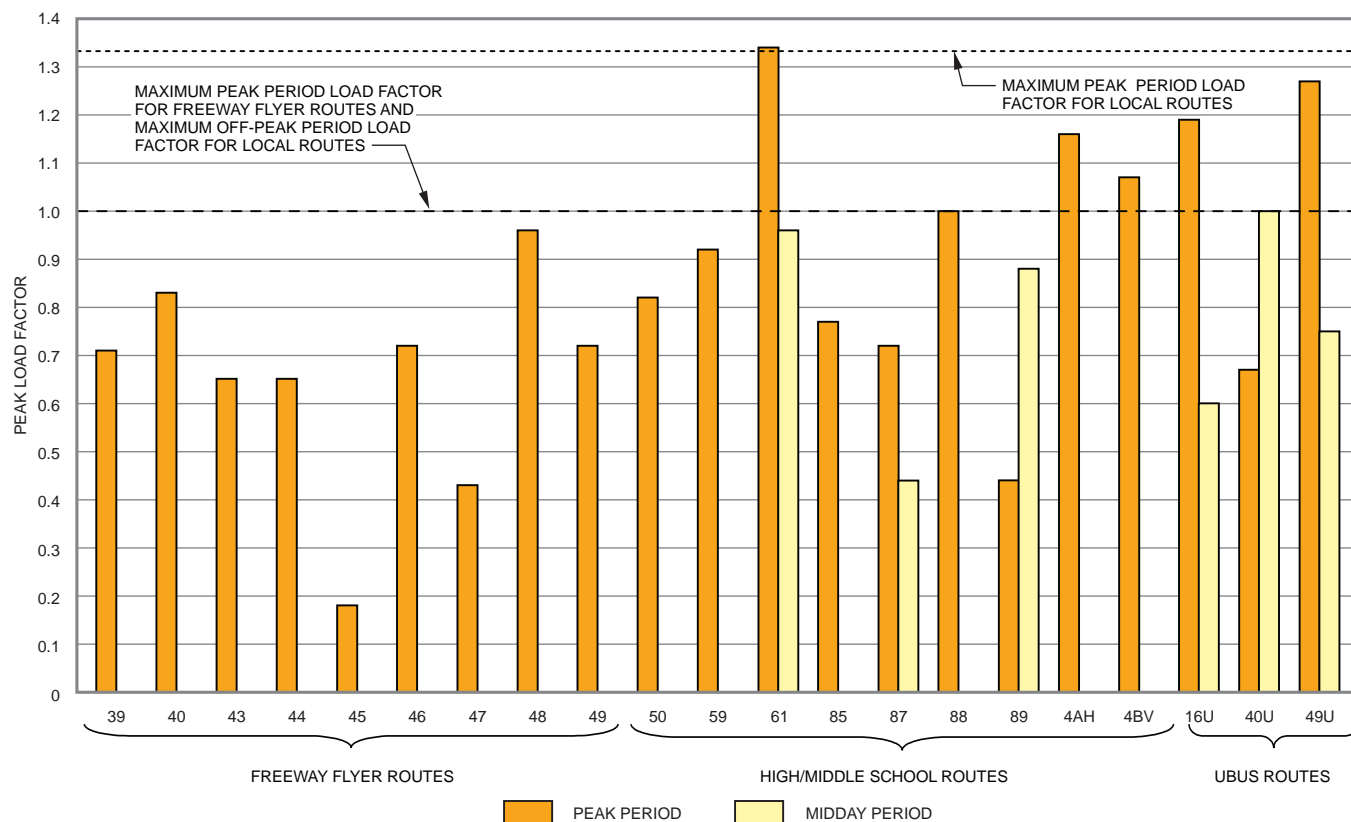
Excessive waiting times caused by buses running behind schedule or resulting from missed connections due to early bus departures can detract from, and even be a deterrent to, using the transit system. The provision of reliable and on-time transit service is, therefore, extremely important in attracting and retaining transit riders. The transit service standards for this study define “on time” as adherence to published schedules within the range of one minute early and three minutes late. Performance within these guidelines is an important means of minimizing passenger inconvenience.

The Milwaukee County Transit System monitors schedule adherence on its bus routes through an automated vehicle location (AVL) system which tracks the location of each bus used in daily service throughout the day. The transit system monitors the running times of vehicles operating over each route and compares those times to scheduled times at time points along the route. A systemwide on-time performance report is generated monthly which identifies the average number of buses on weekdays and weekends that were early or late based on the above service standard and the percent of buses that were on-time, with the checks of on-time performance made at four times during each service day: 7:00 a.m., 12:00 noon, 4:00 p.m., and 9:00 p.m. The schedule adherence data collected for September 2005 are summarized in Table 40.

The on-time performance data collected by the transit system indicates that the transit system meets the service standard of 90 percent of the service being on-time. Every service period checked was at or above this level except the weekday and Sunday midday (12:00 noon) periods when about 89 percent of the service was provided on-time. The midday performance levels are not considered to indicate any major service problems.

Figure 12

MAXIMUM LOAD FACTORS FOR THE WEEKDAY SERVICE PROVIDED ON THE FREEWAY FLYER, HIGH SCHOOL/MIDDLE SCHOOL, AND UBUS ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2005



Source: Milwaukee County Transit System and SEWRPC.

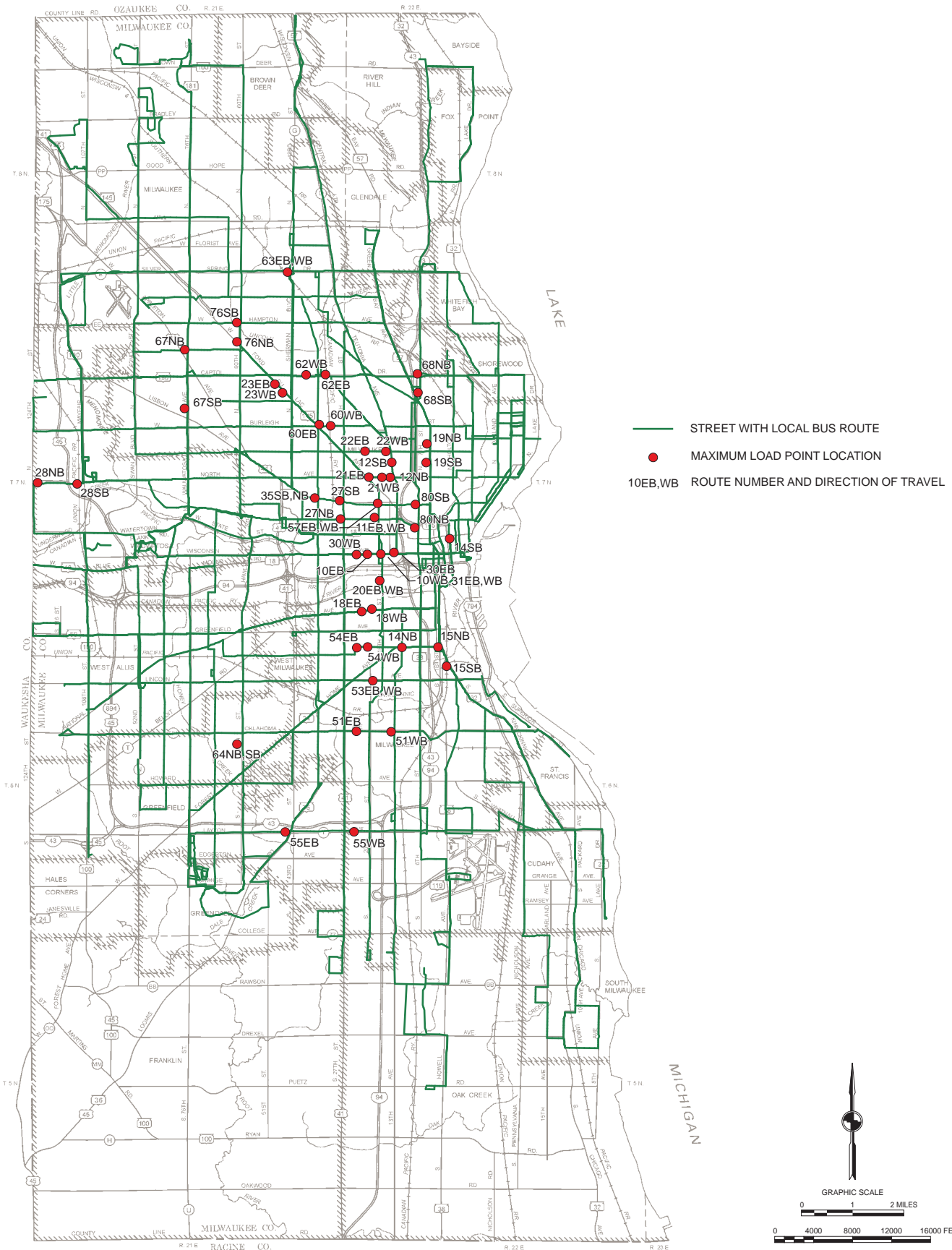
Comparison of Transit and Automobile Travel Times

The ability of the transit system to compete with private automobile for travel is in large part dependant on the transit and automobile travel times associated with any given trip. Where transit and automobile travel times are comparable, there is a greater possibility that an individual will consider using bus service. Transit travel times that are considerably longer than automobile travel times discourage transit use. A comparison of transit and automobile travel times between 13 selected locations within Milwaukee County was, therefore, conducted to identify the degree to which the existing travel times are comparable.

Tables 41 and 42 present a comparison of the total overall transit and automobile travel times between the selected locations during the weekday morning peak period and midday off-peak period and the absolute differences between the total transit and automobile travel times. The absolute difference between transit and automobile travel times can be viewed to indicate a level of service as follows:

- No difference - transit travel is as fast as or faster than travel by automobile
- 1 to 15 minutes longer - transit travel is about as fast by automobile
- 16 to 30 minutes longer - transit travel times are tolerable for choice transit riders
- 31 to 45 minutes longer - a round trip is at least one hour longer by transit
- 46 to 60 minutes longer - travel is tedious for all transit riders
- Greater than 60 minutes - transit travel is unacceptable to most riders

MAXIMUM LOAD POINT LOCATIONS FOR THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM



Source: Milwaukee County Transit System and SEWRPC.

Table 40

**SYSTEMWIDE ON-TIME PERFORMANCE FOR THE ROUTES OF THE
MILWAUKEE COUNTY TRANSIT SYSTEM: SEPTEMBER 2005**

Day	Time	Average Number of Buses in Service	Average Number of Buses Running Late ^a	Average Number of Buses Running Early ^b	Average Number of Buses Running On-Time	Average Percent of Buses Running On-Time
Weekdays	7:00 a.m.	316	15	5	296	93.7
	12:00 noon	223	20	3	200	89.7
	4:00 p.m.	408	30	3	375	91.9
	9:00 p.m.	173	12	1	160	92.5
Saturdays	7:00 a.m.	144	10	2	132	91.7
	12:00 noon	215	17	3	195	90.7
	4:00 p.m.	220	20	2	198	90.0
	9:00 p.m.	152	14	- -	138	90.8
Sundays	7:00 a.m.	96	8	1	87	90.6
	12:00 noon	173	18	2	153	88.4
	4:00 p.m.	183	11	2	170	92.9
	9:00 p.m.	125	10	1	114	91.2

^aMore than three minutes after scheduled time.

^bMore than one minute before scheduled time.

Source: Milwaukee County Transit System and SEWRPC.

The travel time comparison indicates that in no case is transit travel as fast as automobile travel within Milwaukee County. During both weekday peak and midday off-peak periods, the best overall transit travel times in comparison to those for automobiles, are for short transit trips made between areas within and adjacent to the Milwaukee Central Business District (CBD) for which transit travel times are within 15 minutes of the times for automobile travel. The next best overall transit travel times, those within about 16 to 30 minutes of automobile travel times, are for intermediate length trips centered on the Milwaukee CBD and the University of Wisconsin-Milwaukee, for trips to the Milwaukee CBD which can be made using freeway flyer routes, and for trips which can be made without transferring between bus routes. The largest travel time differences during weekday peak and midday off-peak periods occur for the longest transit trips such as those made to or from the Northridge area, locations in the southeast portion of the transit service area including General Mitchell International Airport, and locations in the southwest portion of the service area including the Southridge Shopping Center. The difference between transit and automobile travel times for such trips generally is greater than 30 minutes and in some cases exceeds 60 minutes. Transit travel times are generally lower for trips made between locations in the northern half of the County than for trips made between locations in the southern half of the County.

The travel time comparison between transit and automobiles looks better if only the line-haul or running times are considered. This represents only the time spent in the transit vehicle and excludes the time incurred in walking to a bus stop, waiting for a bus, transferring between routes including waiting for another bus, and walking to a destination. Much of the out-of-vehicle time is related to waiting time for each bus used. Service reductions made for budget purposes since the year 2000 have increased operating headways and, consequently wait times for passengers using many routes. Walk access and egress times have also increased for some riders where routes or route segments have been eliminated, forcing passengers to use other routes or stops which are not as conveniently located.

The ratios of total transit travel time to the total automobile travel time between the selected locations are also presented in Tables 41 and 42 and are illustrated graphically on Map 45. The transit service standards for this study specify that times for transit travel should be no more than 1.5 times greater than times for automobile travel

Table 41

**COMPARISON OF MORNING PEAK PERIOD TRANSIT AND AUTOMOBILE OVERALL TRAVEL TIMES^a
BETWEEN 13 SELECTED LOCATIONS IN MILWAUKEE COUNTY: 2005 ESTIMATED**

Total Overall Transit Travel Time (In-Vehicle Transit Travel Time) ^b in Minutes													
From Location		To Location											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Northridge (N. Servite Drive and W. Brown Deer Road)	-- (15)	39 (15)	54 (27)	57 (28)	66 (43)	62 (36)	57 (37)	71 (38)	97 (56)	88 (53)	105 (64)	92 (60)
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	58 (32)	-- (20)	51 (20)	41 (23)	89 (73)	44 (21)	39 (22)	53 (23)	99 (62)	70 (38)	96 (69)	74 (46)
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	53 (26)	51 (21)	-- (34)	52 (34)	53 (27)	48 (31)	53 (40)	58 (33)	87 (43)	70 (45)	101 (68)	87 (63)
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	81 (61)	40 (19)	49 (29)	-- (59)	77 (59)	53 (41)	34 (23)	59 (39)	58 (33)	74 (52)	80 (49)	80 (59)
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	64 (41)	89 (73)	52 (27)	76 (60)	-- (21)	35 (21)	51 (38)	56 (31)	52 (17)	62 (37)	99 (66)	85 (62)
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	82 (57)	68 (52)	46 (27)	54 (41)	33 (19)	-- (17)	26 (17)	30 (9)	60 (30)	35 (16)	73 (43)	60 (41)
7	Downtown (E. Wisconsin Avenue and N. Water Street)	85 (62)	49 (34)	49 (36)	34 (24)	48 (36)	25 (17)	-- (16)	30 (16)	68 (44)	52 (34)	51 (28)	51 (35)
8	Near South Side (S. 16th Street and W. National Avenue)	93 (62)	71 (48)	53 (31)	56 (38)	52 (31)	31 (14)	32 (19)	-- (28)	53 (28)	39 (14)	63 (28)	51 (28)
9	West Central (S. 108th Street and W. Cleveland Avenue)	83 (52)	78 (52)	75 (52)	55 (35)	52 (18)	51 (33)	46 (33)	48 (28)	-- (28)	61 (28)	95 (61)	82 (58)
10	South Central (S. 27th Street and W. Oklahoma Avenue)	105 (69)	94 (69)	67 (44)	71 (53)	59 (36)	34 (17)	51 (35)	38 (15)	60 (22)	-- (27)	60 (21)	50 (25)
11	Southeast (S. Packard Avenue and E. Layton Avenue)	130 (92)	92 (70)	94 (67)	74 (53)	93 (67)	70 (48)	49 (31)	58 (29)	96 (57)	56 (23)	-- (17)	49 (17)
12	General Mitchell International Airport	126 (96)	98 (73)	86 (63)	78 (60)	86 (63)	63 (44)	54 (38)	54 (30)	92 (58)	51 (22)	50 (18)	-- (29)
13	Southridge Shopping Center	106 (81)	81 (58)	78 (51)	59 (39)	67 (39)	64 (48)	44 (31)	53 (26)	78 (38)	56 (26)	57 (35)	44 (21)

Total Overall Automobile Travel Time in Minutes													
From Location		To Location											
		1	2	3	4	5	6	7	8	9	10	11	12
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	18	15	30	26	33	33	35	32	36	40	40
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	18	--	17	15	28	21	21	23	35	27	28	28
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	15	17	--	21	16	19	22	23	22	23	29	29
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	30	15	22	--	31	22	20	25	38	29	29	31
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	26	31	16	31	--	15	22	20	11	19	29	30
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	32	23	18	23	15	--	14	12	23	16	21	22
7	Downtown (E. Wisconsin Avenue and N. Water Street)	35	23	23	20	22	15	--	17	29	21	20	22
8	Near South Side (S. 16th Street and W. National Avenue)	37	26	23	26	20	13	17	--	21	11	21	19
9	West Central (S. 108th Street and W. Cleveland Avenue)	31	37	23	38	11	22	29	22	--	15	27	22
10	South Central (S. 27th Street and W. Oklahoma Avenue)	36	29	23	30	19	15	21	11	15	--	18	14
11	Southeast (S. Packard Avenue and E. Layton Avenue)	41	29	29	28	29	23	19	20	27	18	--	9
12	General Mitchell International Airport	41	29	29	30	27	22	21	18	20	13	9	--
13	Southridge Shopping Center	41	36	32	37	21	25	28	22	12	14	21	14

Table 41 (continued)

Total Time Difference between Overall Transit Travel Time and Overall Automobile Travel Time (Morning Peak Period)														
From Location		To Location												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	21	39	27	40	29	24	36	65	52	65	52	59
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	40	--	34	26	61	23	18	30	64	43	68	46	72
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	38	34	--	31	37	29	31	35	65	47	72	58	48
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	51	25	27	--	46	31	14	34	20	45	51	49	64
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	38	58	36	45	--	20	29	36	41	43	70	55	47
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	50	45	28	31	18	--	12	18	37	19	52	38	41
7	Downtown (E. Wisconsin Avenue and N. Water Street)	50	26	26	14	26	10	--	13	39	31	31	29	49
8	Near South Side (S. 16th Street and W. National Avenue)	56	45	30	30	32	18	15	--	32	28	42	32	45
9	West Central (S. 108th Street and W. Cleveland Avenue)	52	41	52	17	41	29	17	26	--	46	68	60	57
10	South Central (S. 27th Street and W. Oklahoma Avenue)	69	65	44	41	40	19	30	27	45	--	42	36	41
11	Southeast (S. Packard Avenue and E. Layton Avenue)	89	63	65	46	64	47	30	38	69	38	--	40	36
12	General Mitchell International Airport	85	69	57	48	59	41	33	36	72	38	41	--	43
13	Southridge Shopping Center	65	45	46	22	46	39	16	31	66	42	36	30	--

Ratio of Total Overall Transit Travel Time to Overall Automobile Travel Time (Morning Peak Period)															
From Location		To Location													
		1	2	3	4	5	6	7	8	9	10	11	12	13	Average
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	2.2	3.6	1.9	2.5	1.9	1.7	2.0	3.0	2.4	2.6	2.3	2.4	2.4
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	3.2	--	3.0	2.7	3.2	2.1	1.9	2.3	2.8	2.6	3.4	2.6	3.1	2.8
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	3.5	3.0	--	2.5	3.3	2.5	2.4	2.5	4.0	3.0	3.5	3.0	2.5	3.0
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	2.7	2.7	2.2	--	2.5	2.4	1.7	2.4	1.5	2.6	2.8	2.6	2.7	2.4
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	2.5	2.9	3.3	2.5	--	2.3	2.3	2.8	4.7	3.3	3.4	2.8	3.2	3.0
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	2.6	3.0	2.6	2.3	2.2	--	1.9	2.5	2.6	2.2	3.5	2.7	2.6	2.5
7	Downtown (E. Wisconsin Avenue and N. Water Street)	2.4	2.1	2.1	1.7	2.2	1.7	--	1.8	2.3	2.5	2.6	2.3	2.7	2.2
8	Near South Side (S. 16th Street and W. National Avenue)	2.5	2.7	2.3	2.2	2.6	2.4	1.9	--	2.5	3.5	3.0	2.7	3.0	2.6
9	West Central (S. 108th Street and W. Cleveland Avenue)	2.7	2.1	3.3	1.5	4.7	2.3	1.6	2.2	--	4.1	3.5	3.7	5.8	3.1
10	South Central (S. 27th Street and W. Oklahoma Avenue)	2.9	3.2	2.9	2.4	3.1	2.3	2.4	3.5	4.0	--	3.3	3.6	3.9	3.1
11	Southeast (S. Packard Avenue and E. Layton Avenue)	3.2	3.2	3.2	2.6	3.2	3.0	2.6	2.9	3.6	3.1	--	5.4	2.7	3.2
12	General Mitchell International Airport	3.1	3.4	3.0	2.6	3.2	2.9	2.6	3.0	4.6	3.9	5.6	--	4.1	3.5
13	Southridge Shopping Center	2.6	2.3	2.4	1.6	3.2	2.6	1.6	2.4	6.5	4.0	2.7	3.1	--	2.9

^aOverall travel time is defined as the total door-to-door time for traveling between a trip origin and destination. For transit travel, this time includes the time spent out of the transit vehicle in walking to a transit stop, waiting for the first transit vehicle, transferring between routes, including waiting for each subsequent vehicle needed, and walking to a trip destination, plus the over the road travel time in the transit vehicle. For this analysis, the transit travel times assumed that the waiting time for the first route used would not exceed 15 minutes, but the waiting time for subsequent routes transferred to would be equal to one-half the headway on the route being transferred to. Depending on the location, transferring between routes would also entail one to two minutes of time for walking to the boarding location for the transfer route.

^bIn-vehicle transit time is shown in parentheses below total time.

Source: SEWRPC.

Table 42

**COMPARISON OF MIDDAY OFF-PEAK PERIOD TRANSIT AND AUTOMOBILE OVERALL TRAVEL TIMES^a
BETWEEN 13 SELECTED LOCATIONS IN MILWAUKEE COUNTY: 2005 ESTIMATED**

Total Overall Transit Travel Time (In-Vehicle Transit Travel Time) ^b in Minutes														
From Location		To Location												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Northridge (N. Servite Drive and W. Brown Deer Road)	-- (31)	64 (31)	51 (24)	78 (54)	61 (38)	83 (52)	90 (61)	88 (59)	91 (51)	104 (93)	108 (66)	125 (89)	99 (74)
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	64 (31)	-- (19)	54 (19)	42 (18)	85 (67)	68 (49)	50 (33)	72 (47)	90 (43)	93 (65)	86 (62)	96 (67)	107 (65)
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	51 (24)	54 (19)	-- (29)	49 (24)	54 (28)	47 (36)	50 (30)	54 (52)	106 (40)	66 (63)	93 (59)	84 (59)	76 (47)
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	77 (53)	41 (17)	48 (28)	-- (55)	77 (36)	51 (20)	33 (31)	55 (58)	52 (46)	69 (47)	74 (52)	75 (52)	101 (67)
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	61 (38)	84 (65)	54 (24)	75 (53)	-- (17)	34 (33)	48 (27)	52 (14)	58 (33)	59 (60)	91 (56)	82 (56)	74 (38)
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	82 (51)	66 (48)	47 (28)	50 (35)	34 (17)	-- (16)	25 (10)	29 (29)	58 (16)	33 (43)	68 (39)	59 (39)	70 (39)
7	Downtown (E. Wisconsin Avenue and N. Water Street)	88 (59)	48 (32)	48 (35)	32 (19)	48 (33)	25 (16)	-- (18)	32 (41)	65 (32)	50 (27)	48 (34)	51 (34)	76 (51)
8	Near South Side (S. 16th Street and W. National Avenue)	101 (67)	69 (44)	53 (29)	53 (31)	53 (28)	34 (13)	34 (14)	-- (27)	52 (13)	37 (26)	57 (27)	51 (27)	59 (36)
9	West Central (S. 108th Street and W. Cleveland Avenue)	100 (51)	74 (42)	105 (72)	55 (32)	60 (16)	60 (29)	63 (39)	52 (27)	-- (35)	70 (53)	95 (54)	89 (54)	80 (34)
10	South Central (S. 27th Street and W. Oklahoma Avenue)	104 (68)	91 (62)	65 (39)	67 (44)	59 (32)	33 (15)	50 (31)	38 (13)	70 (35)	-- (21)	56 (20)	50 (20)	59 (24)
11	Southeast (S. Packard Avenue and E. Layton Avenue)	139 (97)	87 (62)	93 (62)	75 (47)	93 (61)	69 (44)	49 (28)	58 (26)	96 (54)	57 (21)	-- (17)	50 (17)	56 (34)
12	General Mitchell International Airport	115 (83)	88 (65)	77 (57)	69 (52)	77 (56)	54 (39)	45 (34)	46 (27)	84 (54)	45 (20)	45 (17)	-- (28)	52 (28)
13	Southridge Shopping Center	99 (74)	106 (74)	75 (9)	90 (63)	71 (37)	61 (34)	66 (45)	60 (30)	76 (34)	56 (25)	56 (34)	57 (28)	--

Total Overall Automobile Travel Time in Minutes														
From Location		To Location												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	18	15	28	23	29	30	31	25	34	36	35	34
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	18	--	15	14	22	17	18	19	23	23	25	23	27
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	15	16	--	18	15	17	21	22	20	22	28	26	27
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	28	14	18	--	24	20	19	22	26	25	27	26	30
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	21	23	15	25	--	15	19	18	10	17	25	22	17
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	30	20	17	22	15	--	14	12	16	15	22	20	24
7	Downtown (E. Wisconsin Avenue and N. Water Street)	31	20	22	19	20	15	--	16	21	20	20	21	25
8	Near South Side (S. 16th Street and W. National Avenue)	32	21	22	23	17	12	16	--	18	11	20	17	21
9	West Central (S. 108th Street and W. Cleveland Avenue)	25	24	20	26	10	17	21	19	--	14	22	18	12
10	South Central (S. 27th Street and W. Oklahoma Avenue)	33	23	22	25	17	14	20	11	14	--	17	14	14
11	Southeast (S. Packard Avenue and E. Layton Avenue)	36	25	28	26	25	22	19	19	23	17	--	8	18
12	General Mitchell International Airport	34	23	26	25	21	20	19	17	17	13	8	--	14
13	Southridge Shopping Center	32	28	27	30	17	23	24	21	12	14	18	14	--

Table 42 (continued)

Total Time Difference between Overall Transit Travel Time and Overall Automobile Travel Time (Midday Off-Peak Period)														
From Location		To Location												
		1	2	3	4	5	6	7	8	9	10	11	12	13
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	46	36	50	38	54	60	57	66	70	72	90	65
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	46	--	39	28	63	51	32	53	67	70	61	73	80
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	36	38	--	31	39	30	29	32	86	44	65	58	49
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	49	27	30	--	53	31	14	33	26	44	47	49	71
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	40	61	39	50	--	19	29	34	48	42	66	60	57
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	52	46	30	28	19	--	11	17	42	18	46	39	46
7	Downtown (E. Wisconsin Avenue and N. Water Street)	57	28	26	13	28	10	--	16	44	30	28	30	51
8	Near South Side (S. 16th Street and W. National Avenue)	69	48	31	30	36	22	18	--	34	26	37	34	38
9	West Central (S. 108th Street and W. Cleveland Avenue)	75	50	85	29	50	43	42	33	--	56	73	71	68
10	South Central (S. 27th Street and W. Oklahoma Avenue)	71	68	43	42	42	19	30	27	56	--	39	36	45
11	Southeast (S. Packard Avenue and E. Layton Avenue)	103	62	65	49	68	47	30	39	73	40	--	42	38
12	General Mitchell International Airport	81	65	51	44	56	34	26	29	67	32	37	--	38
13	Southridge Shopping Center	67	78	48	60	54	38	42	39	64	42	38	43	--

Ratio of Total Overall Transit Travel Time to Overall Automobile Travel Time (Midday Off-Peak Period)															
From Location		To Location													
		1	2	3	4	5	6	7	8	9	10	11	12	13	Average
1	Northridge (N. Servite Drive and W. Brown Deer Road)	--	3.6	3.4	2.8	2.7	2.9	3.0	2.8	3.6	3.1	3.0	3.6	2.9	3.1
2	Northeast (N. Port Washington Road and E. Silver Spring Drive)	3.6	--	3.6	3.0	3.9	4.0	2.8	3.8	3.9	4.0	3.4	4.2	4.0	3.7
3	North Central (W. Fond du Lac Avenue and W. Congress Street)	3.4	3.4	--	2.7	3.6	2.8	2.4	2.5	5.3	3.0	3.3	3.2	2.8	3.2
4	University of Wisconsin-Milwaukee (E. Kenwood Blvd. and N. Maryland Avenue)	2.8	2.9	2.7	--	3.2	2.6	1.7	2.5	2.0	2.8	2.7	2.9	3.4	2.7
5	Milwaukee Regional Medical Center (N. 92nd Street and Connell Avenue)	2.9	3.7	3.6	3.0	--	2.3	2.5	2.9	5.8	3.5	3.6	3.7	4.4	3.5
6	Near West Side (N. 27th Street and W. Wisconsin Avenue)	2.7	3.3	2.8	2.3	2.3	--	1.8	2.4	3.6	2.2	3.1	3.0	2.9	2.7
7	Downtown (E. Wisconsin Avenue and N. Water Street)	2.8	2.4	2.2	1.7	2.4	1.7	--	2.0	3.1	2.5	2.4	2.4	3.0	2.4
8	Near South Side (S. 16th Street and W. National Avenue)	3.2	3.3	2.4	2.3	3.1	2.8	2.1	--	2.9	3.4	2.9	3.0	2.8	2.8
9	West Central (S. 108th Street and W. Cleveland Avenue)	4.0	3.1	5.3	2.1	6.0	3.5	3.0	2.7	--	5.0	4.3	4.9	6.7	4.2
10	South Central (S. 27th Street and W. Oklahoma Avenue)	3.2	4.0	3.0	2.7	3.5	2.4	2.5	3.5	5.0	--	3.3	3.6	4.2	3.4
11	Southeast (S. Packard Avenue and E. Layton Avenue)	3.9	3.5	3.3	2.9	3.7	3.1	2.6	3.1	4.2	3.4	--	6.3	3.1	3.6
12	General Mitchell International Airport	3.4	3.8	3.0	2.8	3.7	2.7	2.4	2.7	4.9	3.5	5.6	--	3.7	3.5
13	Southridge Shopping Center	3.1	3.8	2.8	3.0	4.2	2.7	2.8	2.9	6.3	4.0	3.1	4.1	--	3.6

^aOverall travel time is defined as the total door-to-door time for traveling between a trip origin and destination. For transit travel, this time includes the time spent out of the transit vehicle in walking to a transit stop, waiting for the first transit vehicle, transferring between routes, including waiting for each subsequent vehicle needed, and walking to a trip destination, plus the over the road travel time in the transit vehicle. For this analysis, the transit travel times assumed that the waiting time for the first route used would not exceed 15 minutes, but the waiting time for subsequent routes transferred to would be equal to one-half the headway on the route being transferred to. Depending on the location, transferring between routes would also entail one to two minutes of time for walking to the boarding location for the transfer route.

^bIn-vehicle transit time is shown in parentheses below total time.

Source: SEWRPC.

Map 45

**RATIOS OF OVERALL TRANSIT TRAVEL TIMES TO OVERALL AUTOMOBILE TRAVEL TIMES BETWEEN
SELECTED LOCATIONS IN MILWAUKEE COUNTY FOR WEEKDAY PEAK AND OFF-PEAK PERIODS: 2005 ESTIMATED**



for comparable transit and automobile trips. The travel time ratios developed for travel between the selected locations indicate that the existing bus services provided by the transit system do not meet this standard. The travel time ratios for both peak and midday off peak periods follow the same pattern as the differences in overall travel times noted above, with the lowest ratios being for short transit trips made between areas within and adjacent to downtown Milwaukee, and the highest ratios generally for long transit trips, including those made to or from the Northridge area and locations in the southeast and southwest portions of the service area.

Overall Route Ridership, Service Effectiveness and Service Efficiency

Previous sections of this chapter have identified how accessible the system is to County residents and where the system provides the service hours and headways desired by most riders, provided measures of the passenger loads and on-time performance of the service as an indicator of the comfort level for passengers, and gave an indication of how travel on the transit system compares with travel by private automobile. How system users and other County residents view all of these service characteristics is reflected to a large degree by the actual use of the transit services being offered by the system. This evaluation of the ridership, service effectiveness, and service efficiency of system routes is intended to identify the routes of the transit system with the highest and lowest overall performance levels based on route data identifying total boarding passengers, total passengers per revenue vehicle hour, total operating cost and operating assistance per passenger, and farebox recovery rate. The passengers carried per vehicle hour for each route was compared against the minimum performance levels for this measure established by the transit system to maintain service operation and set forth in the transit service standards: 22 passengers per hour on weekdays, 15 passengers per hour on Saturdays, and 10 passengers per hour on Sundays. Estimates for the operating cost and operating assistance per passenger, and the farebox recovery rate for each route were developed from the daily passengers per vehicle hour for each route and the systemwide averages for operating cost per revenue vehicle hour and passenger revenue per total passenger. The efficiency measure used by the transit system, passengers per bus hour (PBH), effectively serves to monitor performance of each route; however, to provide a “dollars and cents” perspective to the performance of each route, the PBH has been converted to financial measures, including estimated operating cost per boarding passenger, estimated operating assistance per boarding passenger, and estimated farebox recovery rate.

The estimated service effectiveness and cost efficiency measures for the routes of the Milwaukee County Transit System on weekdays and on weekends are shown in Figures 13 through 19. The performance measures presented in these figures are based upon daily ridership and service data for fall 2004 collected by the transit system and 2004 annual data for total system service levels, ridership operating costs and passenger revenues. The following observations may be drawn from this information:

1. In fall 2004, the 30 local/shuttle routes of the transit system accounted for almost all of the ridership on the transit system with a weekday ridership of about 140,500 boarding passengers, or approximately 96 percent of the total system weekday ridership of 146,100 boarding passengers. About 110,000 boarding passengers, or 75 percent of the total local/shuttle route ridership on weekdays was carried on 15 local routes—Route Nos. 10, 12, 14, 15, 18, 19, 21, 23, 27, 30, 35, 60, 62, 76, and 80. These 15 routes were also among the top 20 routes of the system on weekdays in terms of passengers per bus hour. All of these routes have segments which serve the central portions of the County with the highest concentrations of the minority and transit dependent populations and operate for more than 20 hours on weekdays over all or most of their length. The routes also operate with the lowest headways in the system over most of their length, and account for about 70 percent of the revenue vehicle miles and hours operated by the system in the County on weekdays.
2. The transit system does an excellent job of maintaining high productivity on the local/shuttle routes with 26 of the 30 local/shuttle routes meeting or exceeding the minimum acceptable performance level of 22 boarding passengers per revenue vehicle hour for weekday service. This standard is measured using total daily ridership and vehicle hours of service, as shown in Figure 13. Notably, almost all routes also meet the standard during daytime hours of operation (6:00 a.m. to 6:00 p.m.) and about two-thirds of the routes meet the standard during the early evening until 10:00 p.m. The late evening service provided over most local routes after 10:00 p.m. generally does not meet the weekday performance standard, but is needed to enable passengers starting a trip earlier in the service day to complete a round-trip. The weekday cost effectiveness of the local routes mirrors the productivity of the service.

Figure 13

**WEEKDAY RIDERSHIP AND SERVICE EFFECTIVENESS MEASURES FOR
THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

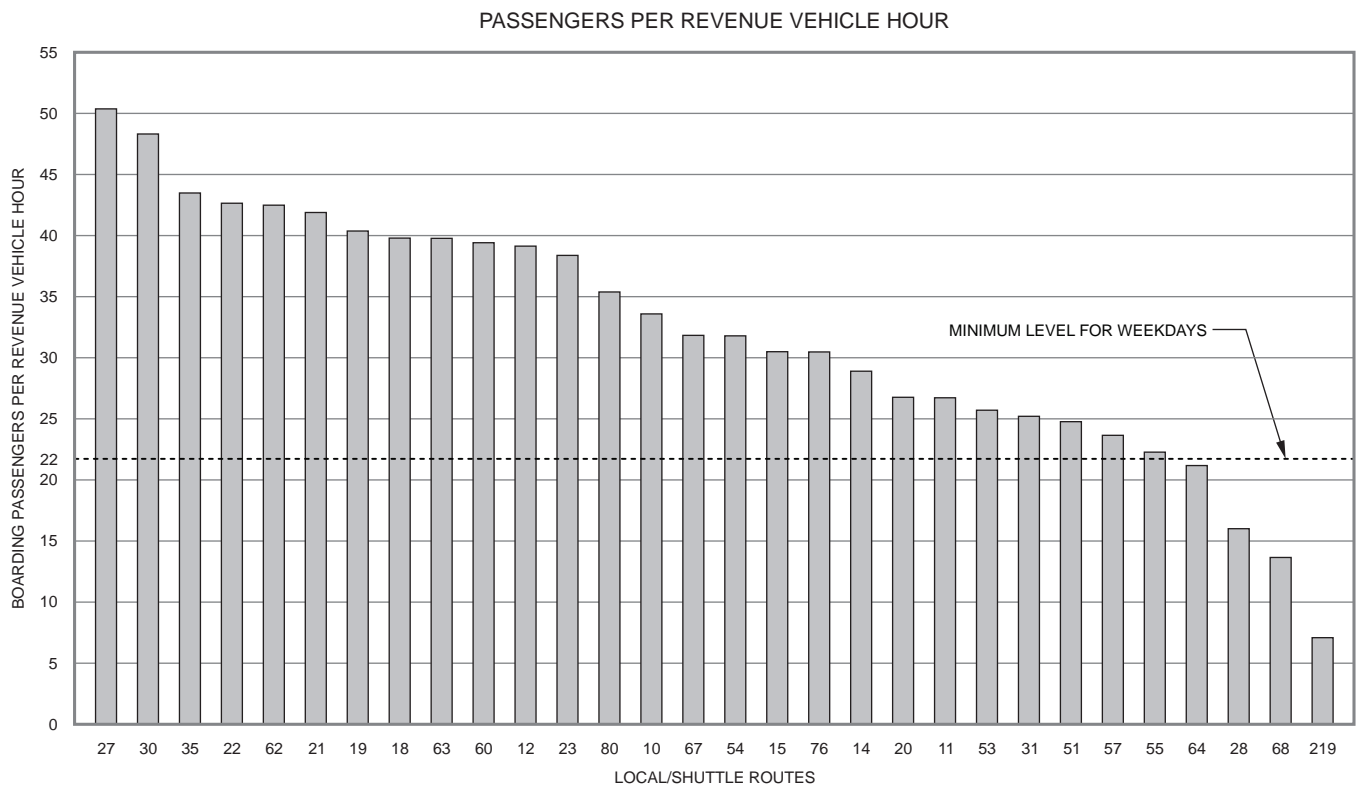
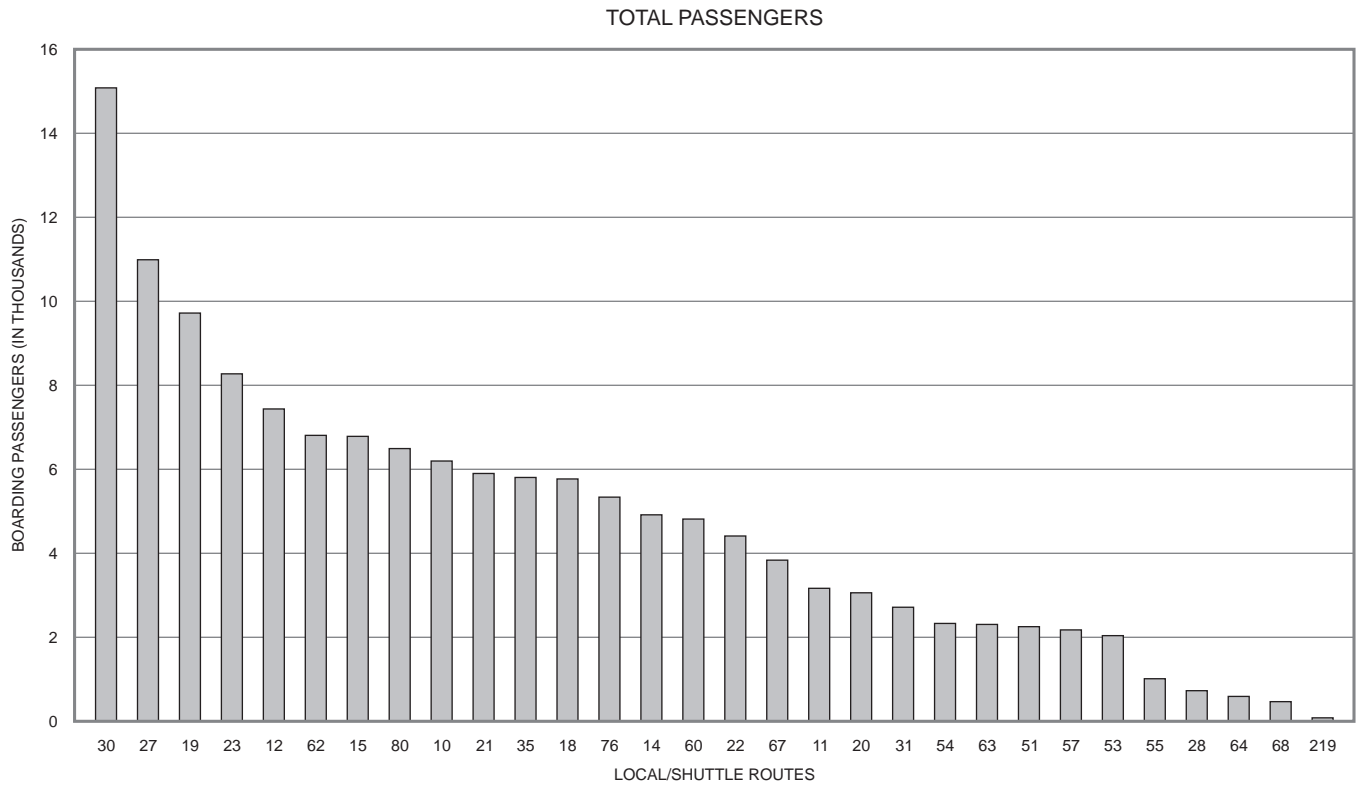
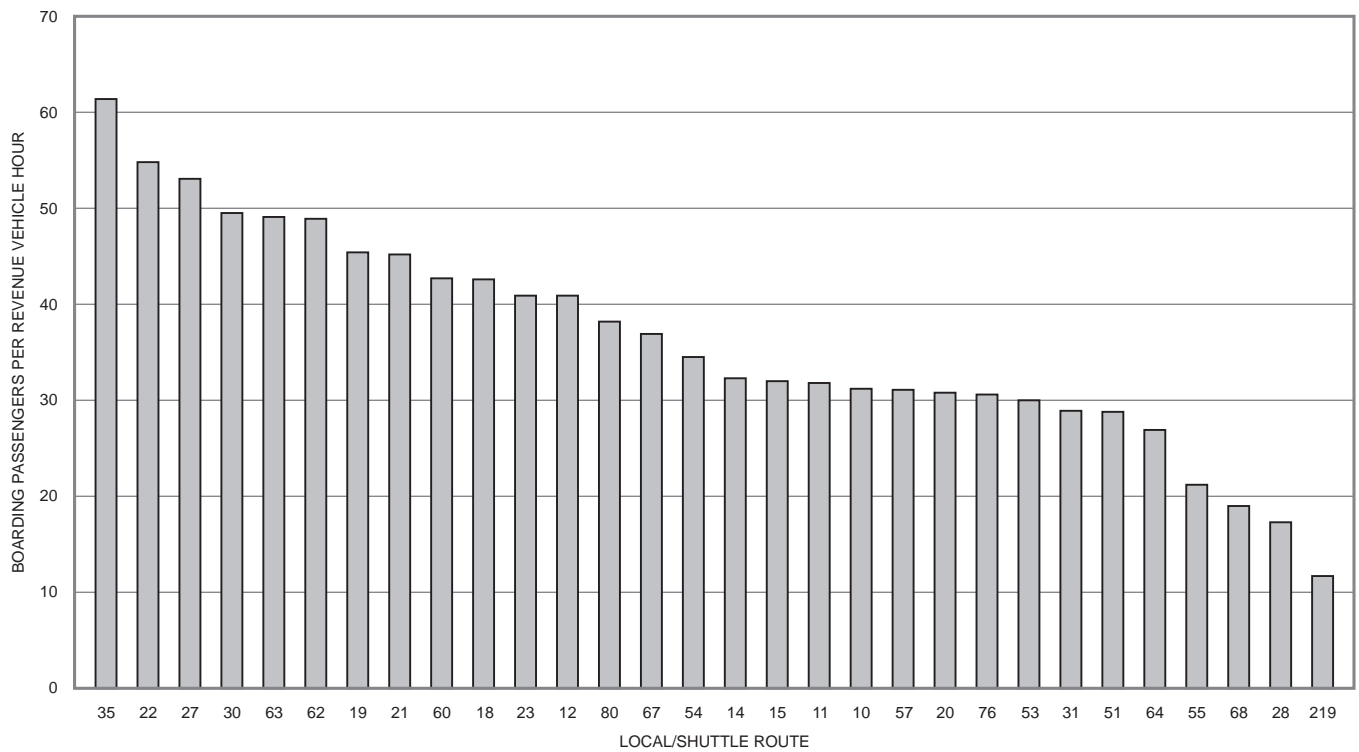


Figure 14

**WEEKDAY BOARDING PASSENGERS PER REVENUE VEHICLE HOUR BY TIME PERIOD
FOR THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

MORNING PEAK PERIOD (6:00 A.M. - 8:59 A.M.)



MIDDAY PERIOD (9:00 A.M. - 2:59 P.M.)

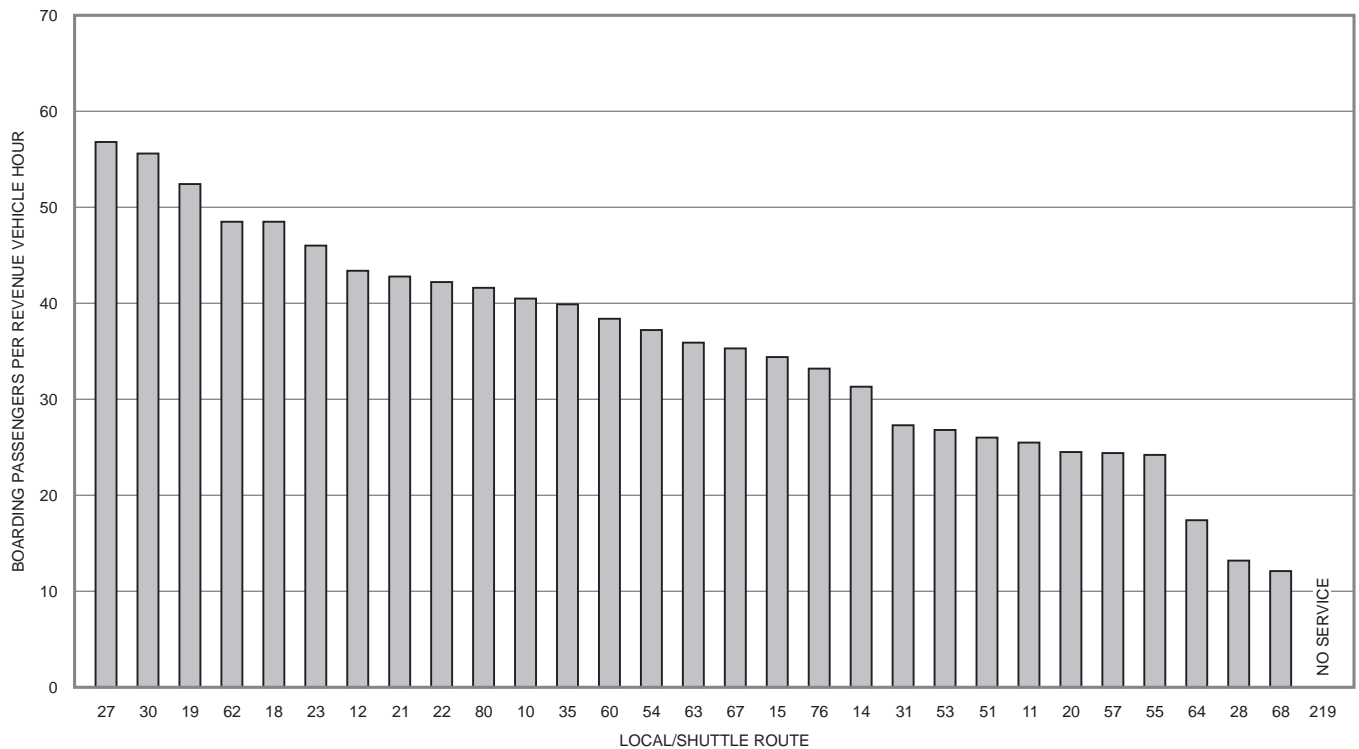
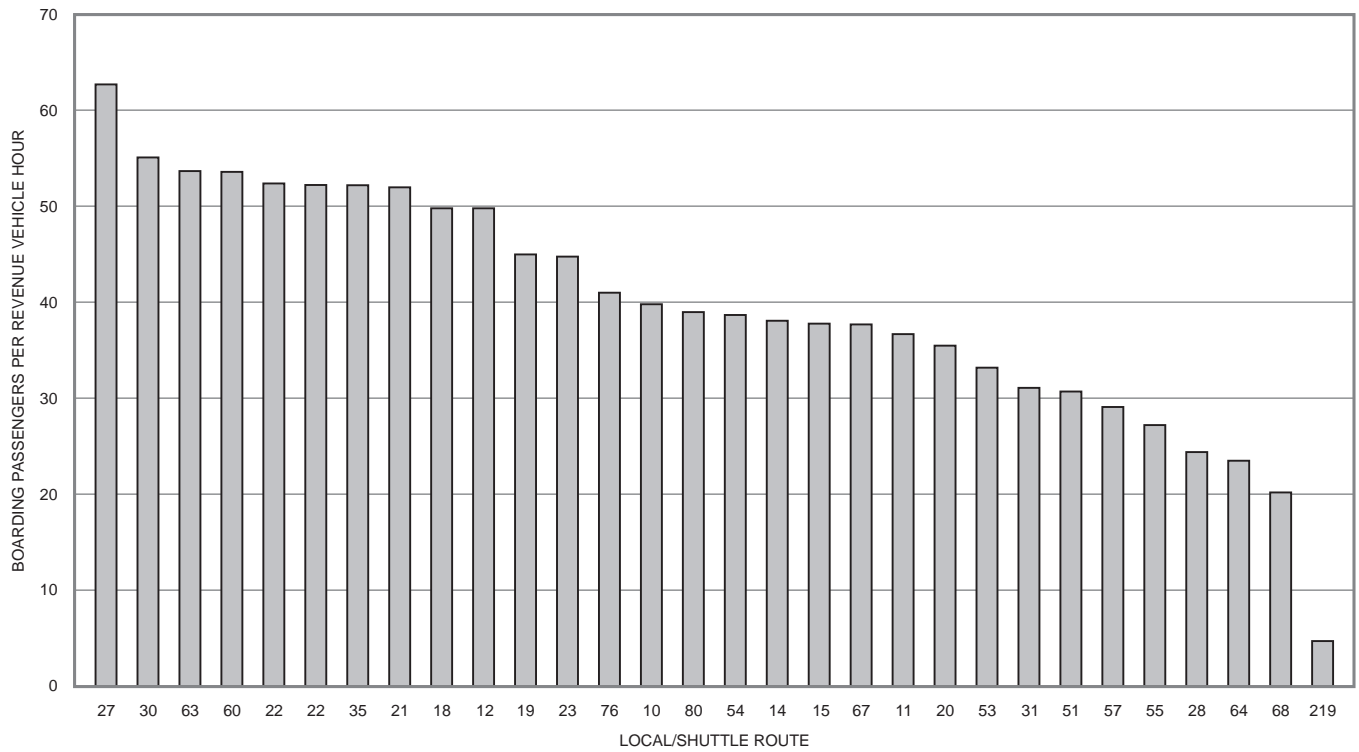


Figure 14 (continued)

AFTERNOON PEAK PERIOD (3:00 P.M. - 5:59 P.M.)



EARLY EVENING PERIOD (6:00 P.M. - 9:59 P.M.)

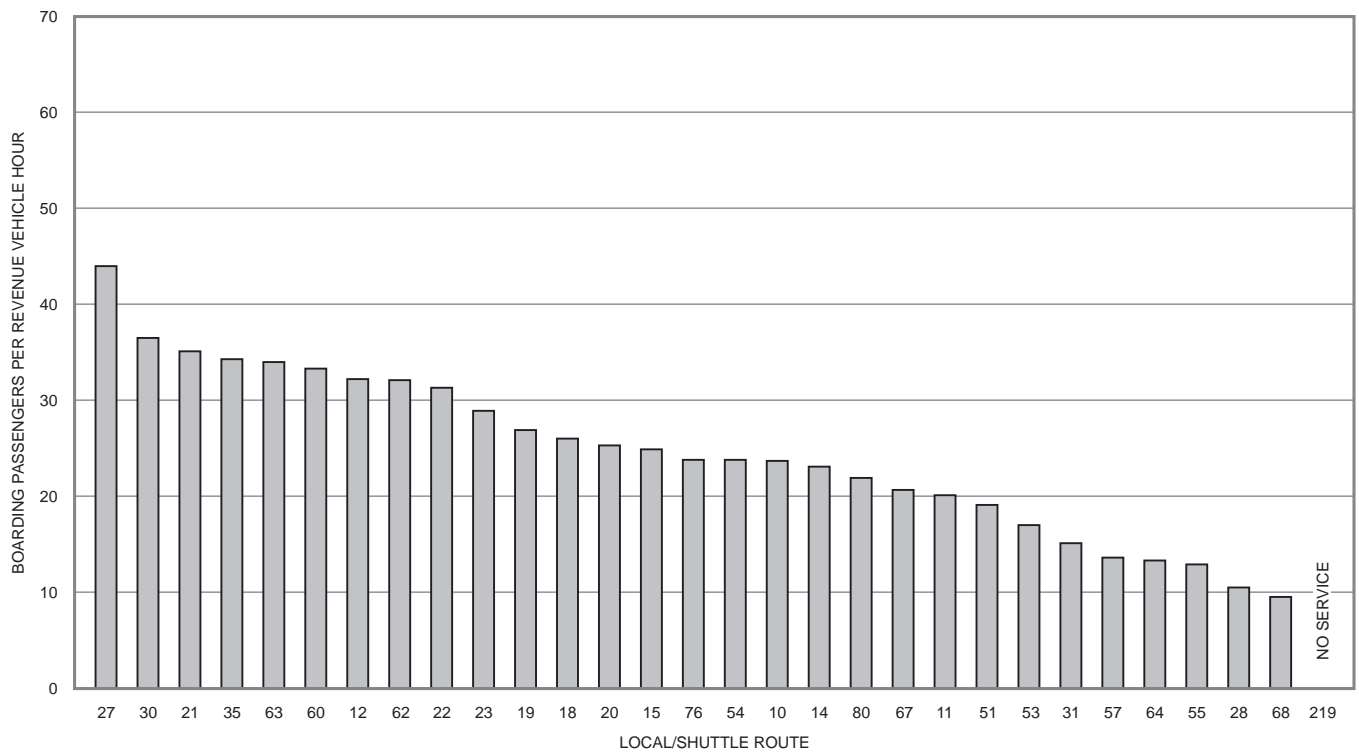
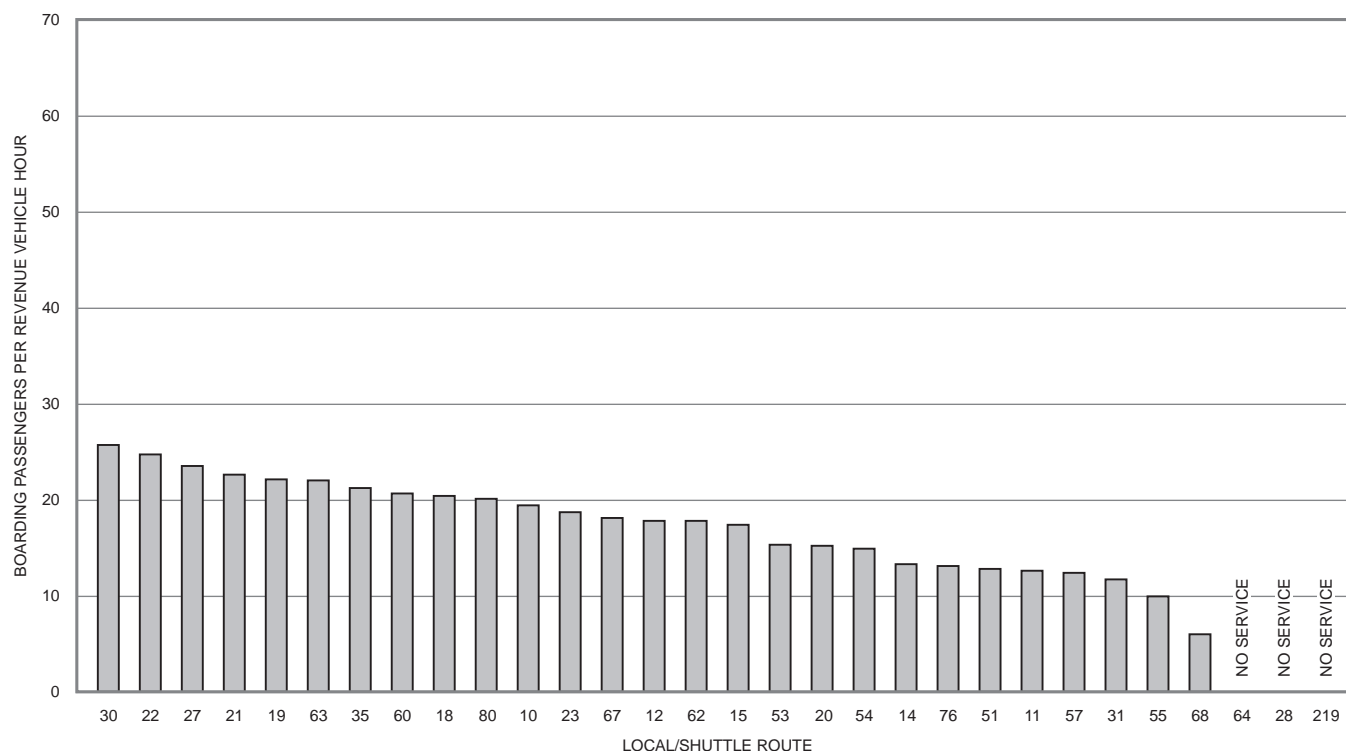


Figure 14 (continued)

LATE EVENING PERIOD (10:00 P.M. AND AFTER)



Source: Milwaukee County Transit System and SEWRPC.

3. The local/shuttle routes with the lowest weekday ridership, productivity, and cost efficiency measures include Route Nos. 28, 64, 68, and 219. As a shuttle route, Route No. 219 provides limited service with far fewer service hours than the typical local route. Route Nos. 28, 64, and 68 also have limited hours of operation and infrequent service. Route No. 28 has no significant terminus at either the north or south ends of the route, does not connect well with all east-west routes, and serves largely auto-oriented strip commercial development which, with the exception of the Mayfair Mall, does not generate significant ridership. Route No. 64 underperforms for the area it serves. The southern portion of Route No. 68 provides connections with other east-west local routes for passengers traveling to the Bayshore Mall but the northern segments serving the residential areas of Villages of Bayside and Fox Point do not generate as much ridership. All four of these routes do not have acceptable weekday productivity levels for the service they provide.
4. The remaining routes of the transit system have markedly different weekday performance characteristics in comparison to the local/shuttle routes. These include the school day routes operated for high and middle school students, the freeway flyer routes, and the University of Milwaukee UBUS routes. Together, these routes account for about 5,500 boarding passengers on weekdays, or about 4 percent of the total ridership on the transit system. All are special service routes serving important ridership markets, each route carrying less than 1,000 boarding passengers on weekdays in fall 2004. The school day routes had a total weekday ridership of about 1,300 boarding passengers and had acceptable productivity and efficiency levels. The nine freeway flyer routes carried about 2,500 boarding passengers in total with five freeway flyer routes having productivity levels below the acceptable weekday minimum level of 22 passengers per revenue bus hour. Similarly, the three UBUS routes—1,700 boarding passengers in total—all had productivity levels below the acceptable weekday minimum level. The low performance levels for the freeway flyer and UBUS routes may be attributed to bus trips operated in the nonpeak direction which puts vehicles in position to make a peak direction trip. These are essentially deadhead trips built into the service schedules and carry few, if any, passengers.

Figure 15

**SERVICE EFFICIENCY MEASURES FOR THE WEEKDAY SERVICE PROVIDED ON
THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**

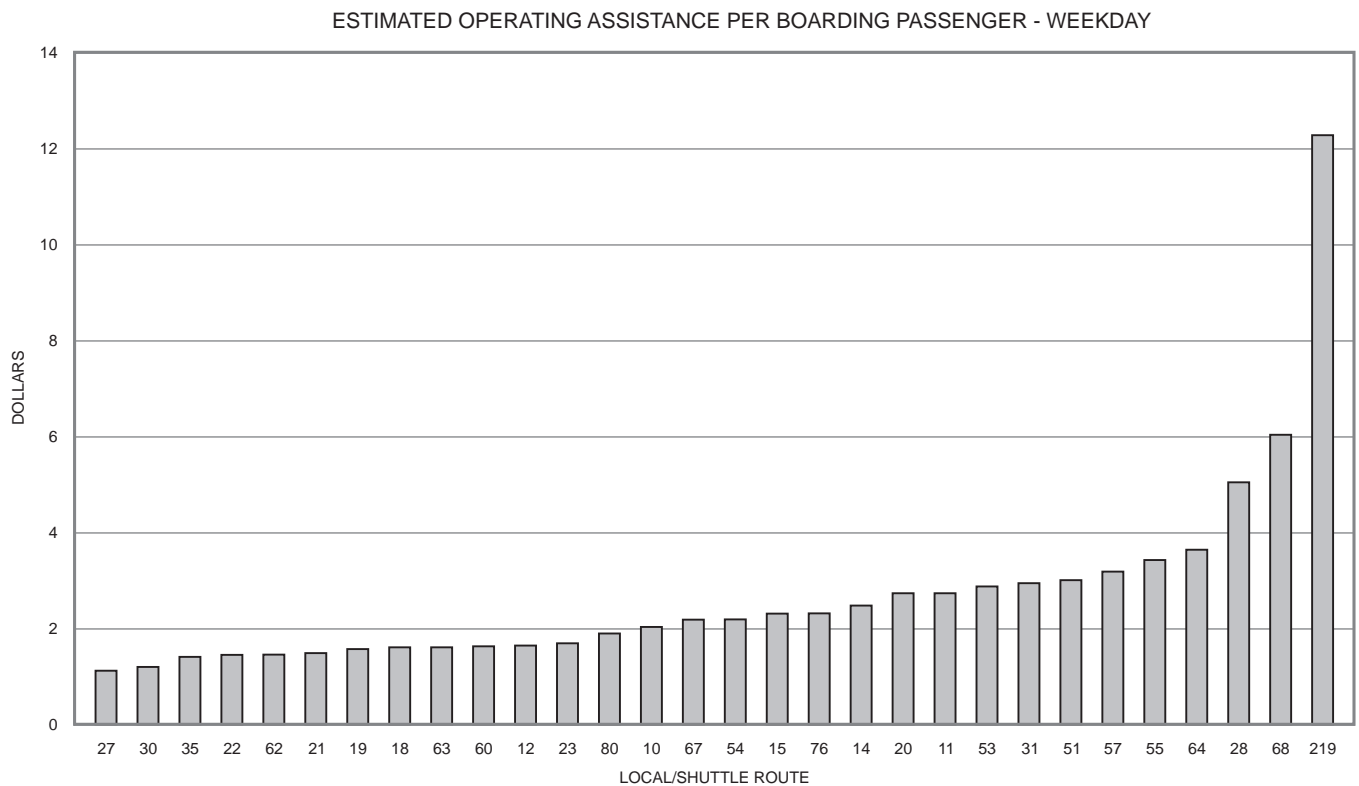
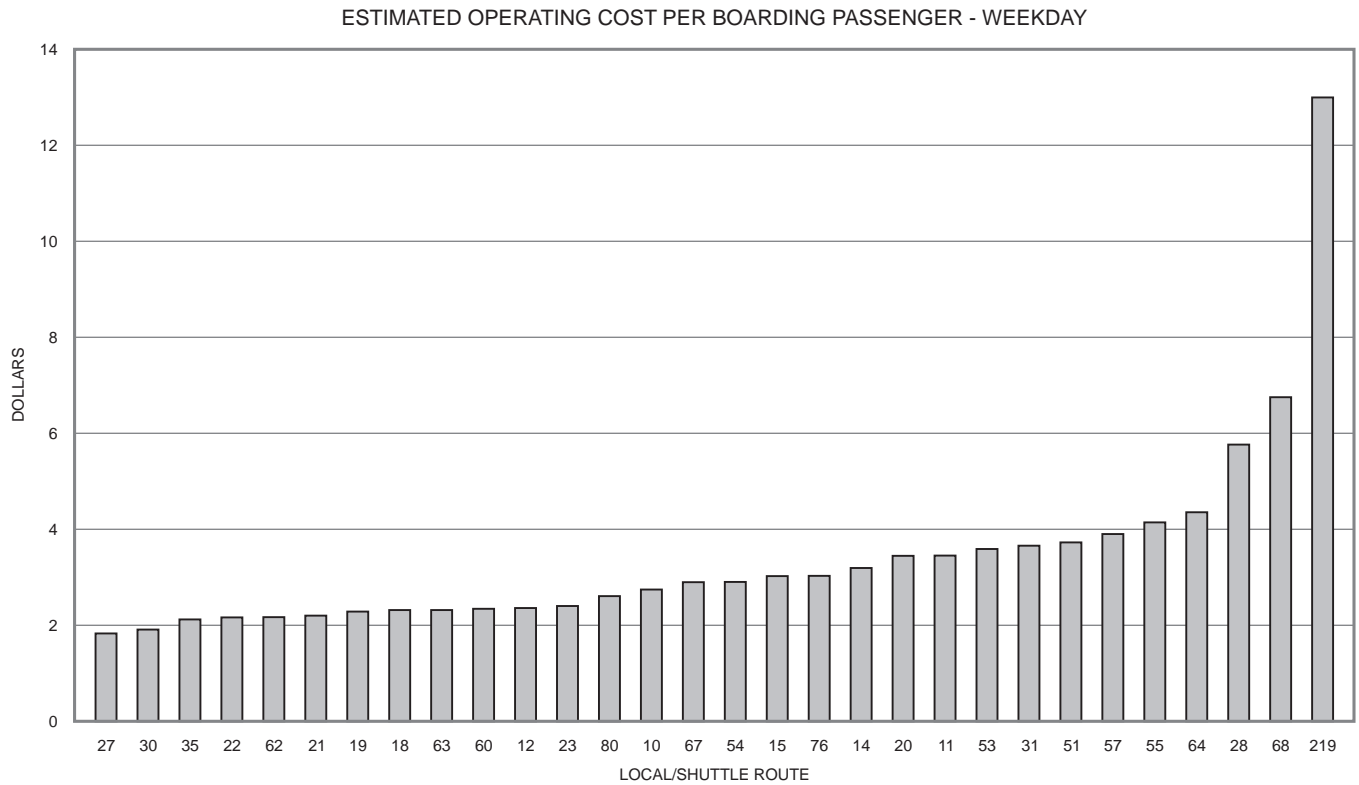
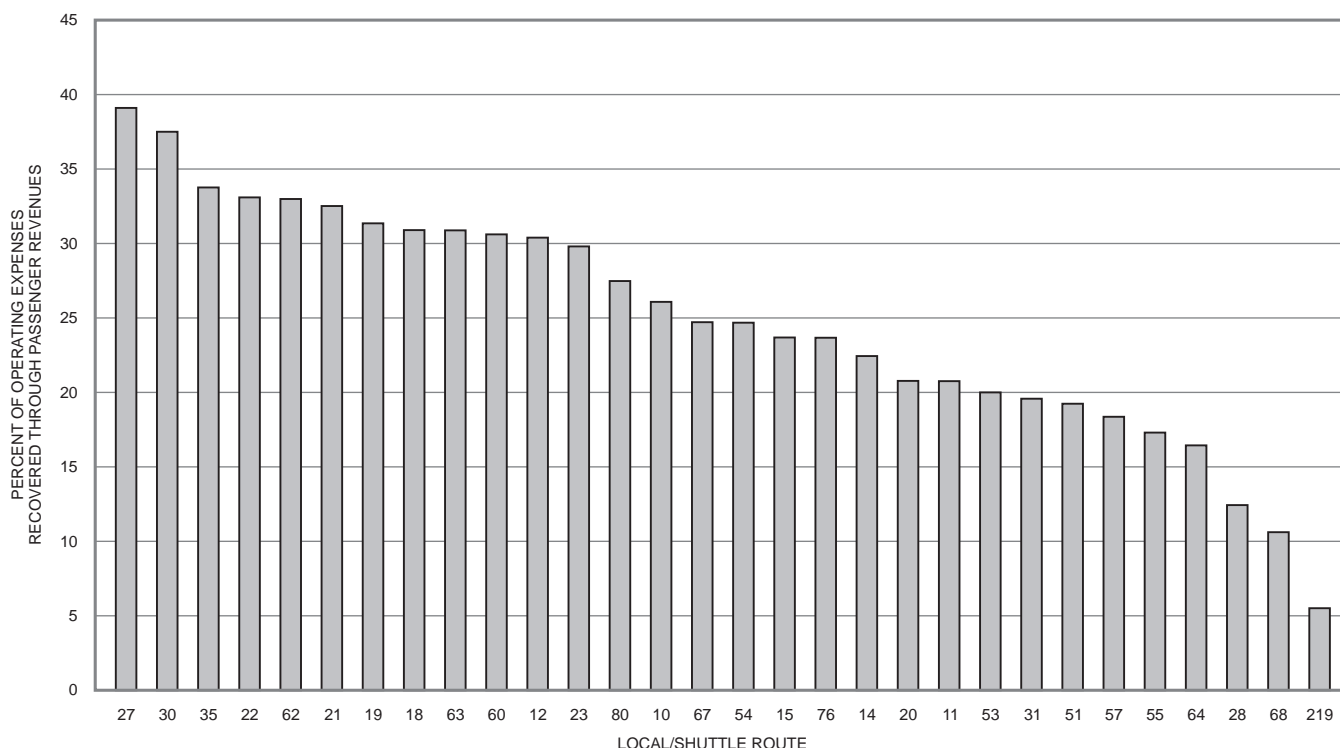


Figure 15 (continued)

ESTIMATED FAREBOX RECOVERY - WEEKDAY



Source: Milwaukee County Transit System and SEWRPC.

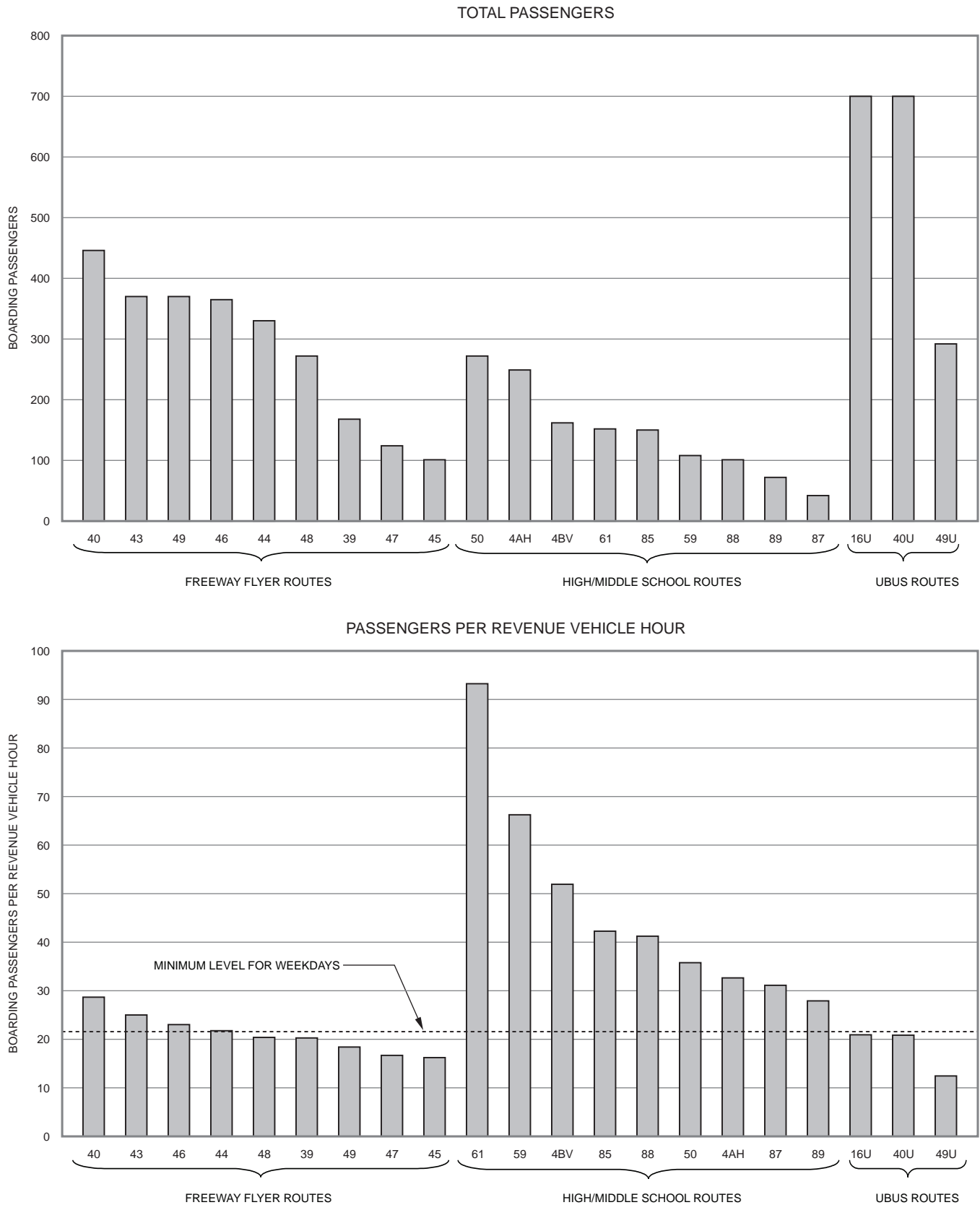
5. The 15 local routes with the highest weekday ridership and productivity levels carry the most passengers and have the highest productivity on weekends albeit in a slightly different rank order. Figure 20 displays the passengers per bus hour for the local/shuttle routes in sequential order to facilitate comparison of route productivity across weekdays, Saturdays, and Sundays. On weekends, five of the 30 local routes operated had productivity levels below the minimum acceptable level for at least one weekend day including three of the routes with unacceptable weekday levels—Route Nos. 28, 64, and 68—plus Route Nos. 11 and 57. The weekend performance of these routes should be monitored and changes reviewed where appropriate to improve their performance.

Route Segment Analysis

The weekday boarding and alighting passenger activity along each regular local route of the transit system was examined to identify the segments along each route with the highest and lowest total (boarding and alighting) passenger activity. The analysis used passenger count data for 2004 collected by the transit system using buses equipped with automated passenger counters or through manual counts. The 2004 data represented the most current data available for all routes and was supplemented with 2005 data for selected routes where detours resulted in inaccurate or incomplete passenger counts. Each local/shuttle route was divided into segments between one and two miles long with the segment break points placed at intersecting bus routes, major arterials, or geographic features, and where significant changes in total passenger activity occurred along the route. All the route segments for the local/shuttle routes were then rank ordered to identify those with the highest and lowest total passenger activity.

Figure 16

WEEKDAY RIDERSHIP AND SERVICE EFFECTIVENESS MEASURES FOR THE FREEWAY FLYER, HIGH/MIDDLE SCHOOL, AND UBUS ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004



Source: Milwaukee County Transit System and SEWRPC.

Figure 17

SERVICE EFFICIENCY MEASURES FOR THE WEEKDAY SERVICE PROVIDED ON THE FREEWAY FLYER, HIGH/MIDDLE SCHOOL, AND UBUS ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004

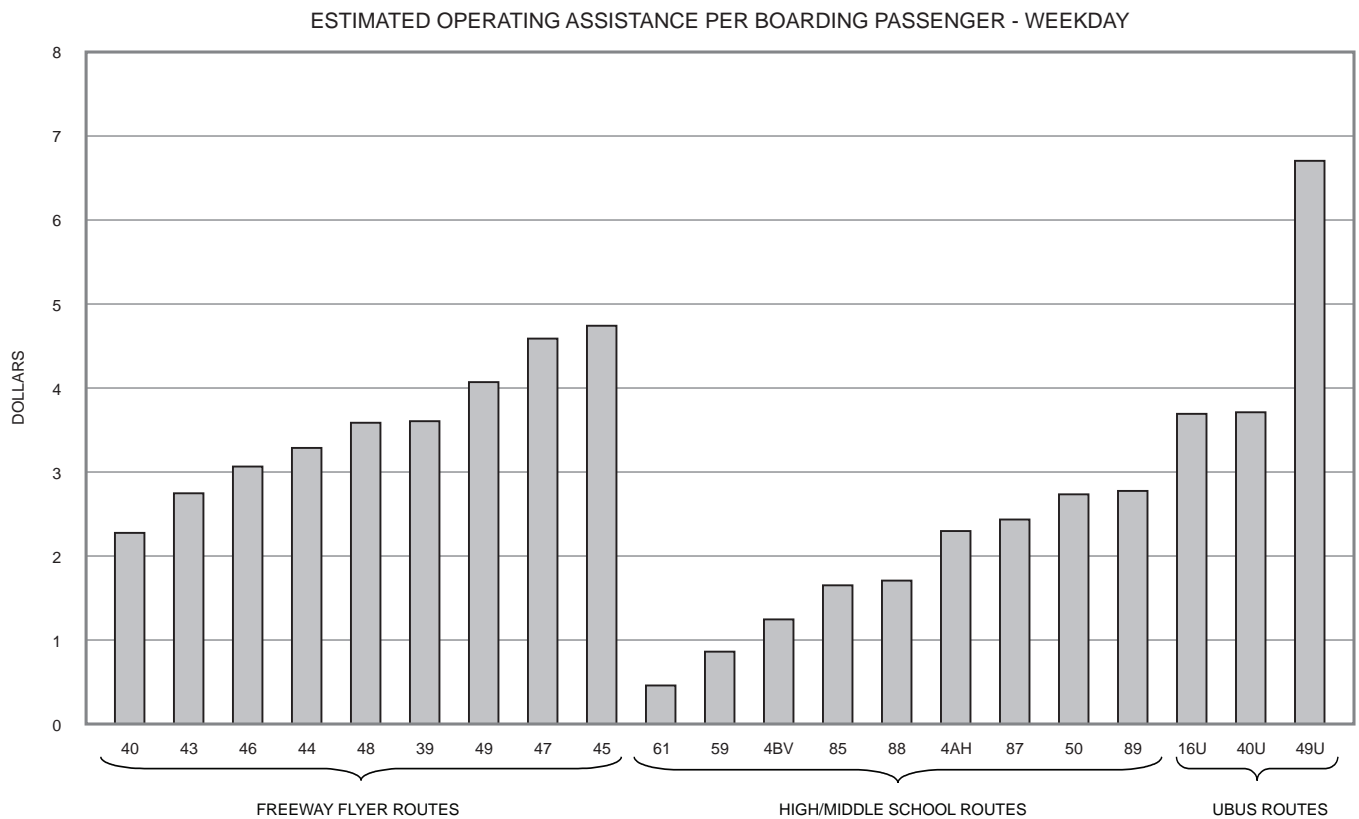
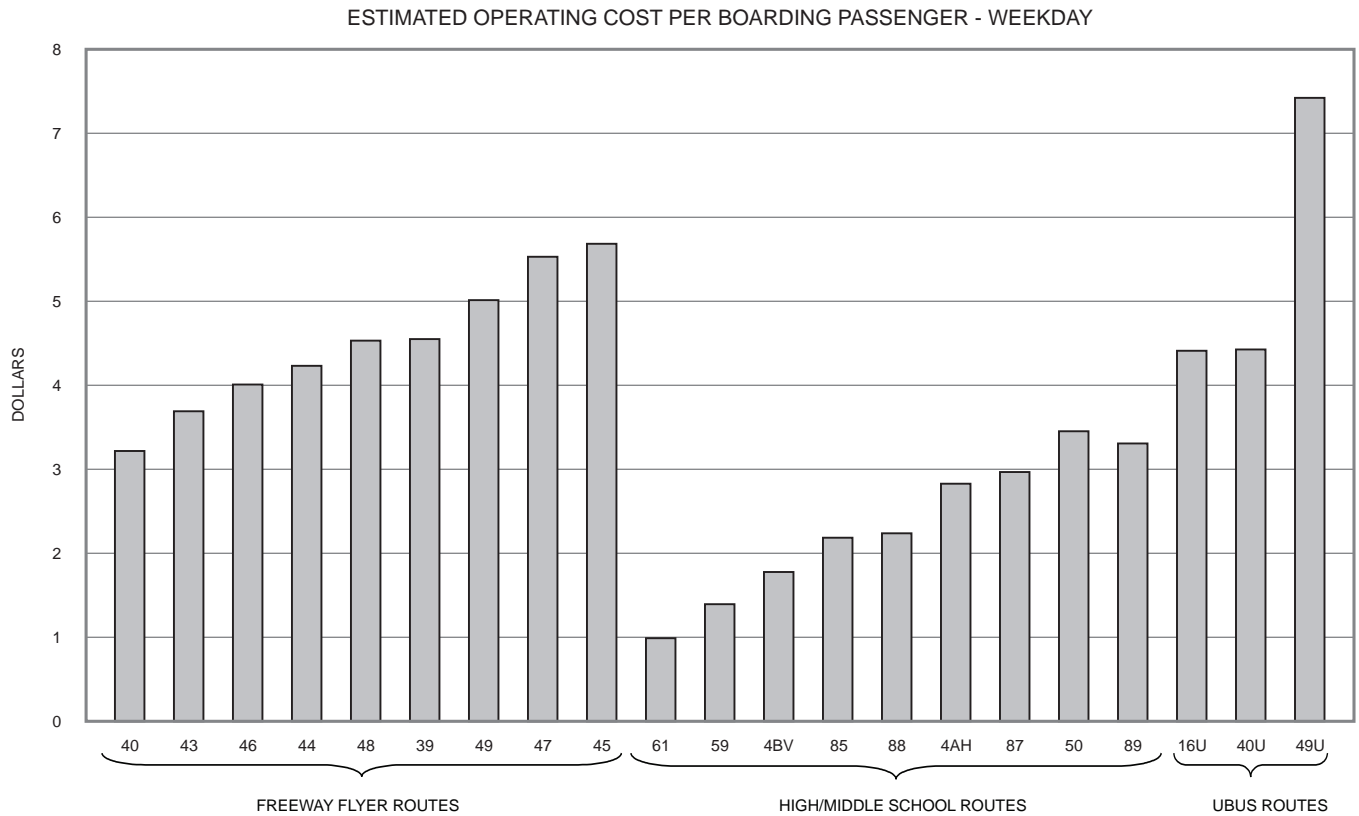
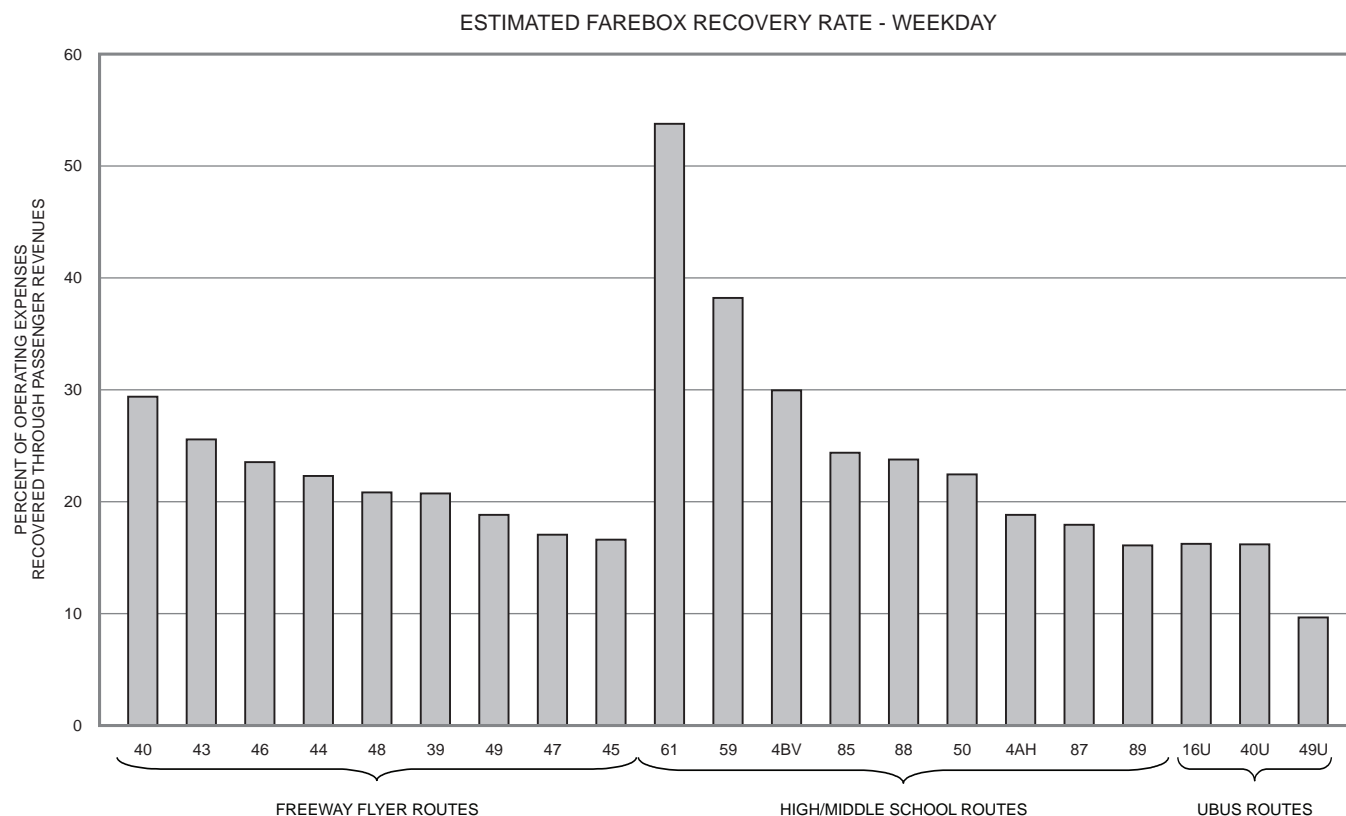


Figure 17 (continued)



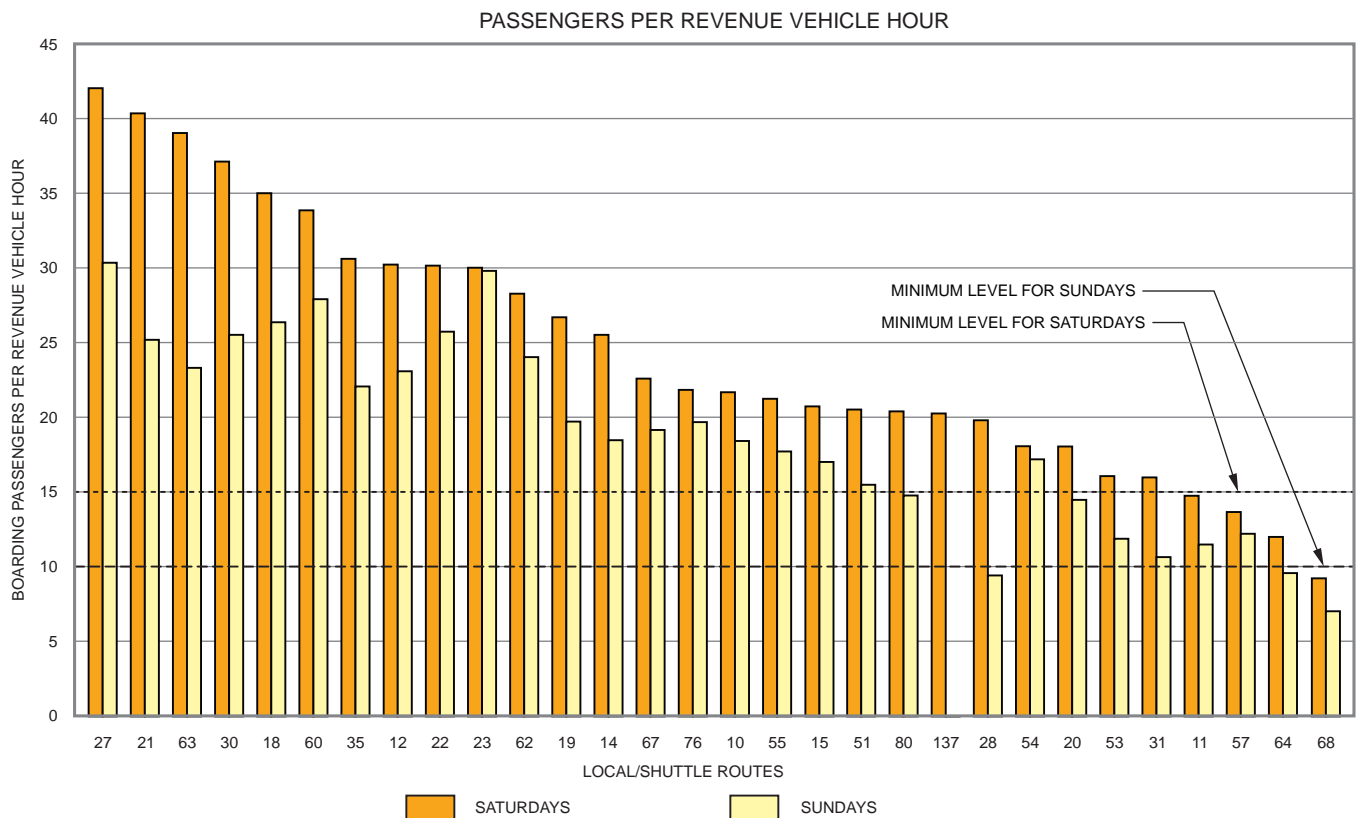
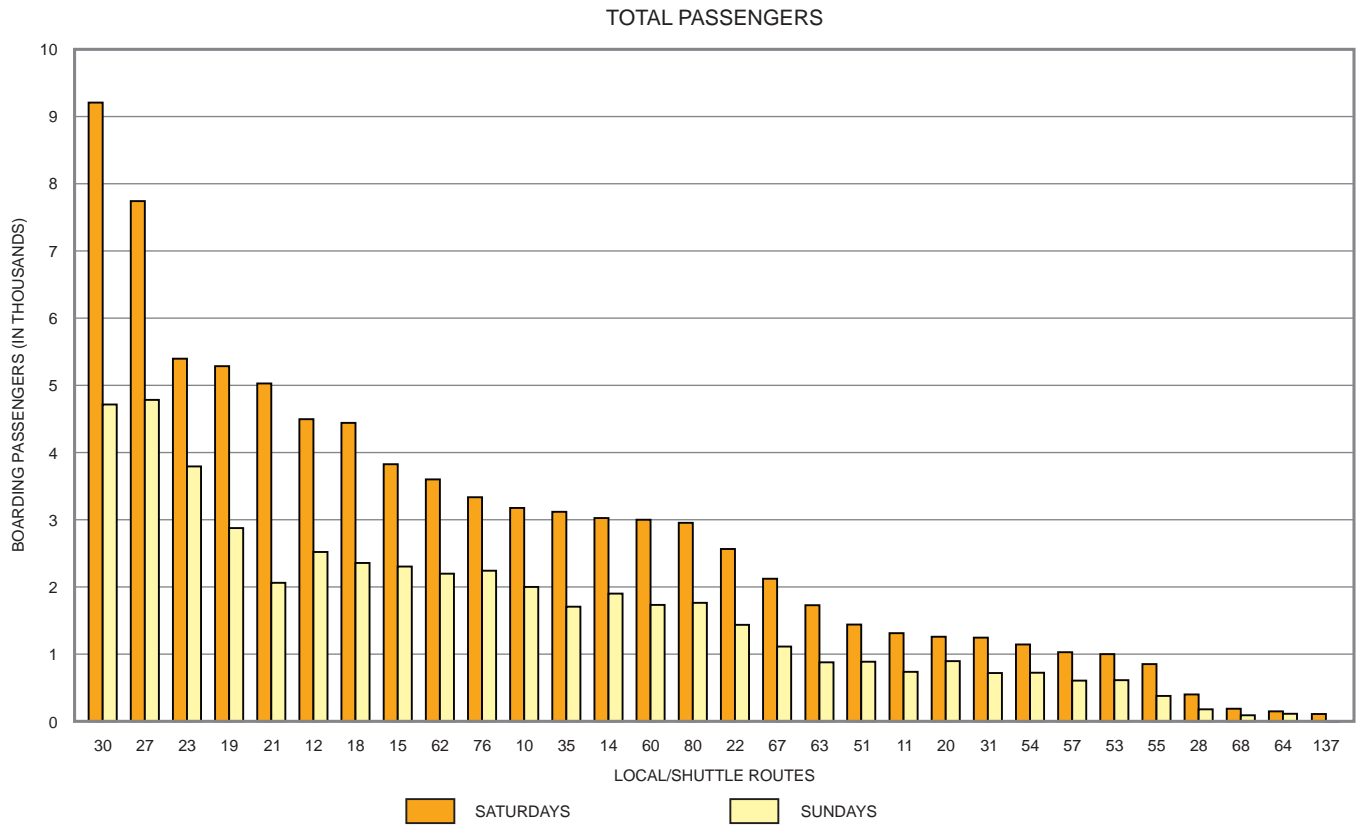
Source: Milwaukee County Transit System and SEWRPC.

The route segment analysis was not conducted for freeway flyer, UBUS, or special school day routes operated to serve high school and middle school students. The 2004 passenger count data indicate that these routes account for only about 3 percent of the weekday boarding passengers for the transit system. The low ridership levels reflect the limited weekday service provided over routes which have significantly fewer scheduled bus trips in comparison to the regular local routes of the system. The freeway flyer and UBUS routes also serve a limited number of stops in outlying areas of the County before operating nonstop to downtown Milwaukee or the University of Wisconsin-Milwaukee and have long segments with no passenger activity. Segment analysis was deemed to be inappropriate for these routes. Segment analysis was also not conducted for the special school day routes serving high schools and middle schools or for the contract service routes operated by the transit system for Waukesha and Ozaukee Counties, as the service characteristics of these routes are determined by the contracting governmental unit.

The 2004 weekday passenger counts provided by the transit system indicated there were approximately 288,000 boarding and alighting passengers, representing a ridership of about 144,000 total passengers, on the local/shuttle routes of the transit system. This ridership was distributed among the 258 route segments identified by Commission staff on the regular routes of the transit system. The individual segments for each regular route and the total passenger activity—boarding plus alighting passengers—on each route segment is shown on the maps included in Appendix C. A rank ordering of the route segments with the highest passenger activity—2,500 or more boarding and alighting passengers—and the lowest passenger activity—200 or less boarding and alighting passengers—is displayed in Figure 21. The route segments with the highest and lowest total passenger activity are shown on Map 46. The following observations may be drawn from this information:

Figure 18

**WEEKEND RIDERSHIP AND SERVICE EFFECTIVENESS MEASURES FOR THE
LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004**



Source: Milwaukee County Transit System and SEWRPC.

Figure 19

SERVICE EFFICIENCY MEASURES FOR THE WEEKEND SERVICE PROVIDED ON THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004

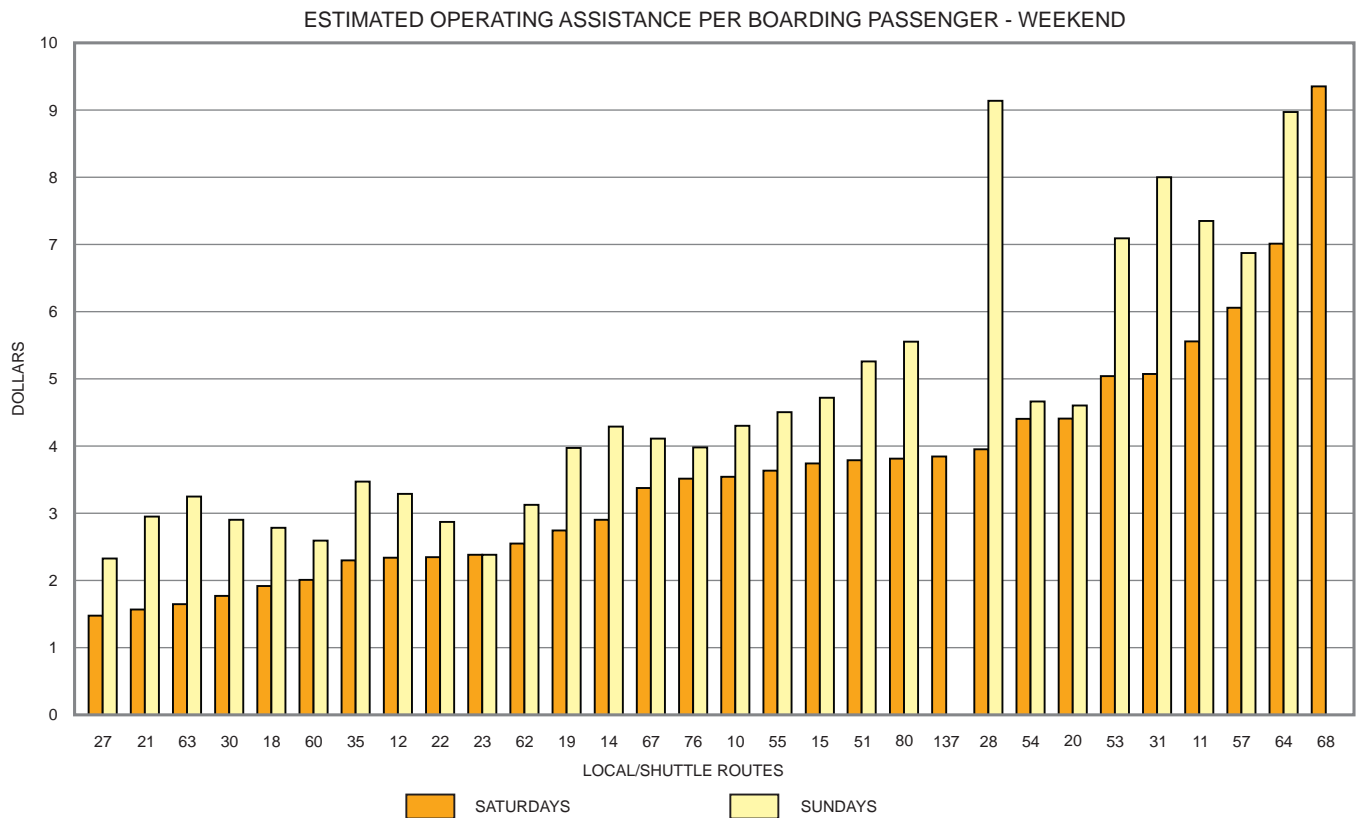
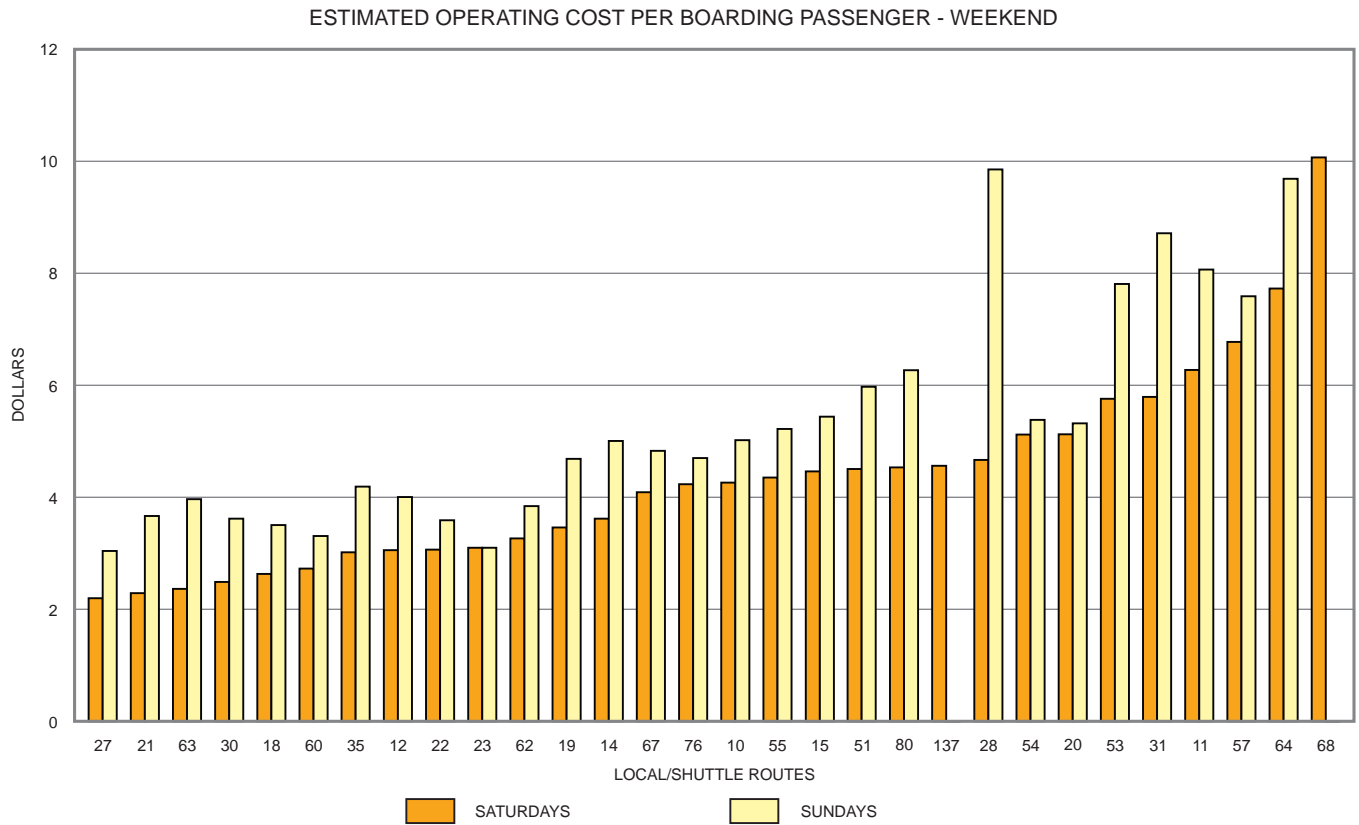
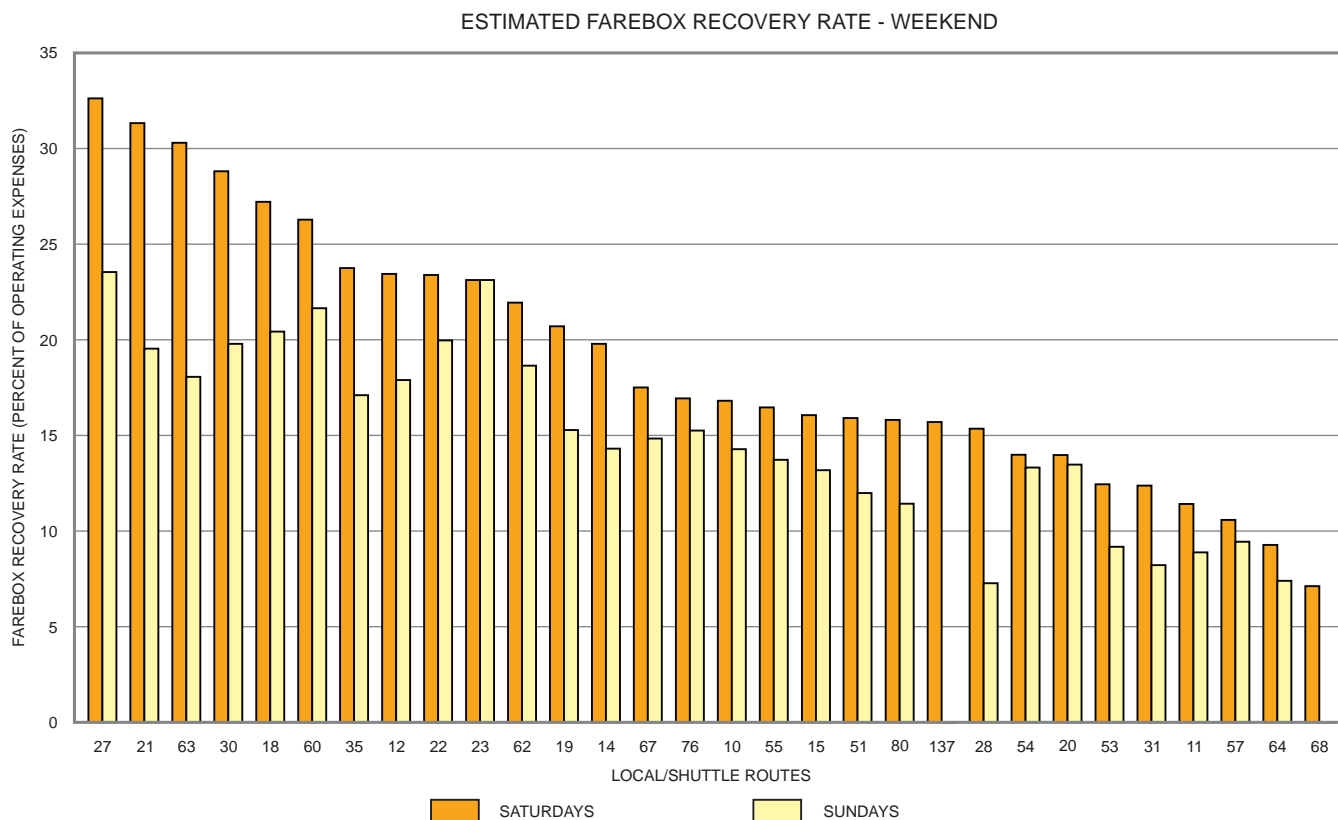


Figure 19 (continued)



Source: Milwaukee County Transit System and SEWRPC.

1. The 29 route segments with the highest passenger activity occurred on 13 different bus routes and accounted for about 98,000 boarding and alighting passengers, or about 34 percent of the total passenger activity on the regular routes of the transit system. These highest ridership segments were generally found within the Milwaukee central business district, the lower east side of the City of Milwaukee, and in the central and northwest portions of the City where significant concentrations of minority or transit-dependent persons reside. Over one-half of the route segments—16 of 29—with the highest ridership occurred on just five routes including Route Nos. 19, 22, 27, 30, and 62. Not surprisingly, the route segments were on the routes operated with the longest service hours and the lowest headways on weekdays.
2. The 32 route segments with the lowest passenger activity occurred on 15 different bus routes and accounted for about 4,000 boarding and alighting passengers, or about 1 percent of the total passenger activity on the regular routes of the system. Segments with low passenger activity on Route Nos. 23, 27, and 80 occur where these routes are extended to serve employers in industrial and office parks in southern and northern Milwaukee County. Weekday service over these segments is limited to bus trips operated at times that serve major work shift changes. The segments identified on Route Nos. 15 and 31 represent portions of the routes operated through heavily industrialized areas which generate few transit trips outside of peak hours. The segments identified on Route Nos. 12 and 28 largely represent portions of the routes operated through auto-oriented strip commercial development. The remaining segments with low passenger activity serve residential areas outside of central Milwaukee County without significant concentrations of minority or transit-dependent persons. A total of 15 of the 32 segments with the lowest ridership occurred on just three routes including Route Nos. 15, 28, and 68.

Figure 20

**PASSENGERS PER REVENUE VEHICLE HOUR FOR MILWAUKEE COUNTY TRANSIT
SYSTEM LOCAL/SHUTTLE ROUTES IN ASCENDING ROUTE NUMBER ORDER: FALL 2004**

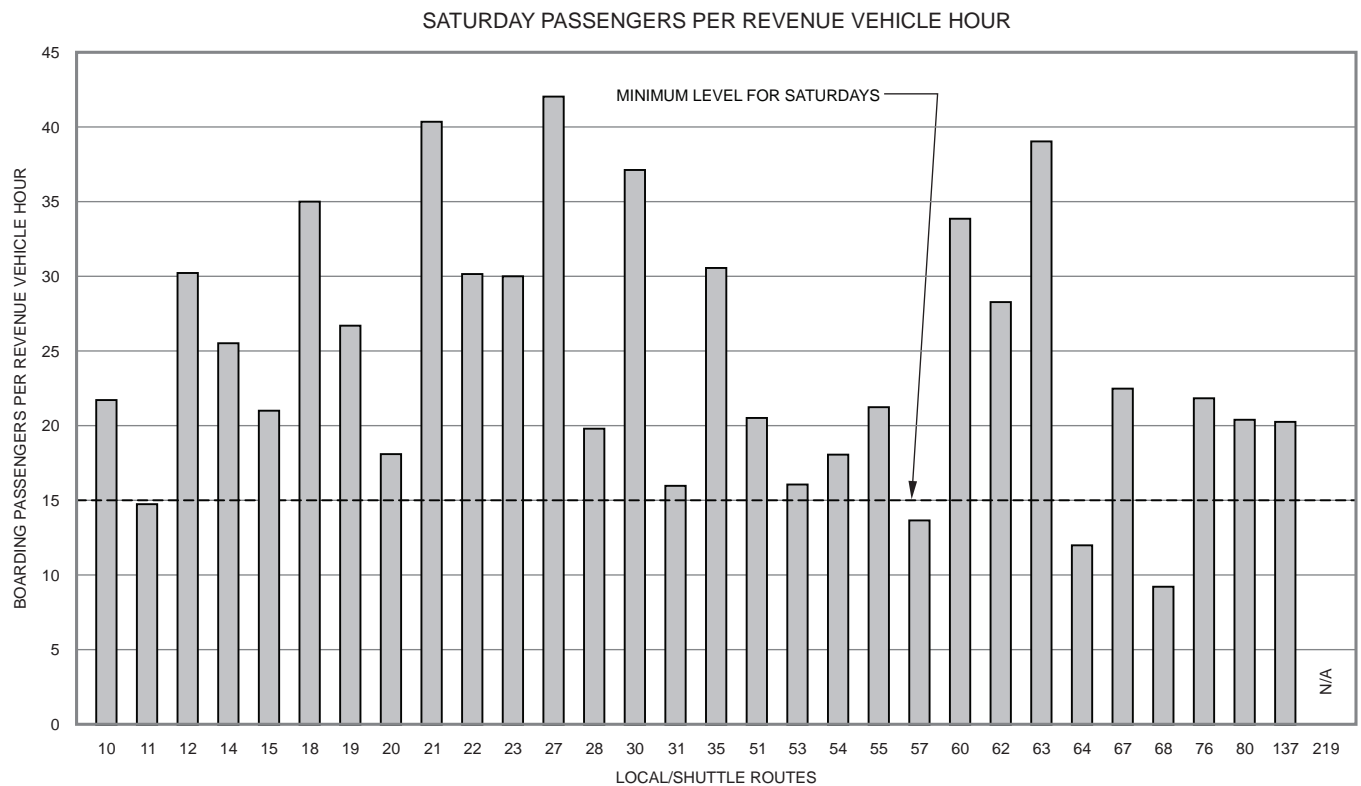
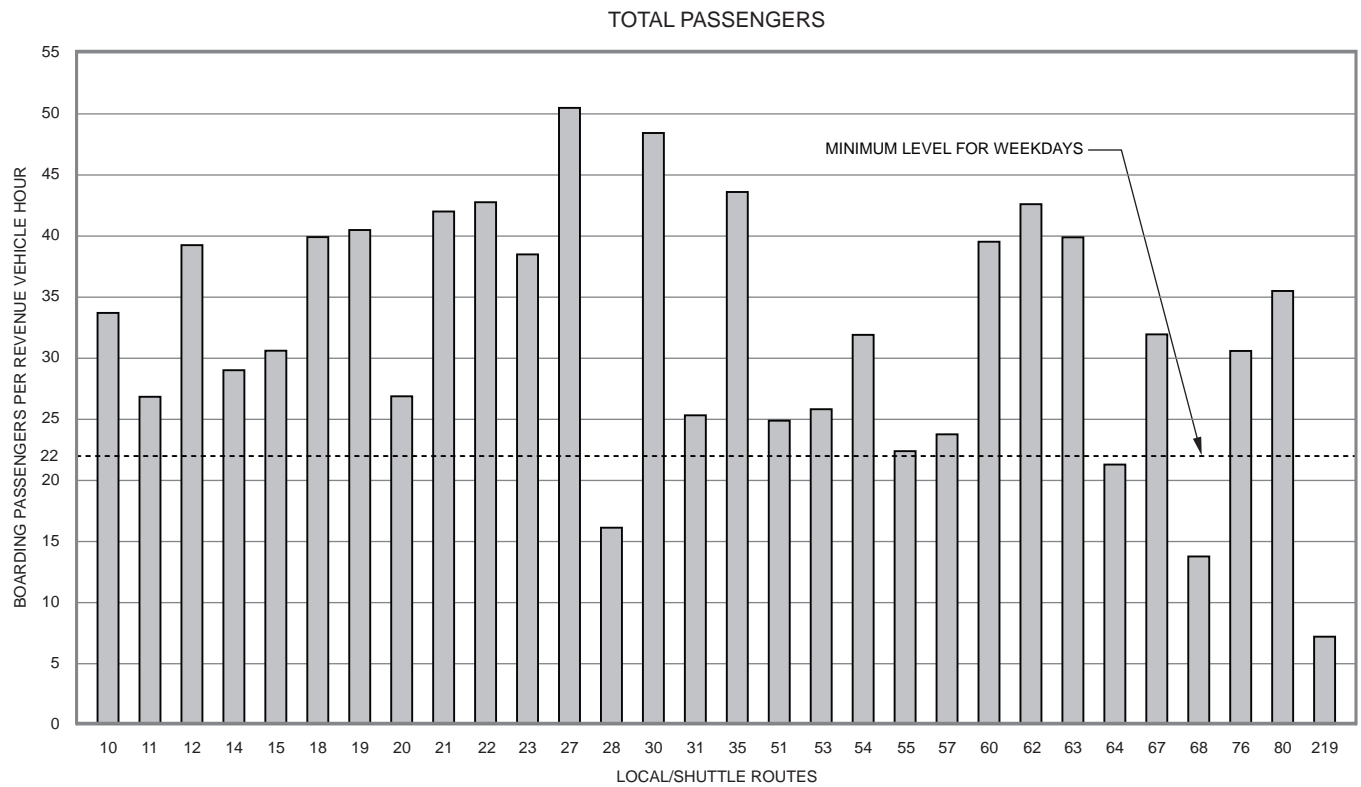
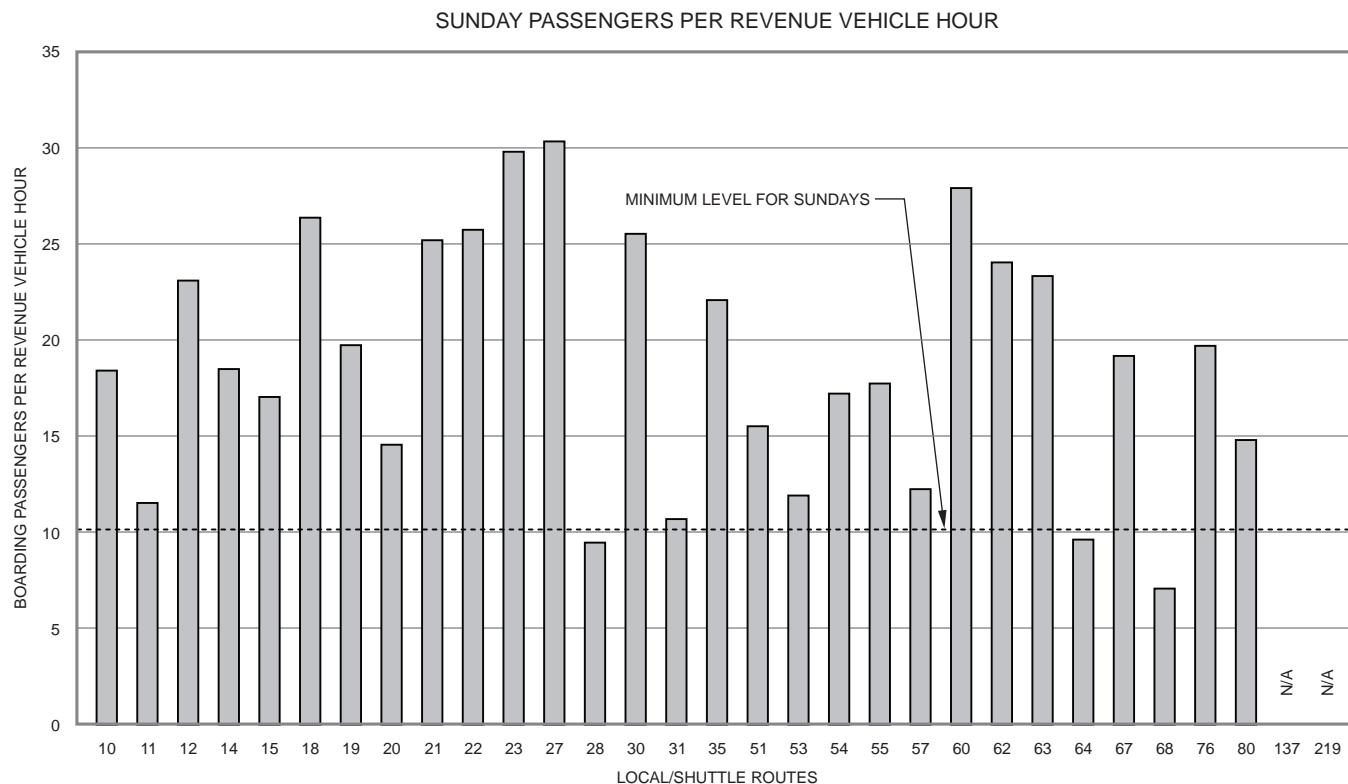


Figure 20 (continued)



Source: Milwaukee County Transit System and SEWRPC.

ASSESSMENT OF UNMET TRANSIT SERVICE NEEDS

In the preceding sections of this chapter, the performance of the Milwaukee County Transit System was identified with respect to the extent its routes served the general and transit-dependent population, employment, and the major activity centers in Milwaukee County and also the extent to which job concentrations and major activity centers in the adjacent counties could be accessed through other connecting transit services in the Milwaukee area. The quantity and quality of the service provided over the routes of the system was also evaluated with respect to service hours, headways, proportion of bus trips meeting scheduled times, passenger loads, and transit travel times. This section of the report draws together the findings of these evaluations to identify the transit service needs of Milwaukee County residents which are not being met at all, or are not being met well, by the existing transit system. The unmet needs fall into specific areas including service area, hours of operation, service frequency or headways, and transit travel times. The unmet needs are discussed below for travel both within Milwaukee County and between Milwaukee County and surrounding southeastern Wisconsin counties.

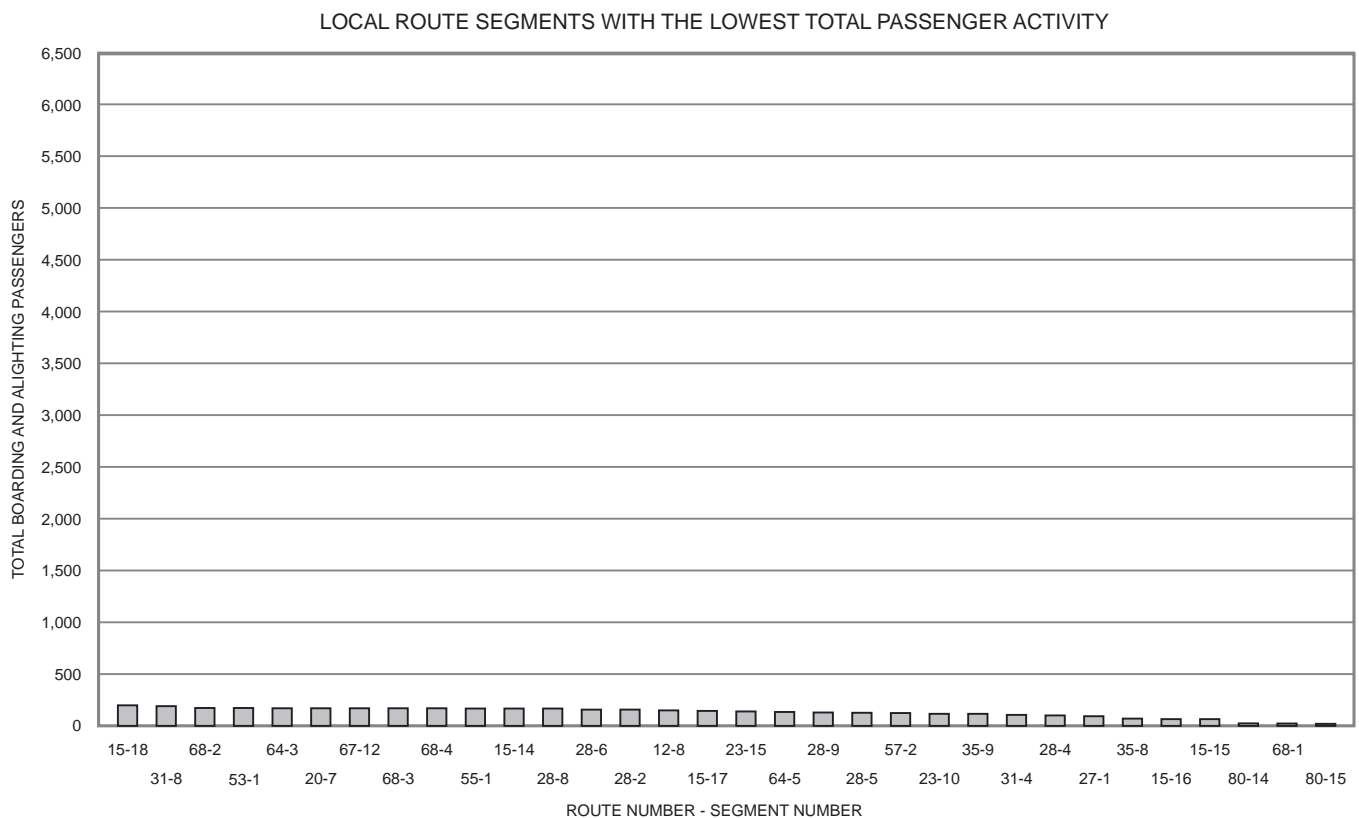
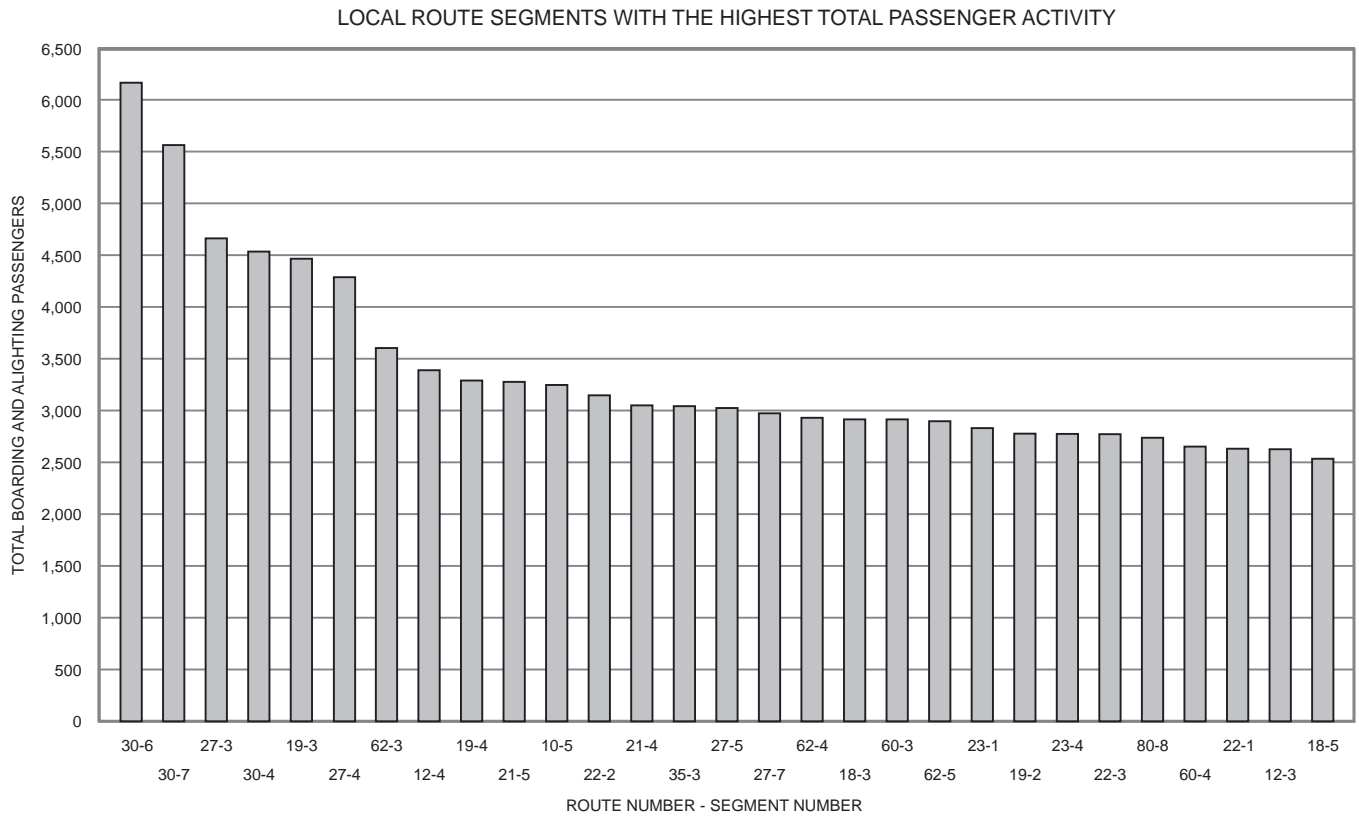
Unmet Needs for Transit Travel Within Milwaukee County

Service Area and Hours

Map 47 identifies areas within Milwaukee County with transit supportive residential and employment densities or major activity centers that are not served at all by the routes of the transit system or where service is provided on weekdays for less than 20 hours of the day and does not permit travel for second or third work shifts. Problem areas in the County include the western, southern, northwest and northeast portions of the County.

Figure 21

**SEGMENTS OF THE LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM
WITH THE HIGHEST AND LOWEST TOTAL PASSENGER ACTIVITY ON WEEKDAYS: FALL 2004**



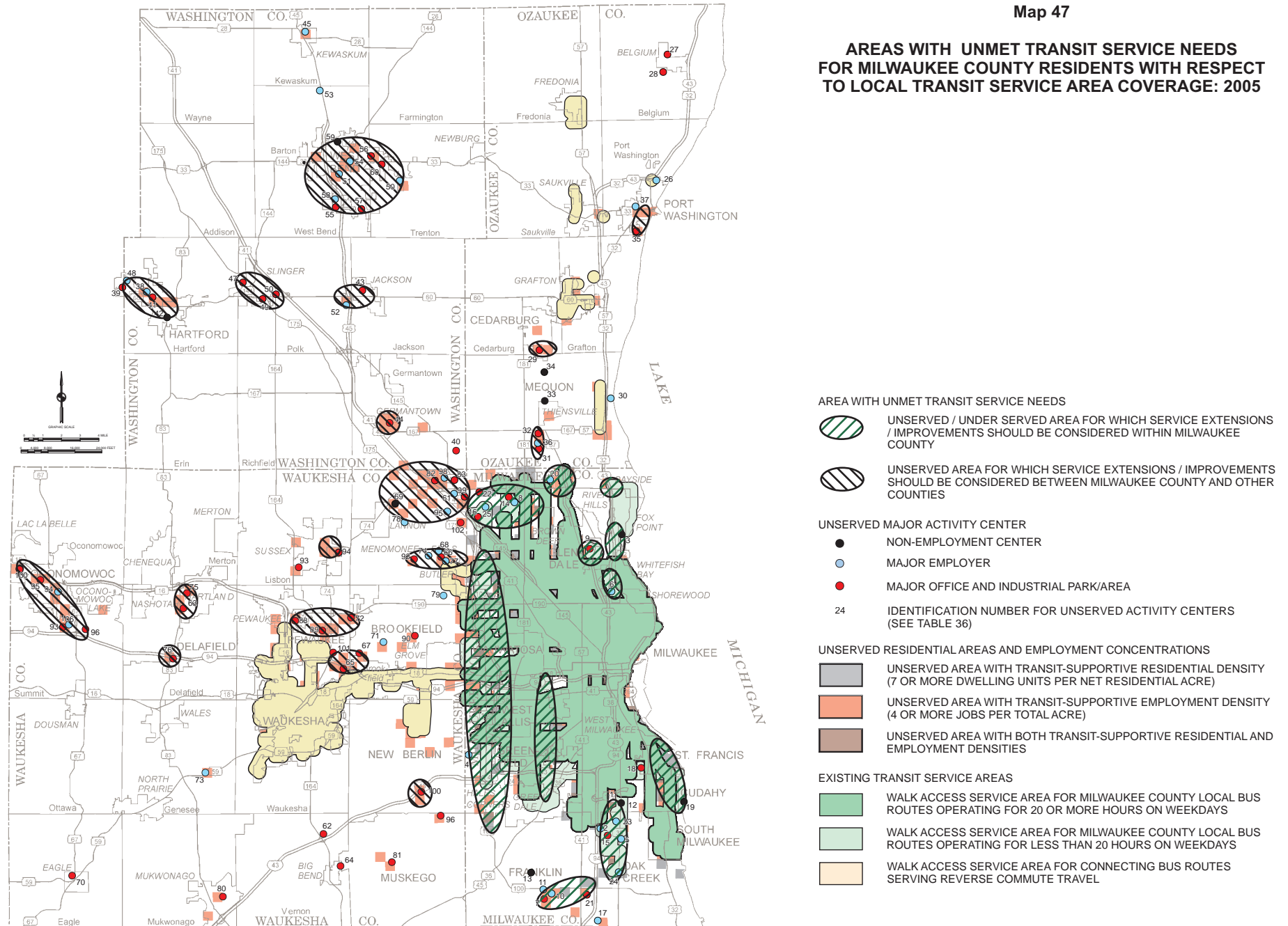
Source: Milwaukee County Transit System and SEWRPC.

**LOCAL ROUTE SEGMENTS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM
WITH THE HIGHEST AND LOWEST WEEKDAY PASSENGER ACTIVITY: FALL 2004**



Map 47

AREAS WITH UNMET TRANSIT SERVICE NEEDS FOR MILWAUKEE COUNTY RESIDENTS WITH RESPECT TO LOCAL TRANSIT SERVICE AREA COVERAGE: 2005



Source: SEWRPC.

Map 48 displays the specific local and shuttle route segments over which less than 20 hours of service is provided on weekdays or on weekends. Of most concern are the local route segments over which less than 16 hours of service is provided as these routes would clearly not serve the starting and ending times of second and third shifts. The current service hours for freeway flyer routes (see Map 41) provide for only peak period weekday service between outlying areas and the Milwaukee central business district with no midday or evening service.

Service Frequency

Map 49 displays the areas in the County where existing operating headways of the Milwaukee County Transit System provide for convenient service. The transit system relies upon a grid system of local routes to serve the County population, jobs, and activity centers. Under this type of route system, transfers between one or more routes and attendant waits for two or more buses are generally required to complete a trip. Service frequency directly affects the times spent waiting for each bus, establishing the convenience of service and resultant service use. Desirable transit service frequencies providing for convenient service for transit riders under a grid routing system are considered to be 10 minutes or less during peak periods and 20 minutes or less during off-peak periods. Map 48 shows that on weekdays, only the central portion of the County currently has desirable headways for local and shuttle routes. None of the freeway flyer routes operate with desirable headways (see Map 42). Most of the County is served by routes for which improvements in service frequency should be considered.

Travel Time

The travel time required by transit for Milwaukee County residents to access employment and other activity centers is lengthy and definitely not as convenient as travel by automobile. This is the result of the following:

- The almost exclusive use of local bus routes to provide transit service. Local routes are operated with frequent stops in mixed traffic.
- The lack of use of transportation systems management actions such as traffic signal priority to extend green time for buses at signalized intersections and the use of reserved lanes for buses on congested major arterial streets during peak hours, both of which can work effectively to increase bus travel speeds.
- Service cuts enacted since 2000 reduced service frequency or eliminated route segments or entire routes. As already noted, the grid system of routes operated by the Milwaukee County Transit System needs good service frequencies to make transfers between routes convenient and keep waiting and overall travel times low. The higher headways generated by the recent service cuts lengthened wait times particularly during off-peak periods. Eliminating service over some local route segments, either entirely or during selected service periods, has also increased travel times by requiring passengers who continue to use transit to travel a longer distance to get to or from a bus stop.

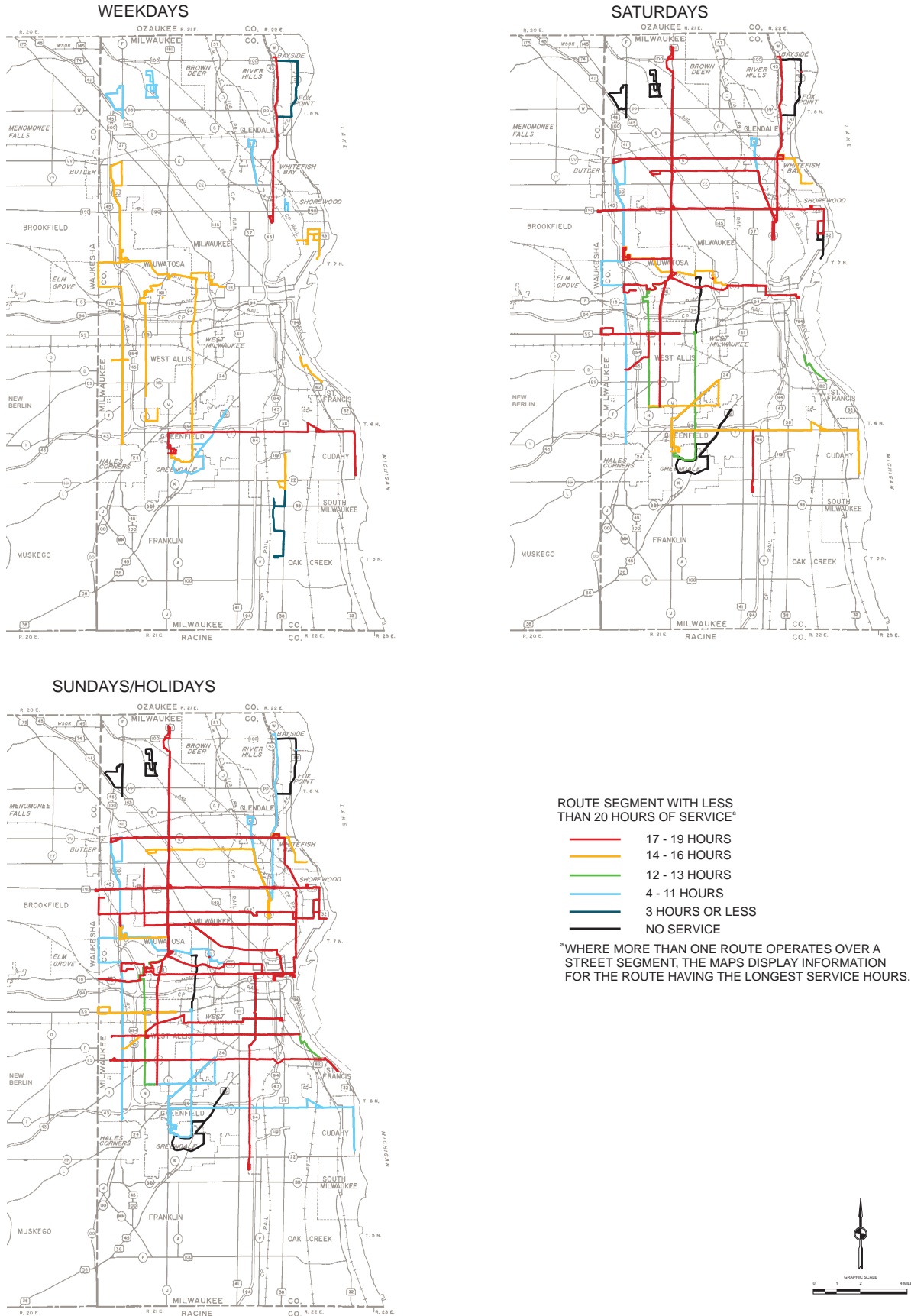
In order to maintain its existing ridership base and attract new transit riders, improvements which would increase operating speeds are needed to reduce transit travel times. Such improvements could include: increasing the frequency of service on Milwaukee County routes by restoring operating headways that have been increased and identifying additional headway reductions throughout the system; selectively reinstating routes and services that have been eliminated by the transit system in the recent past; initiating or reinstituting express routes with limited (one-quarter mile) stop spacing to replace local bus service in major travel corridors; and implementing reserved bus lanes and traffic signal priority measures in conjunction with the express bus services and local routes with improved service frequencies.

Unmet Needs for Transit Travel Outside Milwaukee County

Milwaukee County residents also have unmet needs for travel by transit outside the County that stem from not just how service is provided by the Milwaukee County Transit System, but also from how the other public transit services are provided in the greater Milwaukee area and how all the transit services function together to serve regional travel, in particular for work commuting. These needs include lack of bus service, limited hours of operation and service frequency, lengthy transit travel times, and fares. These deficiencies may be summarized as follows:

Map 48

LOCAL/SHUTTLE ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM CONTRIBUTING TO UNMET TRANSIT SERVICE NEEDS WITH RESPECT TO SERVICE HOURS: FALL 2004

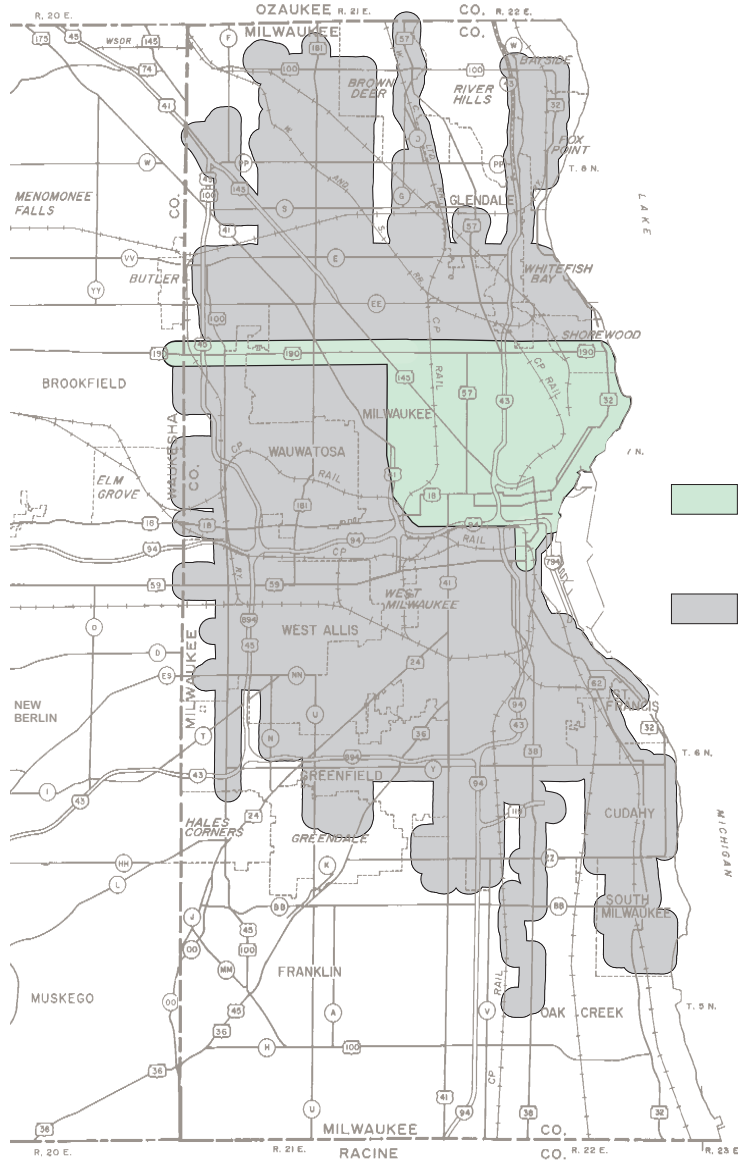


Map 49

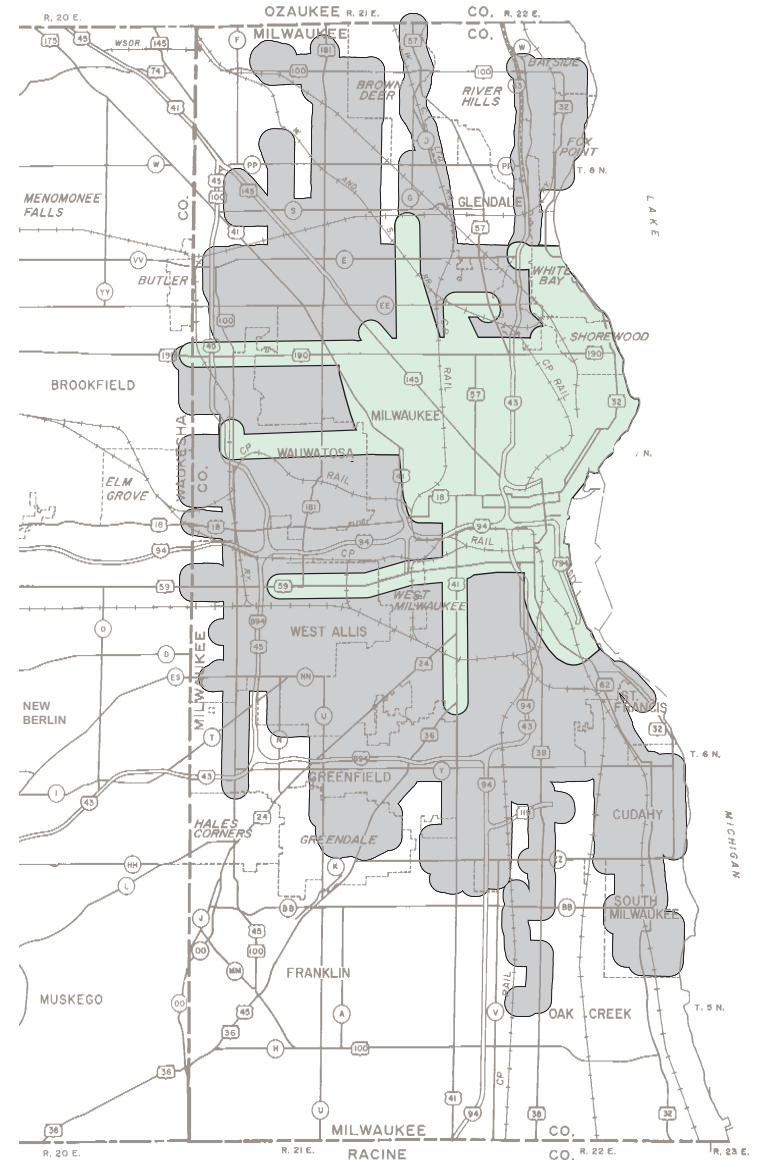
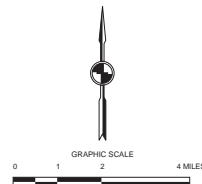
**AREAS WITH UNMET TRANSIT SERVICE NEEDS WITH RESPECT TO WEEKDAY
HEADWAYS ON MILWAUKEE COUNTY TRANSIT SYSTEM LOCAL/SHUTTLE BUS ROUTES: FALL 2004**

**MORNING OR AFTERNOON PEAK PERIODS
(6:00 A.M.-8:59 A.M. OR 3:00 P.M.-5:59 P.M.)**

**MIDDAY OR EARLY EVENING OFF-PEAK PERIODS
(9:00 A.M.-2:59 P.M. OR 6:00 P.M.-9:59 P.M.)**



- SERVICE AREA FOR ROUTES WITH HEADWAYS GENERALLY 10 MINUTES OR LESS DURING PEAK PERIODS AND 20 MINUTES OR LESS DURING OFF-PEAK PERIODS
- AREA WHERE HEADWAY IMPROVEMENTS SHOULD BE CONSIDERED



Source: Milwaukee County Transit System and SEWRPC.

- There are significant areas outside Milwaukee County with major activity centers and significant job concentrations that do not have public transit service connecting to Milwaukee County residents including in the Mequon, Cedarburg, and Port Washington areas in Ozaukee County; in the Germantown, Hartford-Slinger, Jackson, and West Bend areas in Washington County; and in the Menomonee Falls, Sussex, New Berlin, Pewaukee, Hartland, Delafield, and Oconomowoc-Summit areas in Waukesha County.
- For the most part, the transit services available to serve reverse commute travel by Milwaukee County residents to jobs and activity centers in the surrounding counties have limited weekday service hours and are operated with infrequent service. This includes Milwaukee County Transit System Route No. 143 providing contract service for Ozaukee County to employers in the Grafton, Saukville, Port Washington, and Fredonia areas; Milwaukee County Transit System Route Nos. 8 and 9 providing contract service for Waukesha County to employers in the Butler-Menomonee Falls area and to Quad Graphics in Sussex; Waukesha Metro Transit Route No. 218 providing contract service for Waukesha County to employers in the New Berlin Industrial Park; Wisconsin Coach Lines, Inc., Route No. 901 providing contract service for Waukesha County to employers and businesses in the Bluemound Road corridor and connecting with local bus routes serving the corridor, the New Berlin Industrial Park, and the City of Waukesha; and the Wisconsin Coach Lines, Inc., Kenosha-Racine-Milwaukee route providing contract service for the City of Racine and connecting with the local bus routes operated by both the Kenosha and Racine transit systems.
- Travel to locations in the surrounding counties is often lengthy due to the need for Milwaukee County residents to rely on local bus routes for half or more of their trip. While connecting rapid bus routes can be used for part of a trip to some job sites in Ozaukee and Waukesha Counties, Milwaukee County local bus routes must be used to reach the connecting bus services. In many cases, both the Milwaukee County and connecting bus services are provided over local routes such as by various Milwaukee County Transit System local routes which connect with Route No. 10 in Milwaukee County before it extends to the Bluemound Road corridor where it also connects with Waukesha Metro Transit local routes serving the corridor and the New Berlin Industrial Park, and by Route Nos. 62 and 63 which connect with Route No. 9 serving the Butler-Menomonee Falls area. The operation of local routes in mixed traffic with frequent stops results in low operating speeds and long travel times particularly for these long trips made between counties.
- Information on transit services is not shared among the transit operators in the surrounding counties, and transit fares are not coordinated among the different transit operators. Milwaukee County residents may have difficulties determining how to make transit connections in surrounding counties because of the lack of coordinated information among customer service representatives at each transit agency. Moreover, even when riders are able to find out what transfer arrangements are available, the discounts and transfer arrangements are not uniform among all the transit operators. Passengers transferring between Milwaukee County Transit System Route No. 10 and Waukesha Metro Transit Route Nos. 1 or 218 are charged \$0.25 for the transfer at the Brookfield Square Shopping Center. If passengers need to use another Waukesha Metro Transit route to complete their trip, an additional \$0.25 is charged to transfer from Route No. 1 to the other route in downtown Waukesha. Passengers transferring from Milwaukee County Transit System routes to Route No. 143 serving Ozaukee County are charged \$0.75 but there is no transfer charge for a trip made in the opposite direction. Passengers transferring between Milwaukee County Transit System routes and the Wisconsin Coach Lines, Inc. routes serving Waukesha County or the Cities of Racine and Kenosha receive a \$0.50 discount off the appropriate cash fare for their trip. These various transfer fares may be confusing to system riders.

It is the policy of Milwaukee County not to provide any transit services in the surrounding counties unless it receives financial assistance for the service. This includes the transit services that would allow Milwaukee County residents to access job sites and activity centers in the other counties. The transit services that exist today for intercounty transit travel by Milwaukee County residents are sponsored and funded by the surrounding counties.

RIDERSHIP AND FINANCIAL PERFORMANCE - PEER GROUP COMPARISON

This section of the report presents a comparison of the performance of the Milwaukee County Transit System to similar transit systems in the United States. This comparison, or peer review, was conducted as part of a management performance audit of the Milwaukee County Transit System that was completed by the Wisconsin Department of Transportation (WisDOT) in 2003.²

Peer Group Comparison

For the WisDOT transit system management performance audit, the service and financial indicators for the Milwaukee County Transit System were compared to those for 13 other similar systems in the United States. The peer transit systems used all operated within metropolitan areas with populations similar to that for the Milwaukee area, were located in a northern climate, and had a similar bus fleet size. Ridership, service and expenditure data for the year 2000 for each peer system was obtained from the National Transit Database (NTD) maintained by the U.S. Department of Transportation Federal Transit Administration. Table 43 presents the ridership, service, and cost characteristics of the Milwaukee County Transit System and the other peer systems as taken from the NTD data. All the peer systems were similar with respect to overall expenses, passenger revenue, passenger trips and vehicle miles of service. Within this group, the Milwaukee County Transit System ranks between fourth and eighth in most characteristics.

The WisDOT performance audit used two analysis techniques: a peer group analysis to identify the Milwaukee County Transit System's performance relative to the other peer systems for a single point in time; and a trend analysis for the period 1995-2000 to compare the trends in the performance of the Milwaukee County Transit System relative to the other peer systems. The key performance measures for the Milwaukee County Transit System and the peer systems are presented in Table 44. The measures shown are those which are included in the objectives, principles and standards for this study.

The WisDOT performance audit found that the Milwaukee County Transit System performed well in comparison to its peers in terms of ridership, service effectiveness, service efficiency, and cost effectiveness. The key findings from the peer group comparisons are summarized as follows:

1. Ridership and service levels:

The Milwaukee County Transit System performed well with respect to ridership compared to its peer systems. Although the system ranks eighth in service area population, it ranks second in total ridership. The system's ridership also increased at a higher rate (4.5 percent annually) than for the peer systems' (0.8 percent annually) from 1995 to 2000. During the same period, the Milwaukee County Transit System and the peer systems modestly increased revenue miles and revenue hours of service.

2. Service efficiency:

In comparison to the peer systems, the Milwaukee County Transit System provides service efficiently. The operating expenses per revenue mile for the Milwaukee County Transit System placed it in the middle of the peer systems in 2000. However, this measure for the County transit system increased by only 0.8 percent annually since 1995, in contrast to average for the peer systems which experienced an average annual increase of 3.4 percent for operating expenses per revenue mile. Operating expenses per revenue hour for the County transit system was third among the peer systems in 2000, and increased at a lower annual rate than the peer systems.

²See Wisconsin Department of Transportation, Transit System Management Performance Audit of the Milwaukee County Transit System, Performance Audit Summary, Abrams-Cherwony and Associates, April 2003.

Table 43

**CHARACTERISTICS OF PEER SYSTEMS^a FOR THE
MILWAUKEE COUNTY TRANSIT SYSTEM AND NATIONAL PEER GROUP: 2000**

Transit System	Service Area Population	Size in Square Miles	Population per Square Mile	Annual Passenger Trips ^b	Vehicles Operated in Peak Service	Annual Revenue Miles	Annual Revenue Hours	Operating Expenses	Operating Revenue
Milwaukee County Transit System	990,700	243	4,077	70,547,811	461	20,123,056	1,550,987	\$107,652,189	\$36,373,989
Alameda-Contra Costa Transit (Oakland, California)	1,409,983	364	3,873	67,632,612	606	21,518,146	1,811,642	\$179,054,321	\$44,183,065
Bi-State Development Agency (St. Louis, Missouri)	1,924,726	2,354	818	37,535,636	504	18,717,494	1,227,842	\$110,147,588	\$17,754,385
Central Ohio Transit Authority (Columbus, Ohio)	961,437	543	1,771	18,727,260	277	8,976,194	723,456	\$62,051,579	\$13,056,468
Detroit Department of Transportation (Detroit, Michigan)	1,065,567	144	7,400	43,886,980	401	17,320,551	1,511,438	\$151,037,792	\$27,643,748
Greater Cleveland Regional Transit Authority (Cleveland, Ohio)	1,412,140	458	3,083	51,591,504	619	23,523,043	1,880,675	\$164,215,482	\$29,612,991
Indianapolis Public Transportation Corporation (Indianapolis, Indiana)	823,424	417	1,975	11,462,255	112	6,141,179	432,858	\$30,017,556	\$6,819,390
Kansas City Area Transportation Authority (Kansas City, Missouri)	509,356	173	2,944	14,738,506	216	8,796,826	568,770	\$46,619,407	\$7,188,508
Metropolitan Council of Transit Operations (Minneapolis, Minnesota)	2,265,788	1,106	2,050	73,477,709	785	25,153,334	1,785,455	\$168,935,338	\$59,180,532
Port Authority of Allegheny County (Pittsburgh, Pennsylvania)	1,402,267	775	1,809	66,553,980	848	28,351,914	2,214,918	\$181,394,901	\$41,684,063
Regional Transportation District (Denver, Colorado)	2,400,000	2,406	997	70,041,406	639	34,543,571	2,272,119	\$193,990,359	\$35,717,000
Rhode Island Public Transit Authority (Providence, Rhode Island)	750,000	784	957	15,931,860	187	6,758,842	411,318	\$41,973,094	\$9,317,279
Southwest Ohio Regional Transit Authority (Cincinnati, Ohio)	707,964	262	2,702	26,400,888	362	11,705,868	873,696	\$62,401,361	\$18,702,967
Transit Authority of River City (Louisville, Kentucky)	2754,956	283	2,663	15,545,827	203	7,929,716	614,175	\$39,035,375	\$5,932,437
Average	1,260,585	775	2,542	39,502,033	443	16,879,744	1,256,028	\$110,067,243	\$24,368,679
Milwaukee County Transit System Rank ^c	8 of 14	12 of 14	2 of 14	2 of 14	7 of 14	6 of 14	6 of 14	8 of 14	4 of 14

^a Based on ridership, service, and financial data obtained from the Federal Transit Administration National Transit Database for 2000, published in the Wisconsin Department of Transportation's Transit System Management Performance Audit of the Milwaukee County System, August 2002.

^b This measure of ridership counts all passengers each time they board a transit vehicle. Passengers who transfer one or more times to different routes of a transit system are counted as two or more passengers in completing a single trip between a specific origin and destination.

^c Rank of 1 is best, 14 is worst.

Source: Wisconsin Department of Transportation and SEWRPC.

3. Service effectiveness:

The Milwaukee County Transit System also ranks high compared to its peers on the effectiveness of its service. It ranks first among the peer systems in passengers carried per capita, passengers per revenue vehicle mile, and passengers per revenue vehicle hour. For these indicators, the Milwaukee County Transit System experienced average annual increases from 1995 to 2000, while the average for the peer systems only rose slightly, or declined.

4. Cost effectiveness:

Compared to the 13 peer transit systems, the Milwaukee County Transit System had the lowest cost per passenger, the highest passengers per capita, and the lowest operating assistance per passenger among the peer systems. The County transit system recovered about 34 percent of total operating costs through operating revenue in 2000 which ranked it second in this measure among the peer systems, even

Table 44

**COMPARISON OF RIDERSHIP AND FINANCIAL PERFORMANCE INDICATORS
BETWEEN THE MILWAUKEE COUNTY TRANSIT SYSTEM AND PEER GROUP: 1995 AND 2000**

Performance Measure	Operating Data ^a								
	Milwaukee County Transit System			Average ^b for Bus Systems in Peer Group ^c			2000 Peer Group Descriptive Statistics		
	1995	2000	Average Annual Percent Change	1995	2000	Average Annual Percent Change	Minimum	Maximum	Milwaukee County Transit System Rank ^d
Ridership									
Total Passengers ^e	56,496,800	70,547,800	4.5	37,938,100	39,502,000	0.8	11,462,300	73,477,700	2
Service Levels									
Revenue Vehicle Miles	17,243,800	20,123,100	3.1	15,423,800	16,879,800	1.8	6,141,200	34,543,600	6
Revenue Vehicle Hours	1,442,300	1,551,000	1.5	1,103,200	1,256,000	2.6	411,300	2,272,100	6
Service Effectiveness									
Passengers per Capita	57.0	71.2	4.5	29.2	30.4	0.9	13.9	48.0	1
Revenue Vehicle Hours per Capita	1.5	1.6	1.3	0.9	1.0	2.8	0.6	1.6	2
Passengers per Revenue Vehicle Mile	3.3	3.5	1.4	2.4	2.3	-1.1	1.7	3.1	1
Passengers per Revenue Vehicle Hour	39.2	45.5	3.0	32.6	30.7	-1.2	25.3	41.2	1
Service Efficiency									
Operating Expense per Revenue Vehicle Mile	\$ 5.15	\$ 5.35	0.8	\$ 5.35	\$ 6.32	3.4	\$ 4.89	\$ 8.72	5
Operating Expense per Revenue Vehicle Hour	\$61.54	\$69.41	2.4	\$72.89	\$85.52	3.2	\$63.56	\$102.04	3
Cost Effectiveness									
Operating Expense per Passenger	\$ 1.57	\$ 1.52	-0.6	\$ 2.25	\$ 2.81	4.5	\$ 2.30	3.44	1
Total Operating Assistance per Passenger	\$ 0.99	\$ 1.01	0.4	\$ 1.66	\$ 2.22	6.0	\$ 1.49	2.81	1
Farebox Recovery Rate for All Service	37.0	33.8	-1.8	26.5	21.5	-4.1	15.2	35.0	2

^a Based on ridership, service, and financial data obtained from the Federal Transit Administration National Transit Database for the years 1995 and 2000, published in the Wisconsin Department of Transportation's Transit System Management Performance Audit of the Milwaukee County System, August 2002.

^b Averages reflect the mean of the individual performance measure values calculated for each transit system in the peer group.

^c Key performance indicators were developed based on information reported by 13 other urban bus systems selected in the Wisconsin Department of Transportation Transit System Management Performance Audit of the Milwaukee County System. The 14 systems and their characteristics are presented in Table 43.

^d Rank of 1 is best, 14 is worst.

^e This measure of ridership counts all passengers each time they board a transit vehicle. Passengers who transfer one or more times to different routes of a transit system are counted as two or more passengers in completing a single trip between a specific origin and destination.

Source: Wisconsin Department of Transportation and SEWRPC.

though the recovery rate declined from 1995 to 2000. Although the total operating costs for the County transit system increased from 1995 to 2000, system ridership also increased during the same period, resulting in a small 0.6 percent average annual decrease in operating expense per passenger. For the peer systems over the same period, operating costs increased at a faster rate than ridership, resulting in a 4.5 percent average annual increase in operating expense per passenger. The Milwaukee County Transit System obtains much less investment from local sources compared to its peers. This is due primarily to the significant funding obtained from the State of Wisconsin; the system obtains a comparable share of Federal funds.

Overall, the WisDOT performance audit concluded that the Milwaukee County Transit System performs better than its peers for all the measures of ridership and financial performance identified in the transit service objectives and standards set forth in Chapter IV of this report.

FUTURE DIRECTION OF SYSTEM PERFORMANCE

The WisDOT performance audit recognized the superior efficiency and effectiveness of the Milwaukee County Transit System compared to similar transit systems serving urban areas of comparable size. The performance audit/peer review was conducted in 2002 with data from 1995 through the year 2000. The audit noted that the Milwaukee County Transit System had undergone fare increases and service reductions since 2001. The reduction in transit vehicle hours of service from 2000 to 2005 was nearly 15 percent, and the base adult fare had increased from \$1.50 to \$1.75, and the adult weekly pass from \$10.50 to \$13.00. While some of these measures were related to consideration of transit service efficiency and effectiveness, most were due to budgetary constraints due to limits in State transit assistance funding and Milwaukee County funding. The State has historically funded the bulk of the annual operating funding of the Milwaukee County Transit System, providing about 70 percent of total transit operating funding in the 1990's. Federal funds represented about 10 percent of total operating funding, and Milwaukee County provided the remaining 20 percent of funds in the 1990's. However, between 2000 and 2005, State transit funding of the Milwaukee County Transit System only increased by 7.2 percent, or slightly less than 1.5 percent on an average annual basis—not enough to keep up with inflation. Specifically, the 2001-2003 State budget provided a 3 percent annual increase in State transit operating assistance funding, the 2003-2005 budget no increase in funding, and the 2005-2007 budget a 2 percent annual increase in funding. Because Milwaukee County had a balance of unspent Federal Transit Administration (FTA) Section 5307 funds—which are intended for capital project funding but may be used for some operating funding—Milwaukee County was able to increase Federal funding of the transit system by over 80 percent from 2000 to 2005, or about 13 percent annually (even through the annual amount of FTA Section 5307 funds allocated to Milwaukee County over this same period did not increase). Due to a difficult budget period for Milwaukee County, County funding of the transit system between 2000 and 2005 remained about the same. The fairly substantial increases over the years 2000 to 2005 in Federal funding were unable to offset the marginal increases in State transit funding and stagnant Milwaukee County funding, and the transit system underwent substantial service reductions (15 percent) and fare increases (17 to 30 percent).

Looking beyond 2005, Milwaukee County's balance of unspent FTA funds has declined, and may be expected to be depleted by the year 2010. Without renewed increases in State transit assistance funds and Milwaukee County funding to address inflation, dramatically severe cuts in service and higher fares may be expected by the year 2010, resulting in a significantly smaller transit system serving less of the County population and employment, operating with more restrictive service hours and with less frequent service, costing more to use for those who must rely on it as their primary means of transportation, and being viewed less as an alternative mode of travel to the automobile.

Table 45 illustrates this potential future for the transit system if State transit operating assistance only increases at about 2 percent per year—or somewhat greater than the 1.4 percent increase over the past five years. The potential future assumes that between 2006 and 2010, the total combined property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System will not increase and be held to approximately 2005 levels, as was the case over the past five years. It is further assumed that the Transit Plus Program will need to remain fully funded to meet Federal requirements, meaning any shortfall in the amount of passenger fares and Federal and State operating assistance monies available to fund the total annual operating costs of the transit system between 2006 and 2010 will need to be made up through reductions in bus services. Based on the identified assumptions, the transit system would need to reduce total vehicle hours of service for the bus system from about 1,433,500 vehicle hours in 2005 to about 894,000 vehicle hours in 2010, or a reduction of about 507,500 vehicle hours, or about 35 percent.

To illustrate what this service reduction would mean in terms of actual service changes, two service reduction options were developed for illustration and are identified in Table 46. The impacts of each option on the local routes and service area coverage of the transit system are shown on Map 50. Under Option A, all freeway flyer, UBUS, and

Table 45

**ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR THE
BUS AND PARATRANSIT SERVICES PROVIDED BY MILWAUKEE COUNTY TRANSIT SYSTEM: 2000-2010**

Characteristic	Bus System ^a						
	Actual/Estimated						Forecast
	2000	2001	2002	2003	2004	2005	2010
Service Provided							
Total Vehicle Miles	22,196,300	21,849,100	20,756,200	19,745,200	19,341,300	19,267,500	12,017,000
Total Vehicle Hours	1,650,500	1,621,100	1,541,900	1,468,400	1,432,200	1,433,500	894,000
Revenue Passengers	52,855,800	51,306,400	48,455,300	47,952,300	46,585,300	47,457,400	36,504,000
Cost, Revenues, and Assistance							
Operating Expenses	\$108,715,600	\$115,445,000	\$115,705,600	\$116,815,400	\$122,449,700	\$124,028,900	\$109,019,000
Revenues							
Passenger Revenues	\$36,271,700	\$38,491,100	\$36,288,700	\$35,502,300	\$37,813,200	\$39,975,600	\$36,139,000
Other	\$1,339,000	\$1,522,700	\$3,404,400	\$3,691,400	\$4,368,500	\$3,533,900	\$2,717,400
Total	\$37,610,700	\$40,013,800	\$39,693,100	\$39,193,700	\$42,181,700	\$43,509,500	\$38,856,400
Required Operating Assistance	\$71,104,900	\$75,431,200	\$76,012,500	\$77,621,700	\$80,268,000	\$80,519,400	\$70,162,600
Percent of Expenses							
Recovered through Revenues	34.6	34.7	34.3	33.6	34.4	35.1	35.6
Sources of Operating Assistance							
Federal	\$10,954,400	\$16,087,400	\$11,934,400	\$14,186,300	\$15,110,000	\$18,926,800	\$6,330,000
State	\$47,101,000	\$47,408,200	\$51,046,100	\$51,532,900	\$50,877,500	\$48,984,300	\$53,865,700
County	\$13,049,500	\$11,935,600	\$13,032,000	\$11,902,500	\$14,280,500	\$12,608,300	\$9,966,900
Total	\$71,104,900	\$75,431,200	\$76,012,500	\$77,621,700	\$80,268,000	\$80,519,400	\$70,162,600
Per Trip Data							
Operating Cost	\$2.06	\$2.25	\$2.39	\$2.44	\$2.63	\$2.61	\$2.99
Revenue	0.71	0.78	0.82	0.82	0.91	0.91	1.07
Total Operating Assistance	1.35	1.47	1.57	1.62	1.72	1.70	1.92
Local Operating Assistance	0.25	0.23	0.27	0.25	0.31	0.27	0.27

Characteristic	Paratransit System ^b						
	Actual/Estimated						Forecast
	2000	2001	2002	2003	2004	2005	2010
Service Provided							
Total Vehicle Miles	5,461,700	5,007,100	5,237,500	5,379,800	4,839,100	4,896,000	4,898,000
Total Vehicle Hours	401,600	383,800	374,700	354,600	343,600	348,000	348,000
Revenue Passengers	994,300	1,027,000	1,048,000	1,060,500	1,003,400	1,015,200	1,015,200
Cost, Revenues, and Assistance							
Operating Expenses	\$15,627,200	\$16,583,800	\$17,877,400	\$18,632,100	\$18,488,500	\$19,203,300	\$22,259,000
Revenues							
Passenger Revenues	\$2,080,200	\$2,076,900	\$2,318,600	\$2,396,200	\$3,218,100	\$3,274,000	\$3,274,000
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$2,080,200	\$2,076,900	\$2,318,600	\$2,396,200	\$3,218,100	\$3,274,000	\$3,274,000
Required Operating Assistance	\$13,547,000	\$14,506,900	\$15,558,800	\$16,235,900	\$15,270,400	\$15,929,300	\$18,985,000
Percent of Expenses							
Recovered through Revenues	13.3	12.5	13.0	12.9	17.4	17.0	14.7
Sources of Operating Assistance							
Federal	\$5,000	\$1,581,500	\$1,661,100	\$2,477,400	\$2,651,800	\$1,096,000	\$1,096,000
State	\$7,975,700	\$7,638,900	\$8,214,500	\$8,412,200	\$8,433,600	\$10,088,000	\$10,477,000
County	\$5,566,300	\$5,286,500	\$5,683,200	\$5,346,300	\$4,185,000	\$4,744,000	\$7,412,000
Total	\$13,547,000	\$14,506,900	\$15,558,800	\$16,235,900	\$15,270,400	\$15,928,000	\$18,985,000
Per Trip Data							
Operating Cost	\$15.72	\$16.15	\$17.06	\$17.57	\$18.43	\$18.92	\$21.93
Revenue	2.10	2.02	2.21	2.26	3.21	3.23	3.23
Total Operating Assistance	13.62	14.13	14.85	15.31	15.22	15.69	18.70
Local Operating Assistance	5.60	5.15	5.42	5.04	4.17	4.67	7.30

Table 45 (continued)

Characteristic	Bus System ^a						
	Actual/Estimated						Forecast
	2000	2001	2002	2003	2004	2005	2010
Service Provided							
Total Vehicle Miles	27,658,000	26,856,200	25,993,700	25,125,000	24,180,400	24,163,500	16,913,000
Total Vehicle Hours	2,052,100	2,004,900	1,916,600	1,823,000	1,775,800	1,781,500	1,242,000
Revenue Passengers	53,850,100	52,333,400	49,503,300	49,012,800	47,588,700	48,472,600	37,519,200
Cost, Revenues, and Assistance							
Operating Expenses	\$124,342,800	\$132,028,800	\$133,583,000	\$135,447,500	\$140,938,200	\$143,232,200	\$131,278,000
Revenues							
Passenger Revenues	\$38,351,900	\$40,568,000	\$38,607,300	\$37,898,500	\$41,031,300	\$43,249,600	\$39,413,000
Other	\$1,339,000	\$1,522,700	\$3,404,400	\$3,691,400	\$4,368,500	\$3,533,000	\$2,717,400
Total	\$39,690,900	\$42,090,700	\$42,011,700	\$41,589,900	\$45,399,800	\$46,783,600	\$42,130,400
Required Operating Assistance	\$84,651,900	\$89,938,100	\$91,571,300	\$93,857,600	\$95,538,400	\$96,448,600	\$70,162,600
Percent of Expenses							
Recovered through Revenues	31.9	31.9	31.4	30.7	32.2	32.7	32.1
Sources of Operating Assistance							
Federal	\$10,959,400	\$17,668,900	\$13,595,500	\$16,663,700	\$17,761,800	\$20,022,800	\$7,426,000
State	\$55,076,700	\$55,047,100	\$59,260,600	\$59,945,100	\$59,311,100	\$59,072,300	\$64,342,700
County	\$18,615,800	\$17,222,100	\$18,715,200	\$17,248,800	\$18,465,500	\$17,352,300	\$17,378,900
Total	\$84,651,900	\$89,938,100	\$91,571,300	\$93,857,600	\$95,538,400	\$96,447,400	\$89,147,600
Per Trip Data							
Operating Cost	\$2.31	\$2.52	\$2.70	\$2.76	\$2.96	\$2.95	\$3.50
Revenue	0.74	0.80	0.85	0.85	0.95	0.96	1.12
Total Operating Assistance	1.57	1.72	1.85	1.91	2.01	1.99	2.38
Local Operating Assistance	0.35	0.33	0.38	0.35	0.39	0.36	0.46

^aBus system ridership and service data for 2000-2005 were taken from monthly financial and statistical reports prepared by the Milwaukee County Transit System. Financial information for 2000-2005 were taken from National Transit Database reports filed annually by the transit system. The forecast ridership, service, and financial data for 2010 was prepared by Commission and transit system staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 5 percent per year for 2006-2010 to reflect inflationary increases in operating expenses, including for fuel. Reductions in operating costs for service reductions were calculated at the marginal cost rate. After service reductions, the systemwide average operating cost per total vehicle hour would increase by about 7 percent per year.
2. The total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System would be held to 2005 levels.
3. The base adult cash fare for the bus system, currently at \$1.75 per trip in 2006, will be increased to \$2.00 per trip in 2008. The cost of an adult weekly pass for the bus system, currently at \$14 in 2006, will be increased to \$15 in 2008, \$16 in 2009, and \$17 in 2010. Increases in other pass and cash fare categories will occur as adult fares are raised.
4. The unspent balances of Federal Section 5307 funds that have been accumulated by Milwaukee County from past annual allocations to the County will be totally exhausted after 2009. For 2010, Milwaukee County has indicated that it will use approximately \$7.2 million from its total annual allocation of Section 5307 funds for capitalized operating projects.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 4.3 percent for 2006 and by 2 percent for 2007, then by 2 percent per year from 2008 through 2010. The total State 85.21 specialized transit assist paratransit system will increase by 22 percent for 2006 and by 19 percent for 2007, then by 2 percent per year from 2008 through 2010. Special State aid provided for transit services during the Marquette Interchange reconstruction project will be eliminated after the project is completed in 2008.

^bRidership, service, and financial data for 2000-2005 were taken from monthly financial and statistical reports prepared by the Milwaukee County Transit System and annual reports filed for the Wisconsin Department of Transportation Section 85.21 program. The forecast ridership, service, and financial data for 2010 was prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 3 percent per year for 2006-2010.
2. The service characteristics and fares for the paratransit service available under the Transit Plus Program will remain at 2005 levels through the year 2010.
3. No Federal Section 5307 funds will be used for the Transit Plus Program through the year 2010.
4. The State 85.20 program transit operating assistance funds used for the paratransit system will decrease by 10 percent for 2006, increase by 2 percent for 2007, then increase by 1 percent per year from 2008 through 2010. The State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 22 percent for 2006 and by 19 percent for 2007, then by 2 percent per year from 2008 through 2010.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table 46

**EXAMPLES OF SERVICE REDUCTIONS FOR THE
MILWAUKEE COUNTY TRANSIT SYSTEM NEEDED BY
THE YEAR 2010 ASSUMING CONTINUED USE OF
PROPERTY TAXES TO FUND THE LOCAL
SHARE OF TRANSIT SYSTEM OPERATING COSTS**

Description	Estimated Reduction in Annual Vehicle Hours of Service	Percent of 2005 Annual Vehicle Hours of Service
Option A		
<ul style="list-style-type: none"> Eliminate all freeway flyer and UBUS routes 	64,000	4
<ul style="list-style-type: none"> Eliminate all bus service after 10:00 p.m. on weekdays and Saturdays; limit Sunday Service to between 9:00 a.m. and 6:00 p.m.^a 	168,000	12
<ul style="list-style-type: none"> Eliminate 7 local routes and cut-back or restructure service on 17 additional local routes 	<u>286,000</u>	<u>20</u>
Total Reduction	518,000	36
Option B		
<ul style="list-style-type: none"> Eliminate all freeway flyer and UBUS routes 	64,000	4
<ul style="list-style-type: none"> Eliminate 10 local routes and cut-back or restructure service on 14 additional local routes 	<u>460,000</u>	<u>33</u>
Total Reduction	524,000	37

^aElimination of bus service during these periods would also permit reductions in paratransit service.

Source: Milwaukee County Transit System and SEWRPC.

local shuttle routes would need to be eliminated; local bus service would need to be restructured to cut-back or eliminate routes primarily outside of central Milwaukee County; and the daily span of service on local routes would need to be reduced by limiting weekday and Saturday service hours to 6:00 a.m. until 10:00 p.m., and Sunday service hours to 9:00 a.m. until 6:00 p.m. Under Option B, all freeway flyer, UBUS, and local shuttle routes would also need to be eliminated; and service hours for local routes would not be changed, but then there would be a need to restructure local bus routes to cut-back or eliminate routes throughout all of Milwaukee County.

The service reductions in both options A and B would, in turn, place pressure on County specialized transportation services. Reductions in fixed-route bus services would permit a reduction in the hours and coverage of the County's Transit Plus paratransit service, and would result in higher demand on the transportation services provided by the County Department of Health and Human Services. Service reductions would also increase the need and demand for specialized transportation serving employment-related purposes. The options shown in Table 46 and on Map 50 clearly indicate the magnitude of the service and funding problems facing the Milwaukee County Transit System. The examples illustrate the need for the State to return to its commitment to be a

partner in the maintenance, improvement and expansion, and attendant funding of public transit and for considering an alternative source of local funding for transit to replace Milwaukee County property tax dollars.

SUMMARY

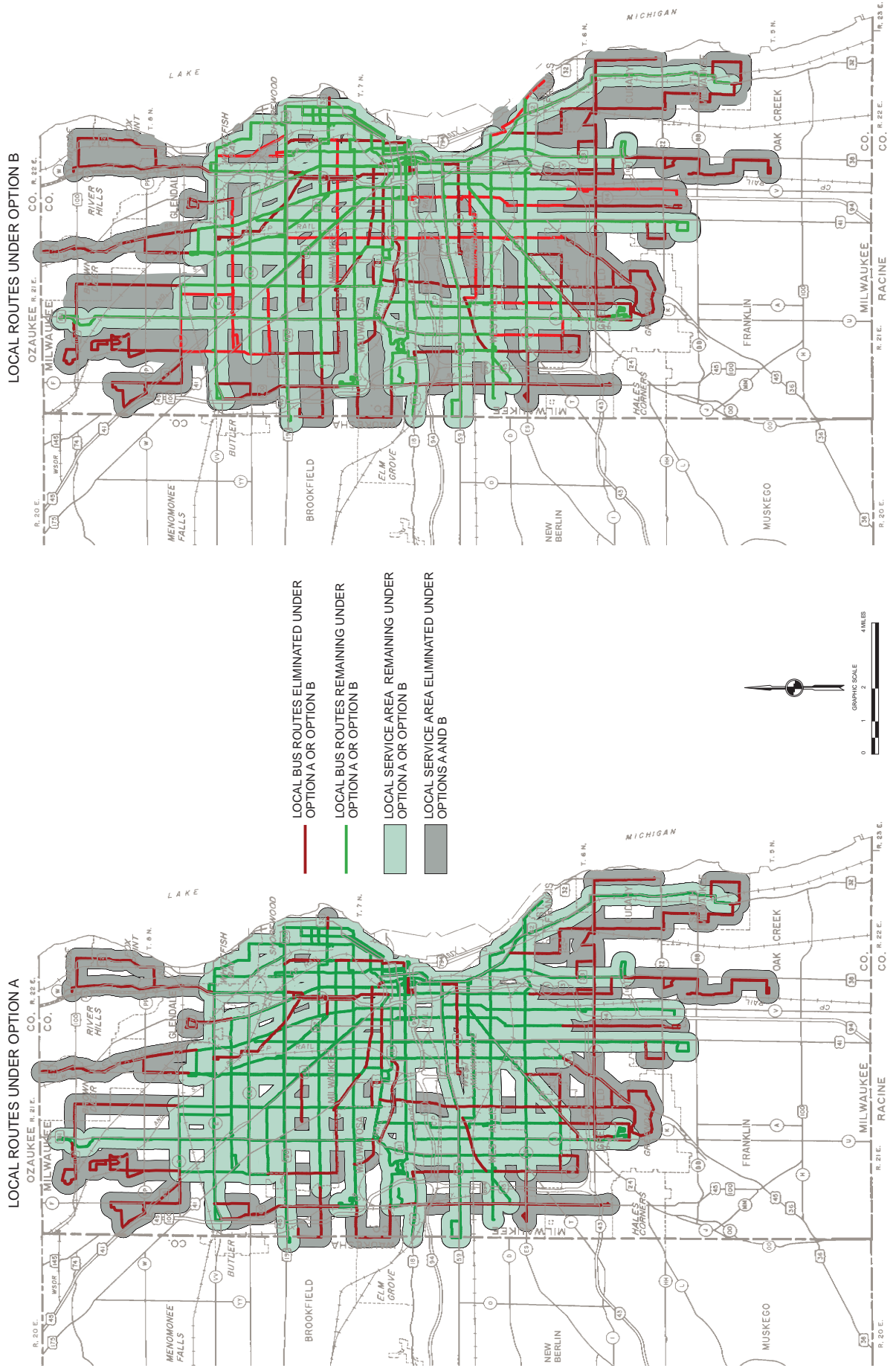
This chapter has evaluated the performance of the Milwaukee County Transit System based upon key performance measures identified in the transit system objectives and standards. The evaluation included assessments of performance on a systemwide basis and on a route-by-route basis and identified the unmet transit service needs of Milwaukee County residents based on these evaluations. The chapter also summarized the significant findings of a peer review of the transit system conducted as part of the last State management performance audit. Lastly, the dependence of the transit system on State funding has been reviewed; its effect and that of stagnant Milwaukee County funding on the trend of transit service cuts and fare increases has been documented; and the implications of these trends on the transit system over the next five years has been estimated.

Systemwide Evaluation of Service to Existing Population, Employment, and Land Uses

The Milwaukee County Transit System was evaluated with respect to the service its routes provide to the County population along with the jobs and major activity centers in the greater Milwaukee area that could be considered as desirable destinations by County residents. This evaluation found that:

Map 50

**MILWAUKEE COUNTY TRANSIT SYSTEM LOCAL
BUS ROUTES UNDER OPTIONS A AND B: 2010**



Source: Milwaukee County Transit System and SEWRPC.

1. The transit system provides for excellent overall coverage of the existing residential areas, of the residential concentrations of the total minority and typically transit-dependent populations, and of the employment concentrations within Milwaukee County. About 789,100 persons in the County—about 84 percent of the total County population—reside within convenient walking distance of the existing transit system. Virtually all of the census block groups with concentrations of transit-dependent persons and census tracts with minority population concentrations within the County were within this walk access service area. About 587,100 jobs, or about 94 percent of the jobs in the County, were within the walk access service areas of the existing transit system.
2. The transit system also provides very good to excellent coverage of the major activity centers and of the transit supportive areas in Milwaukee County. In total, 81 of the 86 major employers, 22 of the 25 office and industrial parks/areas, and 68 of the 70 other activity centers were served by existing transit system routes. The majority of the transit supportive areas in Milwaukee County—areas with the residential and employment densities considered necessary to support fixed-route bus service—are fully or partially served by the local/shuttle routes of the Milwaukee County Transit System.
3. The Milwaukee County Transit System was also evaluated with respect to the travel time by transit required for County residents to access employment and other activity centers, and to the times required to make trips between selected locations within the County by transit in comparison to by automobile. None of the travel time standards set forth in the transit service standards that suggested transit travel times for accessing employment and other activity centers are fully met by the existing transit system. Similarly, the comparison of transit and automobile travel times indicates that transit travel time is in all cases 50 percent or greater than the automobile travel time for comparable trips.

Route Performance Evaluation

The performance evaluation of the individual routes of the transit system reviewed the hours of operation and service frequency for each route, the schedule adherence and passenger loading on each route, and the ridership and service efficiency and effectiveness of each route. This evaluation found that:

1. The weekday hours of operation for the majority—25 of 30—of the local/shuttle routes of the transit system provide for the desirable 20 hours of service (from 5:00 a.m. to 1:00 a.m.) specified in the transit service standards. The weekend hours of operation for the local/shuttle routes generally do not meet the desirable service hours with only 14 of the 30 routes operated on Saturday and nine of the 29 routes operated on Sunday providing 20 or more hours of service. In addition, service is not operated at all over portions of some routes on weekends and the current weekday-only peak hour service periods for the freeway flyer routes provide for considerably less than the desirable service hours. The weekend hours on the local/shuttle routes along with the weekday hours for freeway flyer routes represent areas where service expansion should be considered.
2. During weekday peak periods, only about 23 to 30 percent of the County population, and about 35 to 37 percent of the jobs in the County are within a one-quarter mile walking distance of the local/shuttle routes operating with the desirable peak period headways of 10 minutes or less as specified in the transit service standards. The local routes of the transit system perform best during weekday off-peak periods when about 62 percent of the County population and jobs are served by the routes and route segments operating with the desirable headways of 20 minutes or less specified in the standards. None of the freeway flyer and UBUS routes have headways that conform with the desirable headways. Upgrading service frequencies could be expected to result in increases in ridership.
3. Passenger load data provided by the transit system from fall 2005 passenger counts suggest that the routes of the transit system do not have excessive numbers of standing passengers and largely meet the passenger loading standards on weekdays, with 29 of the 30 local/shuttle routes meeting the peak period loading standard of 1.33 passengers per seat and 28 of the 30 local/shuttle routes meeting the off-peak period loading standard of 1.0 passenger per seat. Load factors for the freeway flyer, UBUS, and school day routes were all at or below the specified loading standards. While the load factors data did not show

serious loading problems, reports by bus operators concerning overloaded buses along with passenger complaints indicate some problems do exist with overcrowding on selected bus trips during the peak hours of operation on weekdays. Such problems have resulted from an increase in the number of students and the general public riding during weekday peak hours. Transit system staff have indicated that the financial resources which the system has available limit its response to the current overcrowding problems.

4. The on-time performance of the routes of the transit system was evaluated using schedule adherence data collected for September 2005 with the automated vehicle location (AVL) system that is used to monitor each bus used in daily service. The data collected by the transit system indicated that the system meets the service standard of 90 percent of the service being on-time.
5. In fall 2004, about 140,500 boarding passengers on weekdays, or approximately 96 percent of the total system weekday ridership of 146,100 passengers, were carried on the 30 local/shuttle routes of the transit system. A total of 15 local routes—Route Nos. 10, 12, 14, 15, 18, 19, 21, 23, 27, 30, 35, 60, 62, 76, and 80—accounted for about 75 percent of the total local/shuttle route ridership on weekdays. These routes were also among the top 20 routes of the system on weekdays in terms of passengers per bus hour. A total of 26 of the 30 local/shuttle routes meet or exceed the minimum acceptable performance level of 22 boarding passengers per revenue vehicle hour for weekday service. The weekday cost effectiveness of the local routes mirrors the productivity of the service. All of the best performing routes have segments which serve the highest concentrations of the minority and transit dependent populations in the County and operate for more than 20 hours on weekdays over all or most of their length, with the most frequent service. The local/shuttle routes with the lowest weekday ridership, productivity, and cost efficiency measures include Route Nos. 28, 64, 68, and 219.
6. The school day, freeway flyer, and University of Wisconsin-Milwaukee UBUS routes carried about 5,500 boarding passengers on weekdays in fall 2004, or about 4 percent of the total ridership on the transit system, with each route carrying less than 1,000 boarding passengers. While the school day routes had acceptable productivity and efficiency levels, the freeway flyer routes and the UBUS routes all had productivity levels below the acceptable weekday minimum level. The low productivity levels of the freeway flyer and UBUS routes are the result of bus trips operated in the nonpeak direction which carry few or no passengers but are needed to position buses for peak direction service.
7. Five of the 30 local routes operated on weekends had productivity levels below the minimum acceptable level for at least one weekend day. The weekend performance of these routes should be monitored and changes made where appropriate to improve their performance.
8. The 29 route segments with the highest passenger activity—total boarding and alighting passengers—occurred on 13 different bus routes and accounted for about 98,000 boarding and alighting passengers, or about one-third of the total passenger activity on the regular routes of the transit system. The highest ridership segments were generally found on the routes operated with the longest service hours and the lowest headways on weekdays, serving the areas with the highest population and employment densities and significant concentrations of minority or typically transit-dependent persons. The 32 route segments with the lowest passenger activity occurred on 15 different bus routes and accounted for only 4,000 boarding and alighting passengers, or about 1 percent of the total passenger activity on the regular routes of the system. A total of 15 of the 32 segments with the lowest ridership occurred on just three routes: Route Nos. 15, 28, and 68.

Assessment of Unmet Transit Service Needs

The findings of systemwide and route-by-route performance evaluations were used to identify the transit service needs of Milwaukee County residents which are not being met at all, or are not being met well, by the existing transit system. These unmet needs for transit travel within Milwaukee County include:

1. Service Area and Hours: There are residential areas in the western, southern, northwest and northeast portions of Milwaukee County with transit supportive residential and employment densities or major

activity centers that are not served at all by the routes of the transit system. With respect to service hours, transit service operating for less than 20 hours per day, and particularly for less than 16 hours per day, is of most concern as the service available over such routes does not permit travel for the starting and ending times of all weekday work shifts, specifically second and third shifts. Areas in the southern, western, and northeast portions of Milwaukee County have such limited transit service hours on weekdays and Saturdays, and nearly all of Milwaukee County has limited hours of service on Sundays and holidays. Freeway flyer service in particular only provides for weekday peak period service, with no midday or evening service.

2. Service Frequency: The Milwaukee County Transit System relies upon a grid system of local routes where transfers between one or more routes are generally required to complete a trip by public transit. The frequency of service on the routes directly affects the convenience of transferring with longer headways increasing waiting times for transferring passengers, making the service inconvenient to use and discouraging use. Only a small area in the central portion of the County currently has the desirable headways for local and shuttle routes that provide for convenient service—10 minutes or less during peak periods and 20 minutes or less during off-peak periods. No freeway flyer route operates with these desirable headways. This is largely the result of the service reductions which have occurred over the past five years.
3. Travel Time: Travel on the current transit system generally results in lengthy travel times which are much slower than automobile travel times. This stems from a combination of factors including the almost exclusive use of local bus routes with frequent stops and operation in mixed traffic at low overall operating speeds to provide the majority of transit service operated by the system; the lack of use of transportation system management actions to increase bus travel speeds; and service cuts enacted since 2000 that increased operating headways or eliminated route segments or entire routes. Consideration should be given to improvements which would increase operating speeds and reduce transit travel times including: restoring the operating headways that have been increased and the routes that have been eliminated by the transit system in the recent past; identifying additional headway reductions throughout the system; initiating or reinstituting express routes with limited (one-quarter mile) stop spacing to replace local bus routes in major travel corridors; and implementing reserved bus lanes and traffic signal priority measures in conjunction with the express bus services.

Milwaukee County residents also have unmet needs for travel by transit outside the County that stem from not just how service is provided by the Milwaukee County Transit System, but also from how the other public transit services are provided in the greater Milwaukee area and how all the transit services function together to serve regional travel, in particular for work commuting. These include unmet needs related to:

1. Areas Served: Significant areas outside Milwaukee County with major activity centers and significant job concentrations are not served by public transit including in: the Mequon, Cedarburg, and Port Washington areas in Ozaukee County; the Germantown, Hartford-Slinger, Jackson, and West Bend areas in Washington County; and the Menomonee Falls, Sussex, New Berlin, Pewaukee, Hartland, Delafield, and Oconomowoc-Summit areas in Waukesha County.
2. Service Hours and Frequency: The transit services available to serve reverse commute travel by Milwaukee County residents to jobs and activity centers in the surrounding counties with rare exception have limited weekday service hours and are operated with infrequent service. This includes transit services provided for Ozaukee County employers in the Grafton, Saukville, Port Washington, and Fredonia areas; for Waukesha County employers and businesses in the Butler-Menomonee Falls area, the New Berlin Industrial Park, the Bluemound Road corridor, and the City of Waukesha as well as to the Quad Graphics plant in Sussex; and to employers and businesses in the Cities of Kenosha and Racine.
3. Travel Times: Travel to locations in the surrounding counties is often lengthy due to need for Milwaukee County residents to rely on local bus routes either to reach connecting rapid bus routes serving areas in Ozaukee and Waukesha Counties or for the entire length of their trip. This would include the use of

various Milwaukee County Transit System local routes to connect with Route No. 10 in Milwaukee County to use the extension of Route No. 10 into the Bluemound Road corridor; the use of the Route 10 extension to connect with Waukesha Metro Transit local routes serving the corridor, the New Berlin Industrial Park, and the City of Waukesha; and the use of Route Nos. 62 and 63 to connect with Route No. 9 serving the Butler-Menomonee Falls area. The operation of local routes in mixed traffic with frequent stops results in low operating speeds and long travel times particularly for trips made between counties.

4. **Transit Fares:** While discounted fares for passengers transferring between the different transit systems are offered, the discounts and transfer arrangements are not uniform among all the transit services connecting with the Milwaukee County Transit System. For passengers transferring between Milwaukee County Transit System routes and routes serving Ozaukee and Waukesha Counties, transfer charges range from nothing to \$0.75 depending on the direction of travel. Passengers transferring between Milwaukee County Transit System routes and the Wisconsin Coach Lines, Inc. routes serving Waukesha County or the Cities of Racine and Kenosha pay the full fare for their trip minus a \$0.50 discount.

Peer Group Comparison and Transit System Future Direction

A comparison of the performance of the Milwaukee County Transit System to a peer group of similar transit systems in the United States was conducted as part of a management performance audit of the Milwaukee County Transit System that was completed by the Wisconsin Department of Transportation (WisDOT) in 2003. Overall, the WisDOT audit concluded that the Milwaukee County Transit System performed significantly better than its peers for all the measures of ridership and financial performance identified in the transit service objectives and standards set forth in Chapter IV of this report.

The audit also noted that since 2001, the Milwaukee County Transit System has implemented both fare increases and service reductions, and expressed concerns over the impacts of a continuation of such actions on the system in the future. While some of these past measures may have been related to considerations of transit service efficiency and effectiveness, most were due to limits in State and County funding. The State has historically provided about 70 percent of transit system operating funding, but between 2000 and 2005, the State only increased operating assistance funding by 7.2 percent or less than 1.5 percent on an average annual basis—not enough to keep up with inflation. Specifically, the 2001-2003 State budget provided a 3 percent annual increase in State transit operating assistance funding, the 2003-2005 budget no increase in funding, and the 2005-2007 budget a 2 percent annual increase in funding. As a result, between 2002 and 2005, State transit operating assistance funding of the Milwaukee County Transit System essentially did not increase. Because Milwaukee County had a balance of unspent Federal Transit Administration (FTA) Section 5307 funds—which are intended for capital project funding, but may be used for operating funding—Milwaukee County was able to increase Federal funding of the transit system by over 80 percent from 2000 to 2005, or 13 percent annually (even though the annual amount of FTA Section 5307 funds allocated to Milwaukee County over this same period did not increase). Milwaukee County funding of the transit system between 2000 and 2005 remained about the same. These fairly substantial increases over the years 2000 to 2005 in Federal funding were unable to offset the marginal increases in State transit funding and stagnant Milwaukee County funding, and the transit system underwent substantial service reductions (15 percent) and fare increases (17 to 30 percent).

Looking forward to the next five years, a continuation of limited State and County funds for the Milwaukee County Transit System may be expected to result in major service cuts and fare increases as the Federal funds which offset the limited State funds of the early 2000's, may be expected to be depleted by 2010. The Commission staff estimates that by 2010, approximately 507,500 total vehicle hours of service—about a 35 percent reduction from 2005 levels—may need to be trimmed from the transit system in response to annual funding shortfalls. This illustrates the need for the State to return to its commitment to be a partner in the maintenance, improvement and expansion, and attendant funding of public transit and for considering an alternative source of local funding for transit to replace Milwaukee County property tax dollars.

Chapter VI

TRANSIT SERVICE IMPROVEMENT ALTERNATIVES

INTRODUCTION

This chapter describes the transit service improvement alternatives developed for the Milwaukee County Transit System for the years 2009 through 2013. The remainder of this chapter consists of four sections. The first section summarizes the public comment received regarding the transit system evaluation. The second section describes the three service improvement alternatives, including the service levels and hours envisioned for each alternative. The third section documents the capital and funding needs for each alternative. Several funding scenarios were developed to address the uncertainties in forecasting Federal, State, and local funding share. The fourth section compares two options for funding the transit system, which will be critical for implementing the final recommended alternative. The chapter concludes with a brief summary.

SUMMARY OF PUBLIC COMMENT ON THE PLAN

In February and March of 2007, Commission staff solicited public feedback on the transit development plan. Staff conveyed the plan findings through a widely distributed newsletter and at four public informational meetings. In addition, several newspaper articles focused attention on transit issues. In total, 212 comments were submitted at informational meetings, or via letter, email, telephone, or through the Commission website. All public comments were reviewed and summarized by staff at the Southeastern Wisconsin Regional Planning Commission, and included in a record of public comments provided for review to each member of the study advisory committee. The public comments were used in the development of the three transit service improvement alternatives.

In general, the comments were supportive of the transit system. A total of 25 people asked that service not be cut any further, and 19 people favored establishing new dedicated funding sources for transit service. Some comments expressed support for specific transit services, such as Transit Plus paratransit (four comments), and the UBUS and UPASS programs for University of Wisconsin-Milwaukee students (four comments).

Comments on Unmet Transit Service Needs

The public comments confirmed the unmet needs identified in the transit system performance evaluation in the previous chapter:

- Areas Not Served. A number of people identified a need for more service in northern Milwaukee County, such as east-west service on Brown Deer Road. Five people asked for more service in southern Milwaukee County in the Cities of Oak Creek and Franklin, and four expressed support for more service to the Village of Hales Corners.

- Lengthy Travel Times. A need for faster travel times was indicated by the 11 comments requesting to restore the express bus services formerly provided over Fond du Lac Avenue; Forest Home Avenue; and Bluemound Road and Wisconsin Avenues. More frequent transit service would also result in faster travel times, and support for more frequent service was expressed in many comments.
- Inadequate Service Frequency. A number of people expressed support for more frequent transit service in general, and also on specific routes. Two people supported implementing 10-minute headways at all times, while two others suggested implementing peak-period headways of less than 10 minutes.
- Inadequate Service Hours. Four people identified a need for longer hours of service on freeway flyer and UBUS routes, and several identified a need for longer hours of service on local routes serving the far northern and southern portions of the County.
- Travel between Milwaukee and Surrounding Counties. A number of comments expressed support for more transit service between Milwaukee County and surrounding counties, including local bus service to Mequon in southern Ozaukee County, Germantown in southeastern Washington County, and various communities in eastern Waukesha County.

Additional Unmet Transit Service Needs Identified in Public Comments

Public feedback in the comments helped identify additional unmet transit service needs that were not included in the initial performance evaluation:

- Bicycle Accommodation on Buses. A total of 52 people expressed support for installing bicycle racks on MCTS buses. The benefits cited include a potential for increased transit ridership, a larger transit service area because bicycles enable longer travel to and from bus stops, and increased mobility by increasing the number of transportation options.
- Insufficient Options for Fares, Tickets and Passes. A number of people expressed support for offering a greater variety of passes, including three people who requested rechargeable “smart” fare cards, three who requested a one-day pass, and two who requested monthly passes.
- Lack of a Regional Transit Authority. Eight people expressed support for using a regional approach or a regional transportation authority to fund and operate transit service. The benefits cited by supporters include a potential for improved travel between Milwaukee County and surrounding counties, and the potential to use a dedicated funding source for transit.

Response to Public Comments

The transit service improvement alternatives were developed to respond to the public comments and the findings of the system performance evaluation. In addition, the Milwaukee County Transit System has already taken action on some concerns identified in public comments. For example, the system has applied for Federal grants to purchase and install bicycle racks on the front of buses; Route No. 11 - Greenfield Avenue was extended south on Miller Park Way to serve Centennial Plaza at Lincoln Avenue; and freeway flyer Route 40U was changed to serve a new stop at the Rockwell Park-Ride Lot near the intersection of W. Greenfield Avenue and S. 4th Street.

TRANSIT SERVICE IMPROVEMENT ALTERNATIVES

Staff at the Southeastern Wisconsin Regional Planning Commission, Milwaukee County Department of Transportation and Public Works, the Milwaukee County Transit System (MCTS), and the Study Advisory Committee reviewed the findings of the performance evaluation and the public comments and identified several high-priority improvements. Given the short-term nature of the plan, staff focused on service improvements that would make transit more competitive with travel by private automobile and address the public comments, and be feasibly implemented over a five-year period:

- Extending routes to unserved areas in Milwaukee County with significant population or employment concentrations;

- Reducing transit travel times by converting major local routes to express routes and by adjusting Freeway Flyer service;
- Increasing the frequency of service to provide for desirable headway levels on more routes; and
- Expanding weekday and weekend service periods to provide for desirable hours of service on more routes.

The preceding priorities are reflected in the proposed service improvements under both Alternatives 1 and 2, as described in the following sections. Alternative 3, which would maintain the transit system at 2008 service levels, represents a baseline for comparison against the other alternatives.

Alternative 1: Extensive Service Expansion

Of the three potential service improvement plans, Alternative 1 represents the most aggressive attempt to address the priorities for service improvements identified above. Overall, the plan would do the following:

- Expand fixed-route bus service by about 22 percent (4 percent per year) from 1,340,000 bus hours budgeted for 2008, to 1,629,000 bus hours in 2013. This service level would be about 1 percent below the 1,650,000 bus hours provided in 2000, the year before the County started to reduce transit service;
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership) from 423,000 vehicle hours provided in 2008, to 437,000 vehicle hours in 2013; and,
- Boost annual ridership by an estimated 10 percent, from 42.8 million (in 2008 budget) to 47.1 million in 2013.

The specific service improvements proposed under Alternative 1 are identified below. Table 47 summarizes the increases in vehicle hours of service associated with each service improvement.

Add New Local Routes and Adjust Alignments of Existing Local Bus Routes

To address the unmet needs for service in the far northern, western, and southern portions of the County, Alternative 1 would extend several bus routes and add several new routes, as displayed in Map 51. The proposed changes to the local bus routes would provide the following:

- An east-west route to serve the commercial and office development along Brown Deer Road;
- Better transit service coverage in north-central and western Milwaukee County;
- An extension of local bus service to the Village of Hales Corners;
- An extension of local bus service to industrial and office parks in Franklin and Oak Creek; and,
- Improved connectivity between transit system routes and ease in transferring between routes.

The route additions and extension improvements outlined above represent a service increase of about 60,000 additional annual bus hours, or 4 percent, over year 2008 levels.

Convert Local Bus Service to Express Bus Service in Three Corridors

Alternative 1 proposes converting high-ridership local bus routes into three express bus routes in order to improve transit travel times. Map 52 displays the three proposed express bus routes along with proposed changes to the five local bus routes that would be affected. All routes would operate between 5:00 a.m. and 1:00 a.m. seven days a week, with frequent service. Buses would arrive every 7-10 minutes during weekday peak periods; every 9-16 minutes during weekday off-peak periods; and every 10-20 minutes on weekends.

- Route 10/30X would run from the Milwaukee Regional Medical Center in Wauwatosa to the University of Wisconsin-Milwaukee (UWM) over portions of Route Nos. 10 and 30. This route could also be extended north on Oakland Avenue to the intersection of Oakland Avenue and Kensington Boulevard in Shorewood.

Table 47

**TRANSIT SERVICE IMPROVEMENTS PROPOSED UNDER ALTERNATIVES
1 AND 2 FOR MILWAUKEE COUNTY TRANSIT SYSTEM BUS ROUTES: 2009-2013**

Service Description	Alternative 1		Alternative 2	
	Estimated Annual Vehicle Hours	Percent Change from 2008 Vehicle Hours	Service Description	Estimated Annual Vehicle Hours
Existing 2008 Bus Service.....	1,340,000	- -	1,340,000	- -
Increment for Potential Service Improvements				
New Local Routes and Route Extensions.....	52,000	3.9	52,000	3.9
Convert Local Bus to Express Bus Service ^a	54,000	4.0	54,000	4.0
Upgrade Freeway Flyer Bus Service	32,000	2.4	24,000	1.8
Remove Bus Turn-backs on Selected Local Routes ^b	20,000	1.5	8,000	0.6
Expand Service Hours on Local Routes to Desirable Service Levels ^c	13,000	1.0	5,000	0.4
Reduce Headways on Local Routes to Desirable Service Levels ^c	118,000	8.8	57,000	4.3
Total Increment	289,000	21.6	200,000	15.0
Total 2013 Bus Service Under Alternative	1,629,000	- -	1,540,000	- -

^aUnder Alternatives 1 and 2, new express routes would replace existing local bus service between the points identified on Map 52 except along Wisconsin Avenue between N. 35th Street and Cass Street where local service over Route No. 30 would be continued.

^bUnder Alternative 1, bus turn-back points would be eliminated from weekday, Saturday, and Sunday service schedules. Under Alternative 2, bus turn-back points would be eliminated only from weekday service schedules.

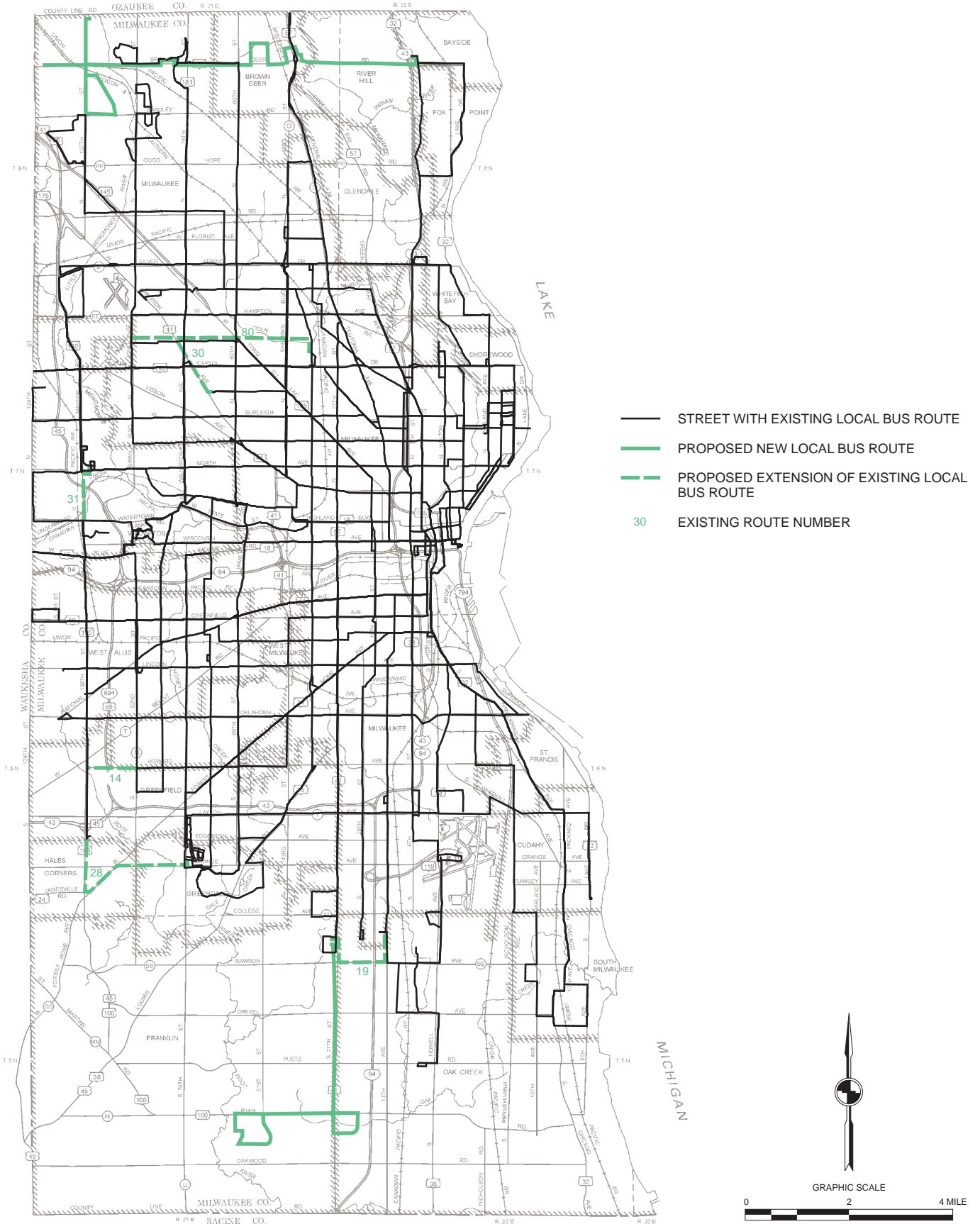
^cUnder Alternative 1, service hours and frequencies on the 15 highest-ridership local routes would be increased for both weekday and weekends in addition to the express bus routes. Under Alternative 2, service hours and frequencies on the 10 highest-ridership local routes would be increased only on weekdays, in addition to the express bus routes.

Source: Milwaukee County Transit System and SEWRPC.

- Route 18/23X would operate between Summit Place (S. 70th St. and W. Greenfield Avenue) and Midtown Center (N. 60th Street and Fond du Lac Avenue) over portions of Route Nos. 18 and 23.
- Route 27X would be a north-south route between the Bayshore Shopping Center and Wal-Mart (S. 27th Street and Sycamore Street) over the entire length of Route No. 27, with the addition of an extension to the Bayshore Shopping Center. This route could also be extended south to the Northwestern Mutual Life Insurance Co. campus at S. 27th Street and W. Drexel Avenue, or to the Wheaton Franciscan Medical Center at 10101 S. 27th Street.
- A possible fourth express bus route, also shown on Map 52, would be Route 11X running from the near north side at W. Capitol Drive and Holton Street through downtown to Milwaukee County's General Mitchell International Airport. The City of Milwaukee has indicated that the airport deserves consideration for express service.

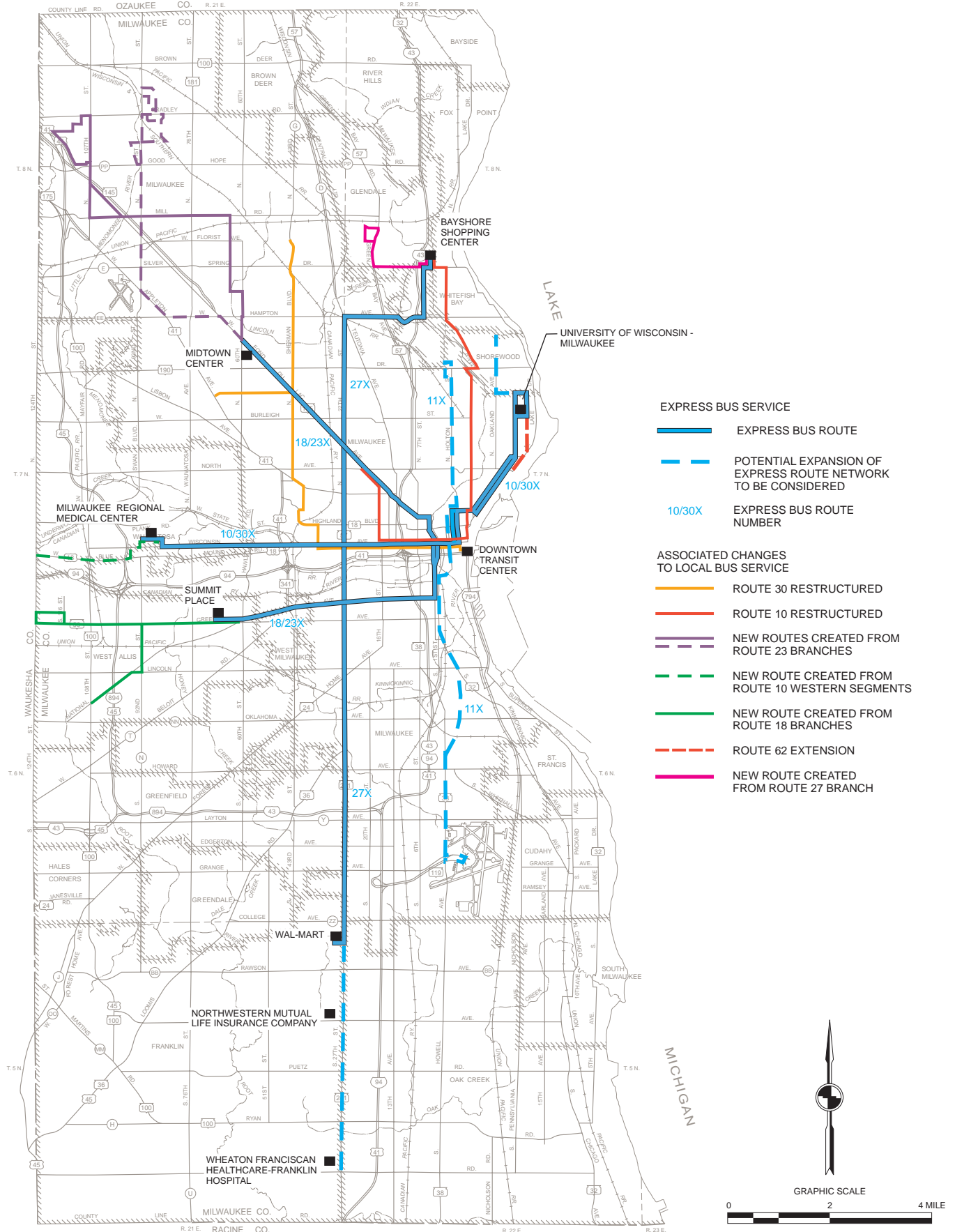
The proposed express service represents an incremental move—achievable within a five-year planning period—toward a faster transit system. A basic level of express service would be created by eliminating infrequently used stops to achieve stop spacing of one-quarter mile outside downtown Milwaukee. The conversion to express service would retain the most frequently used stops (representing about 80 percent of current passenger boardings and alightings on local routes). The express service could be upgraded to bus rapid transit (BRT) service similar to proposals that have been advanced by the Milwaukee County Executive and the City of Milwaukee Mayor. Enhancements to upgrade express bus service to BRT service would include exclusive bus lanes, transit priority at traffic signals, next-bus information displays, buses of a different design or with special markings and paint schemes, and specially designed bump-out bus stops potentially with other amenities such as high platforms for level passenger loading. The upgrading of express bus routes to BRT could also entail some route realignment

**CHANGES TO THE LOCAL BUS ROUTES OF THE MILWAUKEE
COUNTY TRANSIT SYSTEM PROPOSED UNDER ALTERNATIVES 1 AND 2**



Map 52

**EXPRESS BUS ROUTES FOR THE MILWAUKEE COUNTY
TRANSIT SYSTEM PROPOSED UNDER ALTERNATIVES 1 AND 2**



Source: Milwaukee County Transit System and SEWRPC.

and wider stop spacing, along with re-introduction of local bus service. The possibility of incorporating some of the BRT enhancements into the initial express bus route—including signal priority, minor street redesign at bus stops, and using buses with special paint schemes—may be explored as the express routes are moved into implementation. Two projects that would implement BRT services closely following the alignments of express bus Routes 18/23X and 10/30X shown in Map 52 are currently under development by Milwaukee County.

Local bus service would be retained over the non-express portions of the affected local routes through new or restructured routes, as indicated on Map 52 and summarized below:

- A new route with two branches would be created from Route 18 to serve Greenfield Avenue and National Avenue west of S. 92nd Street.
- Two new routes would be created from the Route 23 branches serving the Bradley Woods Business Park and the Park Place Business Park.
- Route 10 would be restructured, retaining the eastern segments from Fond du Lac Avenue and North Avenue, through downtown Milwaukee and north to Bayshore Mall. A new local route would be created along the section of Route 10 that currently serves Bluemound Road west of the Milwaukee Regional Medical Center.
- Route 30 would still operate on Sherman Boulevard and Wisconsin Avenue, but would terminate in downtown Milwaukee instead of continuing to the University of Wisconsin-Milwaukee campus. The Downer Avenue portion of Route 30 would be replaced by an extension of Route 62.
- A new shuttle route from Bayshore Mall would provide service to Glendale Industrial Park (formerly served by Route 27).

The express services described above represent a service increase of about 54,000 additional annual bus hours, or 4 percent, over year 2008 levels. Because the express services will replace the existing local bus service, the additional annual bus hours needed are solely due to the improved service frequency. The potential express route extensions and the potential fourth express route serving the airport would add about 17 miles to the 40 miles of proposed express route, representing about a 43 percent increase in the total miles of proposed express route.

Upgrade Freeway Flyer Service

Expanded freeway flyer service would address the sharp increase in ridership on those routes in recent years, ensure the routes meet the service standard that all passengers have a seat, and improve transit travel times. Alternative 1 proposes these improvements:

- Provide a minimum of 10 bus trips over each freeway flyer route during weekday morning and afternoon peak periods;
- Create one new freeway flyer route so that each route stops at no more than two park-and-ride lots (a service standard); and,
- Add two midday round-trips to each freeway flyer route.

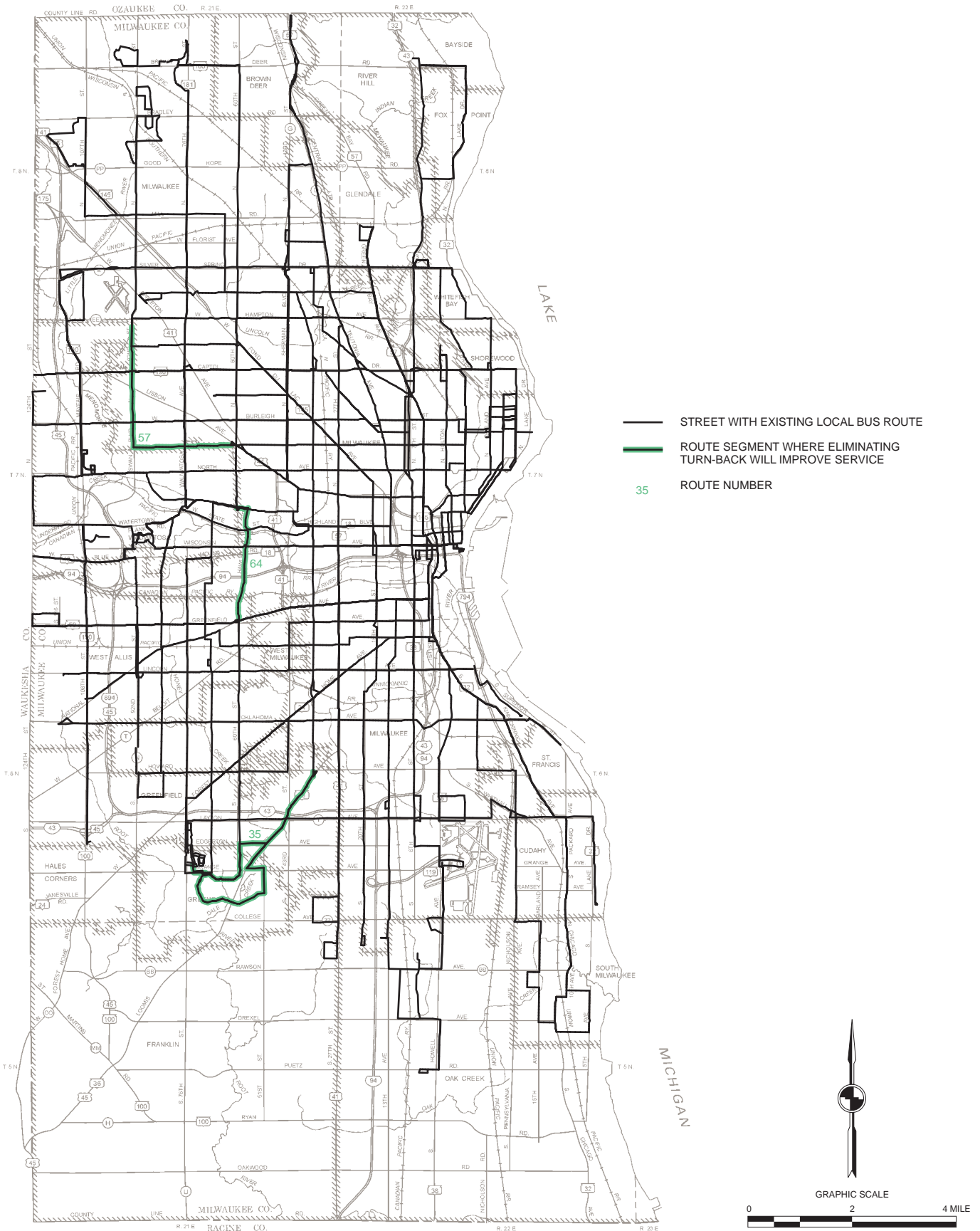
The freeway flyer services described above represent a service increase of about 32,000 additional annual bus hours, or 2 percent, over year 2008 levels.

Eliminate Bus Turn-back Points along Selected Routes

Many bus routes in Milwaukee County have “turn-back points”, points where some of the buses turn around before reaching the terminus of the route. Transit systems use turn-back points to efficiently provide more frequent service on the higher-ridership portions of routes. However, the turn-backs result in infrequent service—often not meeting standards—over the outer segments of the routes. The change proposed in Alternative 1 would provide consistent service levels on weekdays and weekends over the entire lengths of Routes 35, 57, and 64. Map 53 displays the affected route segments. The elimination of bus turn-backs on the identified routes represents a service increase of about 20,000 additional annual bus hours, or 1.5 percent, over year 2008 levels.

Map 53

**LOCAL ROUTE SEGMENTS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE
TURN-BACKS ARE PROPOSED TO BE ELIMINATED UNDER ALTERNATIVES 1 AND 2**



Source: Milwaukee County Transit System and SEWRPC.

Provide Desirable Headways on 15 Local Routes

Earlier in the study, the Advisory Committee established standards for “headways”, or the amount of time between bus arrivals at a stop. According to the standards, buses should arrive no more than 10 minutes apart during weekday peak periods; no more than 20 minutes apart during weekday off-peak periods; and no more than 30 minutes apart on weekends. Currently, only a small area in the central portion of the County is served by local routes meeting the weekday standards for desirable headways. Alternative 1 would increase service frequencies to attain desirable headways on the 15 highest-ridership local routes, in addition to the five routes converted to express service. Map 54 displays the affected route segments for weekdays, Saturdays, and Sundays. The provision of desirable headways on 15 routes represents a service increase of about 118,000 additional annual bus hours or 8 percent over year 2008 levels.

Provide 20 Hours of Service a Day on Weekdays and Weekends

Lengthening bus route schedules to the number of hours specified in the service standards—20 hours a day—would address unmet needs for longer service hours identified in both the performance evaluation and in public comments. Bus routes operating from approximately 5:00 a.m. to 1:00 a.m. permit travel to and from all three traditional work shifts. Most local routes (25 of 30) currently operate 20 hours a day on weekdays, but only half (14 of 30) do on Saturdays, and about a third (nine of 30) do on Sundays. Alternative 1 would improve the weekday schedules for Routes 35 and 80 to provide service on the southern portion of their routes during morning and evening periods. On Saturdays and Sundays, Alternative 1 would lengthen route schedules to attain the desired service hours on the 15 highest-ridership local routes, and the five routes converted to express service. Map 55 displays the affected route segments for weekdays, Saturdays, and Sundays. The provision of desirable service hours on 15 routes represents an increase of about 13,000 additional annual bus hours, or 1 percent over year 2008 levels.

Alternative 2: Limited Service Expansion

Alternative 2 represents a scaling back of the proposals in Alternative 1, but would still address most of the priorities for service improvements. Overall, Alternative 2 would do the following:

- Expand fixed-route bus service by about 15 percent (3 percent per year) starting from the 1,340,000 bus hours provided in 2008 and increasing to 1,540,000 bus hours in 2013. This service level would be about 5 percent below the 1,650,000 bus hours provided in 2000, the year before the County started to reduce transit service;
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership) from 423,000 vehicle hours provided in 2008, to 437,000 vehicle hours in 2013; and,
- Boost annual ridership by an estimated 6 percent, from 42.8 million (in 2008 budget) to 45.3 million in 2013.

The specific service improvements proposed under Alternative 2 are identified below.

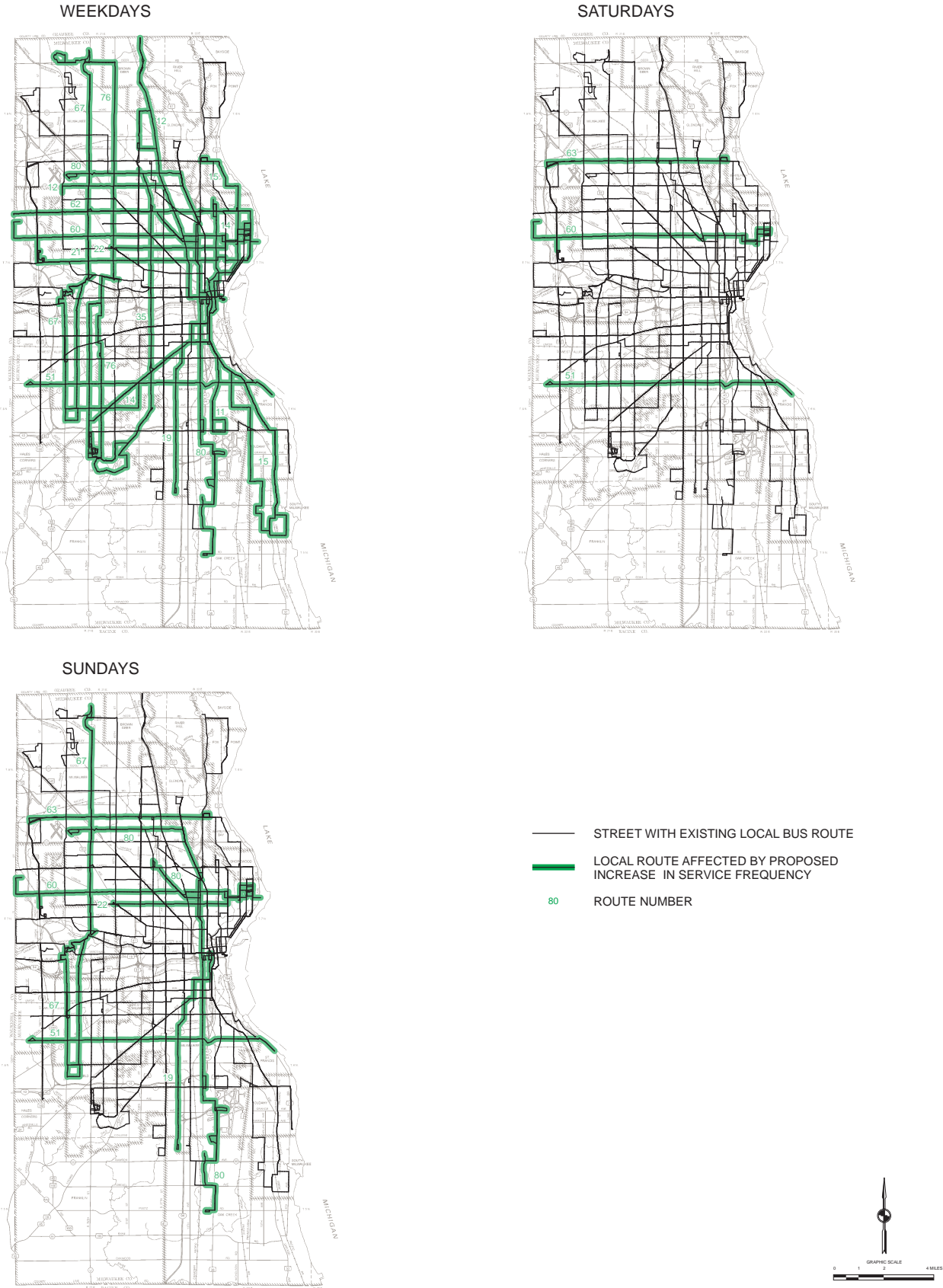
Add Same New Local Routes, Route Adjustments, and Express Bus Services as Proposed in Alternative 1

For these service aspects, Alternative 2 proposes exactly the same service as Alternative 1:

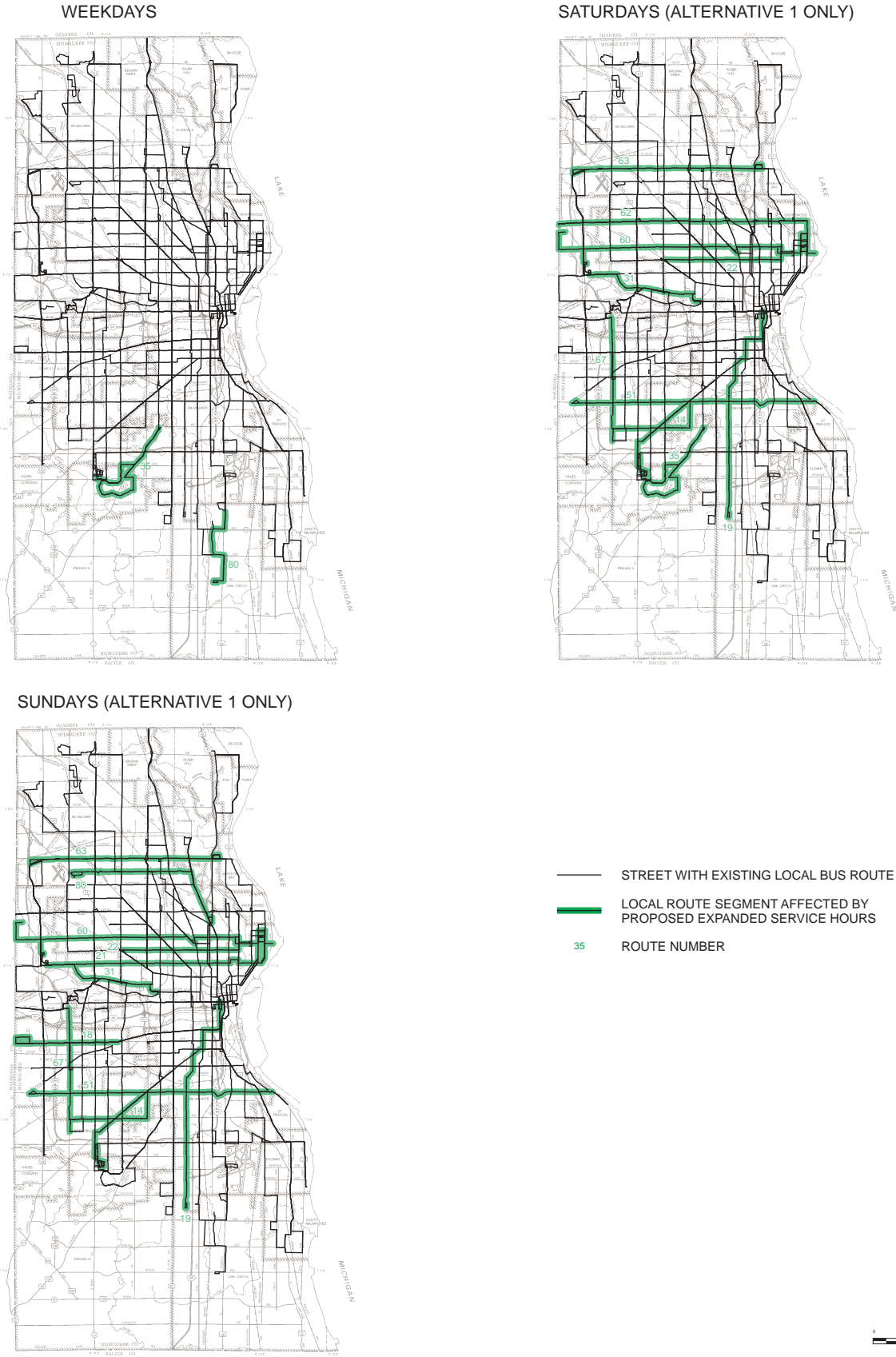
- Extension of several bus routes and addition of several new routes, as displayed in Map 51. The new routes represent a service increase of about 60,000 additional annual bus hours, or 4 percent, over year 2008 levels.
- Conversion of high-ridership local bus routes into three express bus routes in order to improve transit travel times as displayed in Map 52. The express routes represent a service increase of about 54,000 additional annual bus hours, or 4 percent, over year 2008 levels. Because the express services will replace the existing local bus service, the additional annual bus hours needed are solely due to the improved service frequency. Potential express route extensions and a potential fourth express route serving the airport (as described under Alternative 1) would add about 17 miles to the 40 miles of proposed express routes, representing about a 43 percent increase in the total miles of proposed express routes.

Map 54

LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE SERVICE FREQUENCY IS PROPOSED TO BE INCREASED UNDER ALTERNATIVE 1 (OUTSIDE OF EXPRESS BUS CORRIDORS)



**LOCAL ROUTE SEGMENTS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM
WHERE SERVICE HOURS ARE PROPOSED TO BE EXPANDED UNDER ALTERNATIVES 1 AND 2**



Upgrade Freeway Flyer Service Without Adding Midday Service

Alternative 2 proposes the same freeway flyer service expansion as in Alternative 1, but without adding new midday bus trips:

- A minimum of 10 bus trips over each freeway flyer route during weekday morning and afternoon peak periods; and,
- The creation of one new freeway flyer so that each route stops at no more than two park-and-ride lots (a service standard).

The freeway flyer services described above represent a service increase of about 24,000 additional annual bus hours, or 2 percent, over year 2008 levels.

Eliminate Bus Turn-Back Points Only During Weekdays

Alternative 2 proposes eliminating turn-backs to provide consistent service levels only on weekday schedules over Routes 35, 57, and 64. Unlike Alternative 1, bus turn-backs would remain on weekend schedules. Map 53 displays the affected route segments. The elimination of weekday bus turn-backs represents a service increase of about 8,000 additional annual bus hours, or 0.6 percent, over year 2008 levels.

Provide Desirable Headways on 10 Local Routes

Alternative 2 would increase service frequencies to attain desirable headways on the 10 highest-ridership local routes, in addition to the five routes converted to express service. Map 56 displays the affected route segments. The provision of desirable headways on 10 routes represents a service increase of about 57,000 additional annual bus hours, or 4 percent, over year 2008 levels.

Provide 20 Hours of Service a Day on Weekdays

Alternative 2 would ensure that bus schedules operate at least 20 hours a day on weekdays, but not on weekends. Because most routes (25 of 30) already meet that standard on weekdays, only the schedules for Routes 35 and 80 would be adjusted to provide service on the southern portion of their routes during weekday morning and evening periods. Map 55 displays the affected route segments. The provision of desirable service hours on weekdays represents an increase of about 5,000 additional annual bus hours, or 0.4 percent, over year 2008 levels.

Alternative 3: Maintain Existing System

Alternative 3 represents a “no expansion” approach. Under this alternative, the transit system would maintain fixed-route bus service at the existing 2008 levels. Overall, Alternative 3 would do the following:

- Maintain fixed-route bus service at the 1,340,000 bus hours budgeted for 2008;
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership) from 423,000 vehicle hours provided in 2008, to 437,000 vehicle hours in 2013; and,
- Depress annual ridership by an estimated 5 percent, from the 42.8 million estimated in the 2008 budget to 40.5 million in 2013, due to the fare increases that were assumed for all scenarios.

Table 48 compares the proposed service expansions, equipment needs, and estimated ridership under Alternatives 1, 2, and 3.

COSTS AND FUNDING

Capital Needs for Alternatives 1, 2, and 3

Regardless of which alternative service plan is selected, significant capital investments must occur over the next five years to maintain the existing transit system equipment and facilities. All the proposals would require the following capital investments:

Map 56

LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE SERVICE FREQUENCY IS PROPOSED TO BE INCREASED UNDER ALTERNATIVE 2 (OUTSIDE OF EXPRESS BUS CORRIDORS)

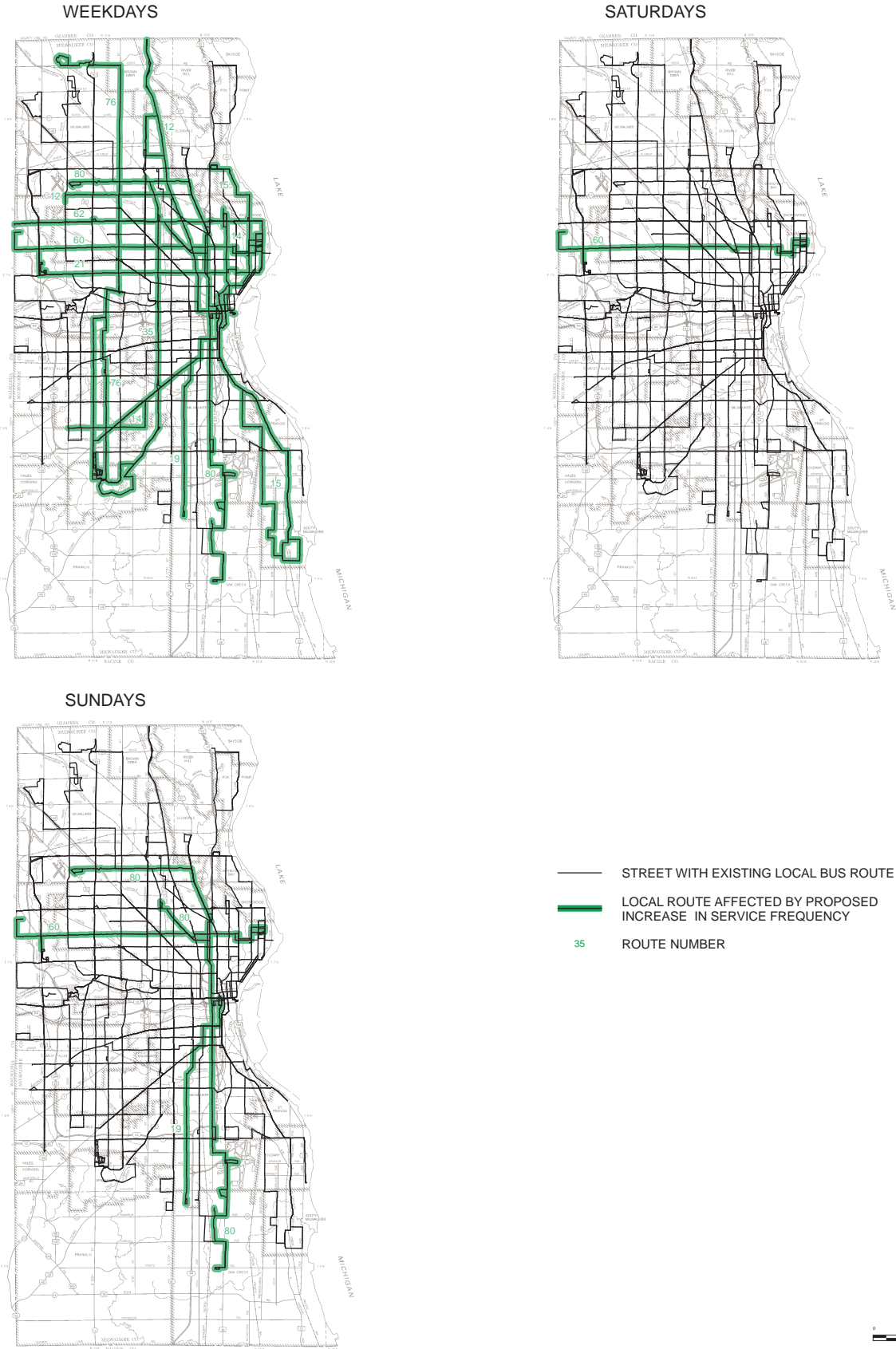


Table 48

**COMPARISON OF SERVICE LEVELS, CAPITAL NEEDS, AND
ESTIMATED RIDERSHIP UNDER ALTERNATIVES 1, 2, AND 3**

Service Characteristic	Alternative 1: Extensive Service Expansion	Alternative 2: Limited Service Expansion	Alternative 3: Maintain Existing System
Fixed-Route Service (Annual Vehicle Hours, Year 2013)	1,629,000	1,540,000	1,340,000
Percent increase over 2008	22	15	--
Average Annual Percent Increase	4	3	--
Transit Plus Paratransit Service (Annual Vehicle Hours, Year 2013)	437,000	437,000	437,000
Percent increase over 2008	3	3	3
Estimated Total Annual Bus and Paratransit Ridership (Year 2013)	47.1 million	45.3 million	40.5 million
Percent Increase over 2008	10	6	-5
Expansion of Transit Service Area	New routes and route extensions to northern and southern portions of County	New routes and route extensions to northern and southern portions of County	No change
Express Bus Routes	3 express bus routes	3 express bus routes	No express routes
Freeway Flyer Service	10 freeway flyer routes Each route would make 10 trips every morning and afternoon. Two midday round trips on each route	10 freeway flyer routes Each route would make 10 trips every morning and afternoon.	9 freeway flyer routes Routes make between 4 and 10 trips every morning and afternoon.
Turn-back Points on Local Routes	Eliminate turn-backs on weekdays and weekends	Eliminate turn-backs on weekdays only	No change
Headway Improvements	15 local routes and 3 new express bus routes would meet headway standards for all time periods	10 local routes and 3 new express bus routes would meet headway standards for all time periods	3 local routes meet headway service standards for all time periods
Hours of Service	Expand weekday hours on parts of Routes 35 and 80. Provide 20 hours of service on Saturdays and Sundays on 15 local routes (in addition to express buses)	Expand weekday hours on parts of Routes 35 and 80.	No change
Bus Fleet Purchase Requirements	204 buses to replace aging fleet plus 75 buses to expand fleet	204 buses to replace aging fleet plus 60 buses to expand fleet	204 buses to replace aging fleet

Source: SEWRPC.

- A total of 204 buses to replace part of the current aging fleet. This figure includes the 150 replacement buses already in the 2008 transit system budget;
- Replacement fareboxes to be installed in the existing bus fleet;
- Bicycle racks to be placed on the existing bus fleet;
- Various repairs, renovations, and upgrades to MCTS facilities (currently scheduled in the transit system's capital expenditure program); and,
- Various transit enhancement projects such as improving bus stops, adding bus shelters, and adding accessibility features to make it easier for disabled persons to use bus services and facilities.

Table 49

**PROPOSED CAPITAL EXPENDITURES FOR THE MILWAUKEE
COUNTY TRANSIT SYSTEM UNDER ALTERNATIVES 1, 2, AND 3**

Capital Equipment/Project	Average Annual Capital Expenditure: 2003-2007	Alternative 1: Extensive Service Expansion		Alternative 2: Limited Service Expansion		Alternative 3: Maintain Existing System	
		Five-Year Total	Average Annual Capital Expenditure	Five-Year Total	Average Annual Capital Expenditure	Five-Year Total	Average Annual Capital Expenditure
Bus Fleet							
Bus Replacement/Rehabilitation....	\$3,408,000	\$ 76,415,000	\$15,283,000	\$ 76,415,000	\$15,283,000	\$76,415,000	\$15,283,000
Buses for Fleet Expansion: 75 for Alternative 1, 60 for Alternative 2	--	28,125,000	5,625,000	22,500,000	4,500,000	--	--
Subtotal	\$3,408,000	\$104,540,000	\$20,908,000	\$ 98,915,000	\$19,783,000	\$76,415,000	\$15,283,000
Fareboxes for the Existing and Expanded Bus Fleet	--	\$ 6,013,000	\$ 1,202,600	\$ 5,810,000	\$ 1,162,000	\$ 5,000,000	\$ 1,000,000
Bicycle Racks for Existing and Expanded Bus Fleet.....	--	751,000	150,200	732,000	146,400	650,000	130,000
Facility Repair and Renovation	\$ 687,000	6,600,000	1,320,000	6,600,000	1,320,000	6,600,000	1,320,000
Other Projects ^a	50,000	944,000	188,800	953,000	190,600	994,000	198,800
Total	\$4,145,000	\$118,848,000	\$23,769,600	\$113,010,000	\$22,602,000	\$89,659,000	\$17,931,800
Sources of Capital Funding							
Federal ^b	\$3,338,400	\$ 98,214,300	\$19,642,900	\$ 93,375,600	\$18,675,100	\$74,019,700	\$14,803,900
Local (Milwaukee County).....	806,600	20,633,700	4,126,700	19,634,400	3,926,900	15,639,300	3,127,900

^aAt least 1 percent of the County's annual allocation of Federal Section 5307 formula transit assistance funds must be spent annually on "transit enhancement" projects that include equipment or activities designed to enhance transit services or use. Such projects include the bicycle racks noted above as well as bus shelters, signage, landscaping, bicycle storage lockers, improving transit access to parks, and actions that improve the ability of disabled individuals to use public transit. The costs shown on this line represent the expenditures needed under each alternative in addition to those for the bicycle racks to meet this Federal requirement. The amount shown is based on the assumed levels of Federal Section 5307 formula transit assistance funds under the average scenario for future funding levels.

^bAssumes 80 percent Federal share for all capital projects except bus purchases, for which 83 percent was assumed (to account for 90 percent Federal share for ADA-related bus accessibility features)

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Both Alternatives 1 and 2 would also require additional capital investments to implement the proposed service improvements:

- Additional buses and fareboxes to expand the fleet to provide service over new or extended routes and operate with lower headways. Alternative 1 would require 75 additional buses; Alternative 2 would require 60.
- Bicycle racks for the additional buses (75 for Alternative 1; 60 for Alternative 2).

Table 49 compares the capital investment required for each of the alternatives, as well as the projected breakdown between Federal and local funding. Assuming Milwaukee County will prioritize the use of limited Federal funds first for necessary capital projects, the Federal share for capital funding of each of the alternatives is approximately 80 percent. Milwaukee County's projected local share for the necessary capital investments would be \$20.6 million over the five year period to implement the extensive service expansion in Alternative 1, \$19.6 million for the limited service expansion in Alternative 2, and \$15.6 million to maintain the existing system in Alternative 3.

Factors and Assumptions in Considering Funding Needs

In order to forecast the costs and local funding needs for each of the three transit service improvement alternatives, Commission staff studied factors that affect the transit system budget. The factors, along with their trends, are listed below.

- Operating Expense per Vehicle Hour of Service. Operating expense per vehicle hour increased by 2.8 percent annually between 1995 and 2000 (during system expansion) and by 5.2 percent annually between 2001 and 2007 (during system contraction).

- State Operating Assistance. Annual operating assistance provided by the Wisconsin Department of Transportation through the Section 85.20 program has covered between 39 and 43 percent of the operating expenses for the transit system in recent years. The amount of Section 85.20 funding received by Milwaukee County increased by 5.2 percent annually from 1995 to 2000 (during system expansion) and by 1.7 percent annually from 2001 to 2007 (during system contraction).
- Federal Formula Funds. The Federal Transit Administration (FTA) provides annual allocations of Section 5307 formula funds, which are intended for capital purchases but may be used for the maintenance elements of operating expenses. These funds covered about 13 percent of transit system operating expenses in 2007. In the late 1990's, Milwaukee County accumulated a "bank" of about \$40 million in unused Section 5307 funds. In an attempt to avoid service cuts, since 2000 the banked allocations have been used to pay for operating expenses and capital projects, leaving less than \$9 million at the end of 2007. The County's annual allocation of new FTA Section 5307 funding has fluctuated between \$17 million and \$19 million over the past eight years.
- Capital Needs and Federal Earmark Funds. From 1999 to 2003, Milwaukee County received about \$5.1 million annually in Federal earmarks through the FTA Section 5309 program, which provided the bulk of bus replacement funding. In 2004-05, the County received about \$3.1 million annually; by 2006-07, Federal earmarks dropped to \$1.5 million per year. The County will need to replace 204 buses between 2010 and 2013, which will require a total of \$63.4 million in Federal funds. The current levels of earmark funds and banked Section 5307 formula funds are not sufficient to fund the County's bus replacement needs. Therefore, the annual allocation of Section 5307 funding (now used for operating expenses) will need to be used for bus replacements. This in turn will require more local funds to cover operating expenses.
- Transit Fares. Between 2003 and 2008, the transit system has raised transit fares by about 25 percent. Bus and paratransit fares are expected to increase with inflation in the next five years, and ridership is assumed to decrease 0.3 percent for every 1 percent increase in fares, in accordance with the Simpson-Curtin rule of transit fare elasticity, a commonly used tool in the transit industry for estimating the impacts of changes in transit fares on ridership.

Operating Funding Needs of Alternative Service Plans

Using the recent trends of the above factors that affect transit funding needs, Commission staff prepared ranges of future projected values for the factors. These projected values were used to develop three funding scenarios, as displayed in Table 50:

- "Best-case scenario", which assumes low increases in operating cost per revenue hour of transit service, and high levels of Federal and State funding assistance;
- "Average scenario", which assumes average increases in operating costs per revenue hour of transit service, and average levels of Federal and State funding assistance; and,
- "Worst-case scenario", which assumes high increases in operating costs per revenue hour of transit service, and low levels of Federal and State funding assistance.

Those three funding scenarios were then used to calculate the possible range of operating costs and the public funds needed for each of the three transit service improvement alternatives. Nine tables in Appendix D present a thorough estimate of the annual operating costs, revenues, and assistance for each alternative and each funding scenario. A summary of this information is shown in Table 51, which presents the potential range of operating costs in year 2013 under all alternatives. Depending on the change in operation costs under each scenario, by 2013, Alternative 1 (Extensive Service Expansion) could require annual operating assistance of as little as \$153.8 million, or as much as \$187.4 million; while Alternative 3 (Maintain Existing System) could require as little as \$128.0 million, or as much as \$155.7 million.

Table 51 also presents the estimated Federal, State, and local share of operating assistance under each alternative and scenario. Depending on the amount of Federal and State funding that is available for operating assistance,

Table 50

ESTIMATES OF FACTORS THAT DETERMINE FUTURE TRANSIT FUNDING NEEDS OVER THE PERIOD 2008-2013

Factor Used to Measure Future Funding Needs	Range of Possible Future Values		
	Worst-Case Scenario	Average Scenario	Best-Case Scenario
Annual Increase in Transit System Operating Costs Per Vehicle Hour	5 percent	3 percent	2 percent
Annual Increase in State Operating Assistance	2 percent	3 percent	4 percent
Annual Increase in Federal Formula Funds	1 percent	2 percent	3 percent
Annual Amount of Federal Earmark Funds	\$2 million	\$5 million	\$8 million
Replacement of 204 Buses	Will require a total of \$63.5 million in Federal funds from 2010 to 2013		
Transit Fares	Expected to increase with inflation (15 percent total over 5 years)		

Source: SEWRPC.

Table 51

ESTIMATED RANGE OF FORECAST YEAR 2013 OPERATING COSTS FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM UNDER ALTERNATIVES 1, 2 AND 3

Characteristic	Year 2008 Budgeted Costs ^a	Year 2013 Operating Costs (in Millions) for Best-Case, Average, and Worst-Case Scenarios ^b								
		Alternative 1: Extensive Service Expansion			Alternative 2: Limited Service Expansion			Alternative 3: Maintain Existing System		
		Best Case	Average	Worst Case	Best Case	Average	Worst Case	Best Case	Average	Worst Case
Costs and Revenues										
Operating Expenses	\$163.8	\$215.2	\$226.0	\$248.8	\$204.9	\$215.2	\$236.9	\$181.7	\$190.8	\$209.4
Passenger and Other Revenues ^c	50.8	61.4	61.4	61.4	59.3	59.3	59.3	53.7	53.7	53.7
Required Operating Assistance	113.0	153.8	164.6	187.4	145.6	155.9	177.6	128.0	137.1	155.7
Sources of Assistance										
Federal	\$ 25.2	\$ 15.5	\$ 11.6	\$ 3.7	\$ 15.5	\$ 11.6	\$ 4.8	\$ 15.6	\$ 11.6	\$ 7.6
State	65.6	79.8	76.0	72.4	79.8	76.0	72.4	79.8	76.0	72.4
Milwaukee County ^d	22.2	58.5	77.0	111.3	50.3	68.3	100.4	32.6	49.5	75.7

^aAll data for 2008 reflect the adopted operating budget for the Milwaukee County Transit System.

^bThe assumptions used to prepare the financial forecasts through the year 2013 are identified in Table 50.

^cPassenger revenues vary with the ridership projected for the transit system with the service improvements proposed under each alternative. Ridership and passenger revenues do not vary among the best, average, and worst case funding scenarios for an alternative.

^dNo constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.

Source: Milwaukee County Transit System and SEWRPC.

Milwaukee County's share of operating expenses could increase greatly by 2013. In 2008, Milwaukee County used \$22.2 million from the property tax levy for transit operating expenses. Even if the County were to simply maintain the existing system (Alternative 3), by 2013 it would have to contribute \$75.7 million of property tax levy for transit operating expenses under the worst-case scenario, \$49.5 million under the average scenario, and \$32.6 million under the best-case scenario.

OPTIONS FOR DEDICATED FUNDING FOR TRANSIT

Given the estimates of operating expenses and the potential local share needed as explained above, Milwaukee County cannot, even in the short term, continue to rely on the local property tax levy to fund the transit system. Various proposals for dedicated funding for transit have been advanced by public officials in recent years. Some

officials have proposed that the growth in the existing sales tax collected on vehicle-related purchases be diverted from the State general fund and used for funding transit. The Southeastern Wisconsin Regional Transportation Authority has investigated many funding options for public transit and commuter rail services, including levying a 0.5 percent additional local sales tax. Because these two possibilities are among the most discussed options, they are described below.

Funding Option A: Future Growth in Sales Tax on Vehicle Sales

Under this proposal, State legislation would be required to take the incremental growth in the current sales tax on motor vehicle-related purchases and designate it for mass transit. However, Wisconsin Department of Revenue data indicate that statewide sales tax revenues on vehicle-related purchases declined from \$675 million in 2003, to \$630 million in 2006, an average annual decrease of 2.2 percent. In Milwaukee County, sales tax revenues on vehicle-related purchases declined by 2.3 percent annually over this same period. Thus, in recent years there has been no vehicle sales tax revenue growth to capture.

Furthermore, this proposal would entail the removal of future revenue from the general fund of the State budget, which has been running a substantial deficit. Moreover, obtaining approval of the use of these funds to replace local property tax funds of public transit can be expected to be very difficult, because it would eliminate any local funding of public transit under a Wisconsin “transportation responsibility structure” in which transit has historically been considered to be a local responsibility. Lastly, to provide adequate funding to meet Milwaukee County transit needs, Milwaukee County would need to receive substantially more than the growth in vehicle-related sales tax generated in Milwaukee County alone, even during periods when such revenue growth was observed.

Funding Option B: Dedicated Sales Tax of 0.5 Percent

Under this option, an additional 0.5 percent sales tax would be levied to raise revenues for the transit system. Based upon an extension of County sales tax collections from 2002 to 2007, a 0.5 percent sales tax in Milwaukee County would generate \$66.7 million for public transit in 2009 and \$72.2 million by 2013.

Table 52 displays the revenue that would be generated by a 0.5 percent sales tax in Milwaukee County, compared to the local share of the combined operating and capital funding needs of Alternatives 1, 2 and 3 under the average scenario. Public transit local funding needs over the next five years may be expected to increase faster than projected local sales tax revenues. This is due in part to the need to address long-deferred bus replacement and, under the expansion alternatives, an aggressive 15 to 22 percent expansion of service proposed to be implemented over only five years. However, it is also due to the expectation that transit system operating costs per vehicle hour of service may be expected to increase by 3 percent annually, while Federal, State, and local (sales tax) revenues are only projected to increase by about 2 percent annually, based on the trend of the past five years. This indicates a need to adopt strategies to aggressively use available Federal funding—such as Federal Highway Administration Congestion Mitigation and Air Quality (CMAQ) or Surface Transportation Program (STP)-Milwaukee Urbanized Area funds—to reduce local funding needs and a need to “bank” excess sales tax funds in early years to address this concern, until economic conditions improve and sales tax revenues begin to increase at 3 to 4 percent annually as they did in the 1990’s. The projections indicate potential surpluses under each alternative through 2013. This is a conservative assessment, as it assumes no additional Federal funds beyond Federal formula and limited discretionary funds.

SUMMARY

The proposed transit service improvement alternatives were developed to address the unmet needs identified in the transit system performance evaluation in Chapter V, and the concerns expressed in the public comments received regarding the transit development plan. In general, the public comments were supportive of public transit and confirmed the unmet needs identified in the transit system performance evaluation.

Table 52

**PROJECTED REVENUE GENERATED BY A 0.5 PERCENT LOCAL SALES TAX, COMPARED TO
MILWAUKEE COUNTY SHARE OF TRANSIT SYSTEM FUNDING UNDER THE "AVERAGE" SCENARIO**

Service Improvement Alternative	Milwaukee County Share of Expenses (in Millions)						
	2008 Budget	2009	2010	2011	2012	2013	Total
Alternative 1, Extensive Expansion							
Operating Expenses, "Average Scenario"	--	\$36.1	\$57.9	\$64.8	\$69.3	\$77.0	\$305.1
Capital Expenses	--	3.2	7.2	3.8	2.8	3.6	20.6
Total County Share	--	\$39.3	\$65.1	\$68.6	\$72.1	\$80.6	\$325.7
Alternative 2, Limited Expansion							
Operating Expenses, "Average Scenario"	--	\$32.2	\$55.8	\$60.0	\$60.2	\$68.3	\$276.5
Capital Expenses	--	2.7	6.7	3.8	2.8	3.7	19.7
Total County Share	--	\$34.9	\$62.5	\$63.8	\$63.0	\$72.0	\$296.2
Alternative 3, Maintain Existing System							
Operating Expenses, "Average Scenario"	\$22.2	\$25.6	\$41.4	\$43.9	\$42.7	\$49.5	\$203.1
Capital Expenses	0.2	0.7	4.8	3.8	2.8	3.7	15.7
Total County Share	\$22.4	\$26.3	\$46.2	\$47.7	\$45.5	\$53.2	\$218.8
Projected Annual Revenue from a 0.5 percent Local Sales Tax^a	--	\$66.7	\$68.0	\$69.4	\$70.8	\$72.2	\$347.1
Projected Revenue Surplus^b							
Alternative 1	--	\$27.4	\$30.3	\$31.1	\$29.8	\$21.4	--
Alternative 2	--	\$31.8	\$37.3	\$42.9	\$50.7	\$50.9	--

^aThe potential tax revenue was estimated from a base of 2007 sales tax collections in Milwaukee County. County sales tax collections increased at a rate of 2 percent per year between 2002 and 2007, and were assumed to continue at that rate of growth between 2008 and 2012.

^bA 3 percent annual return was assumed for any surplus revenues.

Source: Milwaukee County Transit System and SEWRPC.

Given the short-term nature of the plan, staff focused on improvements to service that would make transit more competitive with travel by private automobile, but also could feasibly be implemented over the five-year planning period:

- Extending routes to unserved areas in Milwaukee County;
- Reducing transit travel times;
- Increasing the frequency of service; and,
- Expanding weekday and weekend service periods.

The preceding priorities are reflected in the proposed service improvements under both Alternatives 1 and 2, which attempt to address the unmet transit service needs. Alternative 3, which would maintain the transit system at 2008 levels, represents a baseline for comparison. The alternatives can be summarized as follows:

- Alternative 1, Extensive Service Expansion, represents the most aggressive attempt to address the priorities for service improvements. It would expand fixed-route bus service by about 22 percent by 2013.
- Alternative 2, Limited Service Expansion, represents a scaling-back of the proposals in Alternative 1, but still would address most of the priorities for service improvements. It would expand fixed-route bus service by about 15 percent by 2013.

- Alternative 3, Maintain Existing System, represents a “no expansion” approach. It would maintain fixed-route bus service at 2008 levels.

Regardless of which alternative service plan is selected, significant capital investments must occur. Mainly, all the alternatives require the County to purchase a total of 204 buses to replace part of the current aging fleet. The expansion alternatives would require additional buses (75 for Alternative 1, 65 for Alternative 2) to implement the proposed service improvements.

The total operating expenses and local funding needs for each alternative were calculated in several steps. First, Commission staff analyzed recent trends of factors that affect the transit system budget. Second, a range of factors were developed and used to create best-case, average, and worst-case funding scenarios. Those three funding scenarios were then used to calculate the possible range of operating costs and the public funds needed for each of the three transit service improvement alternatives. Depending on the funding scenario, Milwaukee County’s share of transit system operating expenses could increase greatly by 2013. In 2008, Milwaukee County used \$22.2 million for the property tax levy for operating expenses. Even if the County were to simply maintain the existing system as in Alternative 3, by 2013 it would have to contribute \$75.7 million of property tax levy under the worst-case scenario, \$49.5 million under the average scenario, and \$32.6 million under the best-case scenario.

Given the estimates of operating expenses and potential local share, Milwaukee County cannot, even in the short term, continue to rely on the local property tax levy to fund the transit system. The future of the Milwaukee County Transit System depends on securing a permanent source of dedicated funding. An analysis was conducted for two potential options for dedicated transit funding:

- Future Growth in Sales Tax on Vehicle Sales: The potential revenue generated by this option could not be calculated because sales tax revenues on vehicle-related purchases have been declining in recent years, which would result in no money being set aside for a dedicated transit fund. In addition, this option presents other problems, including the need to convince State leaders to remove future revenue from the general fund of the State budget, and a State funding tradition that local governments are responsible for transit.
- Dedicated Sales Tax of 0.5 Percent: This option would generate \$66.7 million in 2009 and \$72.2 million by 2013 for transit. However, this option also presents concerns, including the need for the transit system to aggressively pursue Federal funds and to “bank” excess sales tax funds in early years to address the projection that transit system operating costs are expected to increase faster than Federal, State, and local revenues, based on the trend of the past five years.

Chapter VII of the transit system development plan summarizes public comment on the proposed transit service improvement alternatives, and also presents the final recommended transit service improvement plan selected for implementation.

Chapter VII

RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN

INTRODUCTION

This chapter describes the comments received on the preliminary recommended plan, the response of the staff and Advisory Committee to the comments received, and the final recommended transit development plan for the Milwaukee County Transit System. The final plan is a short-range plan, outlining the recommended improvement and expansion of the transit system proposed to occur over a period of about five years. The final plan proposes improvements to the year 2010 transit system that would result in about a 22 percent expansion of transit service. The plan may be considered an initial stage in the implementation of the transit element of the regional transportation plan which proposes a doubling of transit service in southeastern Wisconsin over the next 25 years. Implementing this recommended short-range transit plan, as well as the long-range transit plan, will require dedicated local transit funding.

The transit system's immediate need for dedicated local funding has been identified several times during the course of this transit study including in the existing system evaluation presented in Chapter V, in the alternative service plans presented in Chapter VI, and in the materials presented at the public informational meetings for the plan held in January 2007 and January 2009. These chapters and materials demonstrate that Milwaukee County can no longer rely on the local property tax levy to fund the system. In the absence of dedicated funding, a continued reduction in transit service combined with substantial increases in transit fares may be expected. A potential need for significant reduction of transit services—25 to 35 percent—is possible within the next few years when the next set of buses needs to be replaced.

Since the January 2009 public informational meetings, Commission staff has worked with Milwaukee County staff, the former Southeastern Wisconsin Regional Transit Authority, the current Southeastern Regional Transit Authority, and numerous groups and organizations, to secure passage of State legislation authorizing a permanent source of dedicated funding for public transit in southeastern Wisconsin. In anticipation of dedicated funding being provided to Milwaukee County, Commission staff postponed completion of this transit study for the Milwaukee County Transit System as this would require development of an implementation schedule for the plan recommendations. However, dedicated funding failed to be approved during preparation of the 2009-2011 State budget in June 2009, and in April 2010 during the regular session of the Legislature.

The final recommended Milwaukee County transit system development plan documented in this chapter would require that State legislation providing dedicated funding for transit in Milwaukee County be enacted, and the plan outlines the desirable improvement and expansion of transit service which could be implemented upon

approval of dedicated funding. The earliest this may occur would probably be as part of the State 2011-2013 budget legislation. With allowance for the time needed for the State to administer sales tax collections, this means that implementation could at the earliest begin in 2012. The recommended transit system development plan proposes that service improvement and expansion would be staged to occur over a subsequent five year period.

This chapter includes a description of the route and service changes recommended under the final plan and the anticipated performance of the recommended transit system, including information on projected ridership, revenues, operating and capital costs, and the need for dedicated funding for the transit system. The actions required to achieve plan implementation are also identified. The chapter concludes with a brief summary.

COMMENTS ON THE ALTERNATIVE IMPROVEMENT PLANS

Between late January and mid March 2009, Commission staff solicited public feedback on the alternative transit service improvement plans identified in Chapter VI. Information summarizing the alternative improvement plans was also provided through a widely distributed newsletter and at three public informational meetings. In addition, several newspapers published articles focusing on the proposed service improvements and the need for dedicated public funding for the Milwaukee County Transit System (MCTS). In total, 159 comments were submitted during the three-month public comment period by oral and written format at public meetings, via letters and emails, or through the Commission website. The majority of the comments were supportive toward the transit system. All public comments were reviewed and summarized by staff at the Southeastern Wisconsin Regional Planning Commission, and included in a record of public comments provided for review to each member of the study advisory committee.¹ The public comments were used in selecting the transit service improvements included in the final recommended plan.

Comments Related to the Transit System in General

A total of 57 of the 159 comments received pertained to general transit system issues and did not specifically address the transit system development plan or the alternative transit service improvement plans:

- Twenty people expressed support for the MCTS or public transit in general.
- Five people stated their opposition to the service reductions made on the system since the year 2000 and the amount of transit service that had been lost.

Response

The proposed service improvements under both Alternative Improvement Plans 1 and 2 would restore many of the service cuts implemented by the transit system since the year 2000 plus add service for new express routes, local route extensions, improved service frequencies, and longer service hours. Under Alternatives 1 and 2, the system would operate about 1.63 million and 1.54 million annual bus hours of service, respectively, with service levels under Alternative 1 being only about 1 percent below the 1.65 million bus hours provided by the transit system in the year 2000.

- The comments of 22 people addressed various issues with transit system equipment and facilities, bus operators, or passengers. These comments identified concerns and complaints on overcrowded buses; bus stop locations; snow removal at bus stops; bus operators failing to announce bus stops; poor attitudes of some bus operators; the use of profane language by passengers; unclean buses; and the safety and security of passengers and bus operators.
- Ten people offered suggestions for revising and improving the marketing and public relations efforts undertaken by the transit system.

¹See Record of Public Comments, Milwaukee County Transit System Development Plan, Volume Two: Alternative Improvement Plans, Comments Received January 9 through March 16, 2009; *April 2009*.

Response

The specific comments and suggestions regarding transit system equipment and facilities, bus operators, passengers, and transit system marketing and public relations efforts fall outside the scope of the transit development plan being prepared by the Regional Planning Commission and were provided directly to transit system staff responsible for responding to customer service issues and marketing. Customer service and marketing are key to the mission of the Milwaukee County Transit System to provide reliable, convenient and safe public transportation services, and transit system staff will work to resolve the issues identified by these comments. In addition, criteria regarding bus stop announcements, bus stop locations and bus stop accessibility—including snow removal—are identified under the Americans with Disabilities Act (ADA), and transit system staff strives to maintain and improve transit system compliance with all ADA requirements. By way of example, the transit system continues to focus on the bus operator's responsibility for making bus stop announcements, and anticipates implementing an automated bus stop announcement system in 2011. In 2009 and 2010, the transit system embarked on a process of improving accessibility at many bus stops throughout the system by adding passenger loading and unloading pads to improve universal access to the bus. Without these concrete pads, it was not feasible for wheelchair users and others with disabilities to make use of the accessible fixed route transit service provided on bus routes.

Comments Specific to Format of and Materials for January 2009 Public Informational Meetings

A total of 12 comments were received that addressed the public informational meetings and materials.

- Three comments concerned the scheduling, location, or format of the public informational meetings held for the plan. These included: one comment suggesting that meeting locations should have been selected that were better served by the MCTS; one objecting to the open house format of the meeting rather than a public hearing format with formal testimony; and one objecting to scheduling the meetings during the week of the Presidential inauguration.

Response

It is a Commission policy to hold public meetings like the informational meetings for the MCTS at transit accessible locations. The downtown Transit Center is directly served by five transit system local routes—Nos. 10, 12, 14, 23, and 31—and is within two blocks of a sixth route—Route No. 30. Together, these six routes account for about one-third of the total passengers carried on the transit system on an average weekday. The Washington Park Senior Center is directly served by Route No. 31 and within one-quarter mile of Route No. 30. The West Allis City Hall is directly served by Route No. 18 and within one-quarter mile of Route Nos. 54 and 76.

The open house format for public meetings is an effective way to facilitate the review of study findings and recommendations, and for staff to be accessible to the public. Staff from the Commission, Milwaukee County, and the transit system staff were present at the meetings to discuss with, and answer questions on, printed materials and display boards providing information about the transit system development plan and improvement alternatives. Several members of the Advisory Committee for the study were also present. The public could also provide formal statements and testimony to a court reporter available at each meeting.

The public informational meetings were scheduled for early evening and were completed by 7:00 p.m. so those attending on the evening of the January 21, 2009, could watch the televised Presidential inauguration events, or participate in local events for the inauguration.

- Nine comments addressed the information distributed for the meetings on the alternative improvement plans and funding options. One of these comments stated that not enough information had been provided on how the transit system should be funded.

Response

The materials for the alternative improvement plans described two proposals for dedicated transit funding that had been advanced by public officials during the development of the plans. One proposed that the growth in the existing sales tax collected on vehicle-related purchases be diverted

from the State general fund and used for funding transit. It was concluded that this funding source was not likely to be viable. The other proposal was to levy a 0.5 percent additional local sales tax for transit. The Commission concluded in the 2035 regional transportation system plan that a sales tax would be a necessary funding source to maintain and improve and expand transit service in southeastern Wisconsin. In November of 2008, an advisory referendum held in Milwaukee County passed approving a 1 percent County sales tax increase, which included an anticipated 0.5 percent sales tax for transit. Also in November of 2008, the former “temporary” and “limited authority” Southeastern Wisconsin Regional Transit Authority recommended that authority be given by the Wisconsin Legislature to enact up to a 0.5 percent sales tax for transit systems in southeastern Wisconsin. In the spring of 2009, Wisconsin Governor James Doyle proposed legislation during the preparation of the 2009-2011 State budget that would have created a regional transit authority in southeastern Wisconsin, with the authority to enact up to a 0.5 percent sales tax for transit. The State Legislature rejected the Governor’s proposal, and proposed legislation for a Kenosha-Racine-Milwaukee (KRM) commuter rail authority and for a Milwaukee County transit authority. Governor Doyle vetoed the Milwaukee County transit authority, which would have permitted a 0.5 percent sales tax. In April of 2010, another attempt to pass State legislation to create a regional transit authority in southeastern Wisconsin was made, but the legislation was not passed by the State Legislature.

Comments Specific to the Alternative Transit Service Improvement Plans

A total of 90 comments were received on the transit service changes and improvements proposed under the alternative plans. These comments can be summarized as follows:

- Thirty-one comments expressed support for the improvement alternatives or specific service changes. The majority of these comments were in favor of the proposed new local routes and route extensions, the addition of express or bus rapid transit (BRT) routes, increases in service frequencies, and expanded service hours.
- Thirty-five comments suggesting additional routing and/or service changes or changes to fares and operating policies which were not included in the improvement alternatives including:
 - Twelve comments identifying/requesting changes for local bus routes including:
 - Reestablish Route No. 11 service over Vliet Street (two comments);
 - Change Route No. 18 to make the route branches more understandable to riders (one comment);
 - Extend Route No. 28 to provide service to the Village of Hales Corners and to Boerner Gardens in Whitnall Park (three comments);
 - Improve weekend service on Route No. 57 (one comment);
 - Extend service hours on the system on Fridays and Saturday nights, potentially until 3:00 or 3:30 a.m. with Route No. 10 specifically identified as needing longer weekend service hours (two comments); and
 - In designing routing changes, keep route lengths and running times to what operators can do without "cutting corners" (one comment).

Response

The comments and suggestions regarding additional local routing and/or service changes have been provided to the MCTS staff for consideration. Local bus service over Vliet Street was re-established in March 2009 when Milwaukee County Transit System Route No. 33 began operation. Many of the other suggested changes have been considered by the transit system in the past but did not meet warrants for transit service. Others could not be implemented within the transit system’s constrained operating budget but could potentially be implemented in the future if additional funding is made available to the transit system. The County Board created the Transit Services Advisory Committee (TSAC) to advise the Milwaukee County Committee on Transportation, Public Works, and Transit on transit service issues. The TSAC would likely advise the County on the merits of the service changes identified above and in the other public comments should additional local funding become available.

- Thirteen comments on the proposed express bus services and BRT routes or stops including:
 - Use the express bus route alignments operated in the year 2000 (one comment);
 - Consider creating additional express bus routes over Route Nos. 15, 31, and 62 and to serve the Southridge Mall in the City of Greenfield and the Brookfield Square Shopping Center in the City of Brookfield (two comments);
 - Route the BRT service over Wisconsin Avenue in downtown Milwaukee and include a stop at Water Street and Wisconsin Avenue (one comment);
 - The BRT route should serve the Social Security Office at 6300 W. Fond du Lac Avenue and the Intermodal Transit Station in downtown Milwaukee (two comments);
 - Support was expressed for BRT service for the southern part of Milwaukee County (one comment);
 - Use bus shelters for BRT that do not obscure passenger views of approaching buses (one comment);
 - It may be possible to extend the service life of buses in the fleet by assigning buses to operate on an express route (one comment); and
 - Light rail transit service should be considered as an alternative to BRT service (four comments).

Response

The express bus alignments identified in the Alternative Improvement Plans were drawn from the routes previously operated by the MCTS between 1992 and 2002 including Route Nos. 1 (Metrolink Northwest Express) and 3 (Metrolink Bluemound Express). The express routes serve corridors with high ridership local routes and represent the services which have the best potential for implementation within the five-year planning period for the transit system development plan. The express routes represent an initial stage of a network of express routes serving Milwaukee and Waukesha Counties that have long been identified under the Commission's regional transportation system plans. Other express bus routes such as those suggested in the public comments can be advanced for implementation in the future.

Comments on the routing, stops, and shelters for the Fondy-National BRT line have been provided to the Milwaukee County and transit system staff for consideration in refining the BRT service. The County has no intention at this time of converting the BRT service to light rail transit.

- Two comments specific to freeway flyer routes or service:
 - Consider creating a new freeway flyer route operating between the State Fair Park park-ride lot and new development along S. 27th Street in the City of Franklin including the new Northwestern Mutual Life campus and Wheaton Franciscan Healthcare (one comment); and
 - Consider providing freeway flyer service in the non-peak direction to serve reverse commute travel (one comment).

Response

The new Northwestern Mutual Life campus and Wheaton Franciscan Healthcare facility would not be expected to generate enough transit ridership to make a special freeway flyer route dedicated to those centers financially viable during the five year planning period. Instead, the alternative plans propose serving these centers with an extension of the express bus service to be operated over S. 27th Street.

The transit system currently provides limited reverse commute service over several freeway flyer routes but this service attracts very little ridership. An expansion of freeway flyer service to provide for both traditional commuter and reverse-commute service is recommended under the Commission's adopted regional transportation system plan for the year 2035. In comparison to the other service improvements identified under the alternative improvement plans, expansion of reverse commute service was considered to have a low priority for the next five years.

- Four comments requesting changes to passenger fares:
 - A suggestion to operate the service improvements without charging users a fare for a trial period (one comment); and
 - Consider fares that provide incentives to ride such as deeply discounted passes and tickets, free ride days, a free ride zone in downtown Milwaukee (three comments).

Response

These suggestions have been incorporated into the final recommended transit system development plan which recommends that Federal Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds be sought to offset the loss of revenues from such reduced and free fare initiatives.

- Six comments regarding transfers:
 - Maintaining or improving transfer connections should be considered in implementing the proposed service changes (two comments);
 - Consider extending the one-hour period that transfers can be used; one-hour is not long enough (two comments); and
 - Improve connections with transit services operated by adjacent counties and for passengers at the Intermodal Transit Station after 10:00 p.m. (two comments).

Response

Alternative Improvement Plans 1 and 2 both propose increasing service frequencies on the highest ridership routes in the system, reducing headways to no more than 10 minutes during peak periods and no more than 20 minutes during off-peak periods on weekdays, and to no more than 30 minutes on weekends. The increases in service frequency will reduce waiting times and improve the convenience of transferring between routes.

- A total of 13 comments were made opposing specific service changes. Ten of these comments opposed the BRT service due to elimination of all local bus service in the BRT corridors, the perception that travel times with the BRT service would increase due to the need to transfer to a connecting shuttle route at the end of the BRT line, and a perception that the long length of the BRT route would result in unreliable service. Two comments indicated that the alternative plans were not bold enough and should have proposed larger increases in service. One comment was made in opposition to equipping all buses with bicycle racks.

Response

Transit system ridership records indicate that 75 to 85 percent of all passenger boardings and alightings along the Fondy-National BRT alignment currently occur at bus stops that would be served by the proposed BRT line. While some passengers may need to transfer to connecting local and shuttle routes at the ends of the BRT line, efforts will be made to coordinate the schedules for the BRT line and shuttle services at the end of the line to keep transfer times low. Despite the long length of the proposed BRT route, the transit system anticipates it will be able to maintain schedules and provide reliable service through the use of traffic signal prioritization and automated vehicle location technologies.

Alternative Improvement Plans 1 and 2 propose increases of 22 and 15 percent, respectively, over the 1.34 million annual revenue vehicle hours of service budgeted for the year 2008. These increases are both significant and achievable over the planning period.

Strong support was expressed for installing bicycle racks on MCTS buses in the public comments received during the initial set of public informational meetings held in early 2007. In response to those comments, a project to purchase and install the bicycle racks was approved and completed by Milwaukee County in 2009.

- Eleven comments that expressed concerns over the negative impacts which some of the service changes could have on people with disabilities. These included seven concerned about the accessibility of the BRT

service and the impact of its wide stop spacing on riders using wheelchairs; two requesting that paratransit service be expanded along with fixed-route bus services and consideration be given to the accessibility needs of people with disabilities in implementing service improvements; one requesting that a weekly pass for disabled riders be offered by the transit system.

Response

All vehicles and stops/stations used in providing the BRT service will include features to make them accessible to people with disabilities. The wide stop spacing for the proposed express bus and BRT routes is essential to increasing operating speeds and reducing travel times over those for local bus service. The stops that will be retained are used by 75 percent or more of passengers along the existing local bus routes that will be affected. Disabled passengers who believe the wide stop spacing prevents them from using the express bus or BRT services can request paratransit service through the Transit Plus program. No significant changes are envisioned for the Transit Plus Program under the alternative improvement plans as the paratransit service area includes all of Milwaukee County and the current paratransit service hours cover the expanded service hours proposed for the bus system. The suggestion that the transit system offer a weekly pass for disabled riders has been incorporated into the final recommended transit system development plan.

RECOMMENDED SHORT-RANGE TRANSIT SERVICE PLAN

The public comments received on the alternative plans indicated strong support for making improvements to the MCTS. The final recommended short-range transit system development plan for the MCTS is based on the transit service improvements proposed under Alternative Improvement Plan 1, Extensive Service Expansion. This alternative plan was selected as the basis for the recommended plan as it proposed the broadest level of service improvement, about a 22 percent expansion of transit service over year 2010 levels. It would restore the service which was eliminated over the last several years returning systemwide service levels to about 1 percent below the year 2000 service level, and further improve the convenience and speed of transit service. To implement this plan, dedicated local funding such as the proposed 0.5 percent sales tax will be necessary. The recommended plan serves to identify the transit improvement and expansion which could occur in the short term—about a five-year period—upon enactment of dedicated local transit funding.

Proposed Service Changes

The recommended plan focuses on transit improvements that would restore service that was eliminated over the last several years, expanding access to transit service throughout more of Milwaukee County. It would also reduce travel times, making transit more competitive with travel by private automobile and increasing transit ridership. This would be accomplished by extending routes to unserved areas in Milwaukee County with significant population or employment concentrations; eliminating bus turn-back points so the same service level is provided over the entire lengths of each route including at the ends of the routes; expanding weekday and weekend service periods to provide for desirable hours of service on more routes; increasing the frequency of service to provide for desirable headway levels on more routes; and reducing transit travel times by adjusting Freeway Flyer service and by converting major local routes to express routes. The specific improvements to MCTS bus services that are recommended under the plan are identified below and in Table 53.

New Local Bus Routes and Adjust Alignments of Existing Local Bus Routes

To address the unmet needs for service in the far northern, western, and southern portions of the County, the plan proposes to extend or add several bus routes, restoring service that was eliminated over the last several years (see Map 57). The proposed changes to the local bus routes will provide:

- An east-west route to serve the commercial and office development along Brown Deer Road;
- Better transit service coverage in north-central and western Milwaukee County;
- An extension of local bus service to the Village of Hales Corners;
- An extension of local bus service to industrial and office parks in Franklin and Oak Creek;

Table 53

**RECOMMENDED IMPROVEMENTS FOR THE BUS SERVICES
PROVIDED BY THE MILWAUKEE COUNTY TRANSIT SYSTEM**

Service Description	Estimated Recommended Plan Annual Vehicle Hours	Percent Change from 2010 Budget Vehicle Hours	Average Annual
		Total	
Total 2010 Budget Bus Service	1,327,500	--	--
Increment for Recommended Service Improvements			
New Local Routes and Route Extensions and Restored Local Bus Services ^a	64,000	4.8	
Remove Bus Turn-backs on Selected Local Routes to Provide Consistent Headways over Route ^b	20,000	1.5	
Expand Service Hours on Local Routes to Desirable Service Levels ^c	13,000	1.0	
Reduce Headways on Local Routes to Desirable Service Levels ^c	118,000	8.9	
Upgrade Freeway Flyer Bus Service	32,000	2.4	
Convert Local Bus to Express Bus Service ^d	54,000	4.1	
Total Increment for All Improvements	301,000	22.7	4.2
Total Under the Recommended Plan	1,628,500	--	--

^aIncludes restoring the service cuts made to Routes No. 14, 33, and 35 under the 2010 Milwaukee County operating budget.

^bBus turn-back points would be eliminated from weekday, Saturday, and Sunday service schedules.

^cService hours and frequencies on the local routes outside express bus corridors with the highest ridership would be increased to meet desirable service frequencies and service hours for both weekday and weekend periods of operation.

^dExpress bus routes would be implemented along Route Nos. 10 and 30 between the Milwaukee Regional Medical Center and the University of Wisconsin-Milwaukee; along Route Nos. 18 and 23 between Summit Place (S. 70th Street and W. Greenfield Avenue) and Midtown Center (N. 60th Street and W. Fond du Lac Avenue); and along Route Nos. 27, 80, and 63 between S. 27th Street and Sycamore Street (Wal-Mart) and the Bayshore Shopping Center. The express routes would replace existing local bus service between the points identified except along Wisconsin Avenue between N. 35th Street and Cass Street where local service over Route No. 30 would be continued.

Source: Milwaukee County Transit System and SEWRPC.

- Restoration of bus service over Route Nos. 14, 33, and 35 that were reduced or eliminated under the 2010 Milwaukee County budget; and
- Improved connectivity between transit system routes and ease in transferring between routes.

The local bus services in this group of improvements would provide a service increase of about 64,000 additional annual bus hours, or about 5 percent, over year 2010 levels.

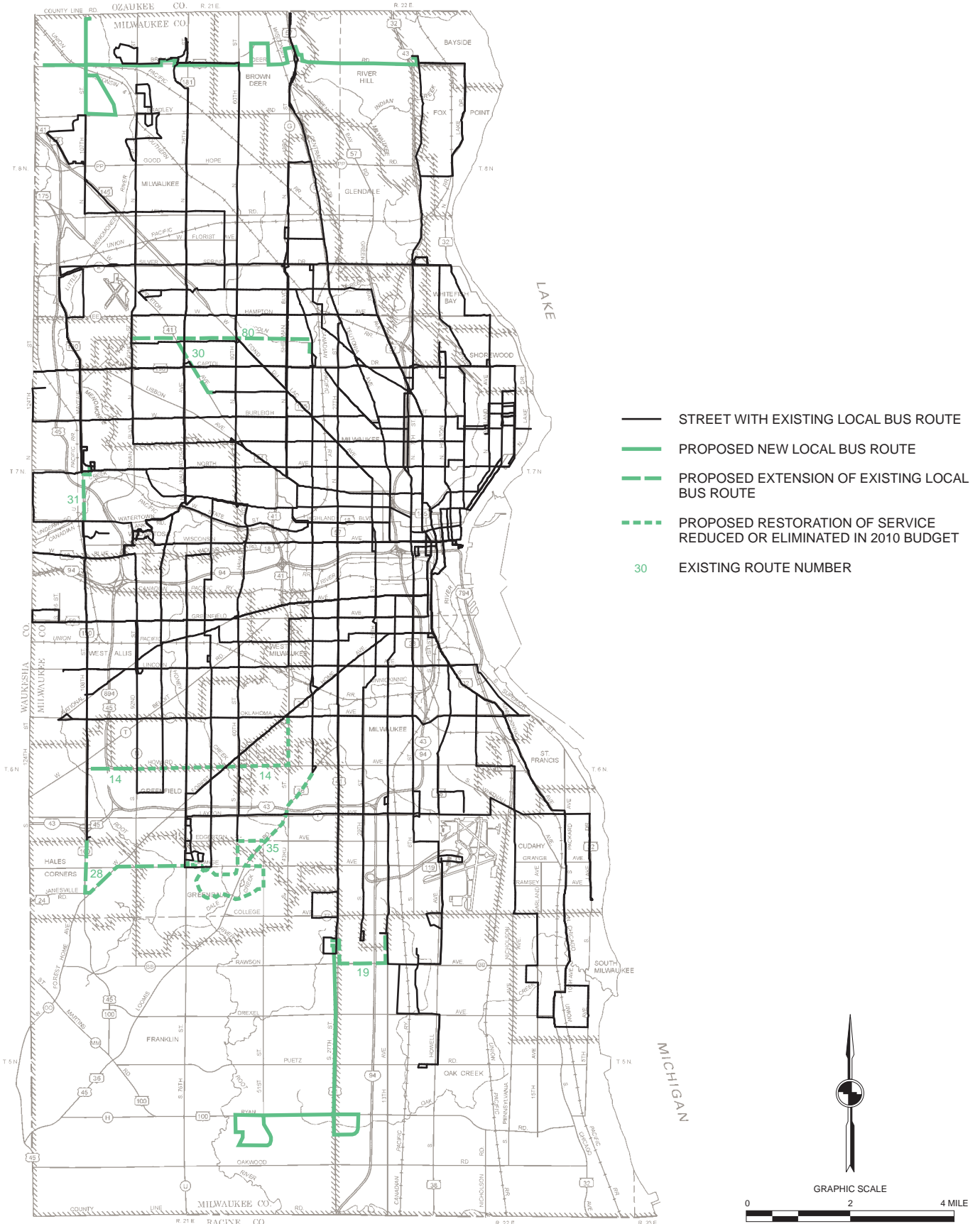
Elimination of Bus Turn-back Points Along Local Routes

Many bus routes in Milwaukee County have “turn-back points”, points where some of the buses turn around before reaching the terminus of the route. Transit systems use turn-back points to efficiently provide frequent service on the higher-ridership main or trunk portions of routes and less frequent service at the ends of the routes. The recommended plan proposes to provide the same service levels on weekdays and weekends over the entire lengths of Route Nos. 35, 57, and 64, including at the ends of each route. Map 58 displays the affected route segments. The elimination of bus turn-backs on the identified routes represents a service increase of about 20,000 additional annual bus hours or 1.5 percent over year 2010 levels.

Extension of Service Hours for Local Bus Routes on Weekdays and Weekends

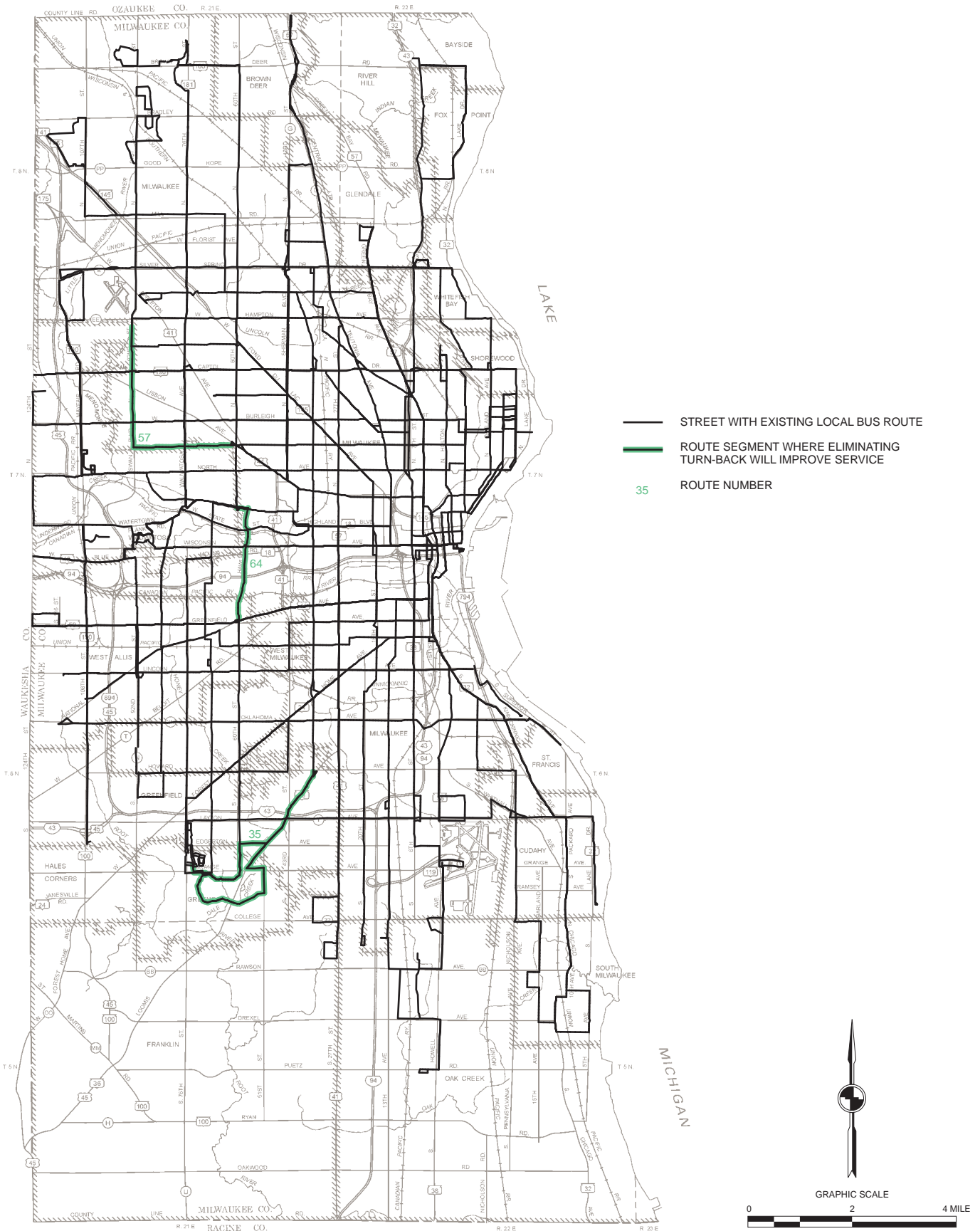
Lengthening bus route schedules to the number of hours specified in the service standards—20 hours a day—would address unmet needs for longer service hours identified in both the performance evaluation and in public comments. Bus routes operating from approximately 5:00 a.m. to 1:00 a.m. permit travel to and from all three

CHANGES TO THE LOCAL BUS ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM PROPOSED UNDER THE RECOMMENDED PLAN



Map 58

**LOCAL ROUTE SEGMENTS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE
TURN-BACKS ARE PROPOSED TO BE ELIMINATED UNDER THE RECOMMENDED PLAN**



Source: Milwaukee County Transit System and SEWRPC.

traditional work shifts. Most local routes (25 of 30) currently operate 20 hours a day on weekdays, but only half (14 of 30) operate 20 hours a day on Saturdays, and about a third (nine of 30) operate 20 hours a day on Sundays. The recommended plan would improve the weekday schedules for Route Nos. 35 and 80 to provide service on the southern portion of those routes during morning and evening periods. On Saturdays and Sundays, the plan would lengthen route schedules to attain the desired service hours on the 15 highest-ridership local routes, and the five routes converted to express service. Map 59 displays the affected route segments for weekdays, Saturdays, and Sundays. The provision of desirable service hours on 15 routes represents an increase of about 13,000 additional annual bus hours, or 1 percent over year 2010 levels.

Increases in Service Frequency on Local Bus Routes

The Milwaukee County Transit System relies upon a grid system of local routes to serve the County population, jobs, and activity centers. Under this type of route system, transfers between one or more routes and attendant waits for two or more buses are generally required to complete a trip. Service frequencies or “headways”—the amount of time between bus arrivals at a stop—directly affect the times passengers spend waiting for each bus and establishes the convenience of service and resultant service use. High service frequencies increase the convenience of using the service, and result in higher ridership.

The service standards established for the study specify that buses should arrive no more than 10 minutes apart during weekday peak periods; no more than 20 minutes apart during weekday off-peak periods; and no more than 30 minutes apart on weekends. Currently, only a small area in the central portion of the County is served by local routes meeting the standards. The plan recommends that service frequencies be increased to attain the desirable headways on the 15 highest-ridership local routes, in addition to the five routes converted to express service. Map 60 displays the affected route segments for weekdays, Saturdays, and Sundays. The provision of desirable headways on 15 routes represents a service increase of about 118,000 additional annual bus hours, or 9 percent over year 2010 levels.

Upgrades to Freeway Flyer Service

The plan also recommends expanding some freeway flyer services to address the increase in ridership on those routes in recent years, ensure the routes meet the service standard that all passengers have a seat, and improve transit travel times. The improvements include:

- Providing a minimum of 10 bus trips over each freeway flyer route during weekday morning and afternoon peak periods;
- Creating one new freeway flyer route so that each route stops at no more than two park-and-ride lots (a service standard); and
- Adding two midday round-trips to each freeway flyer route.

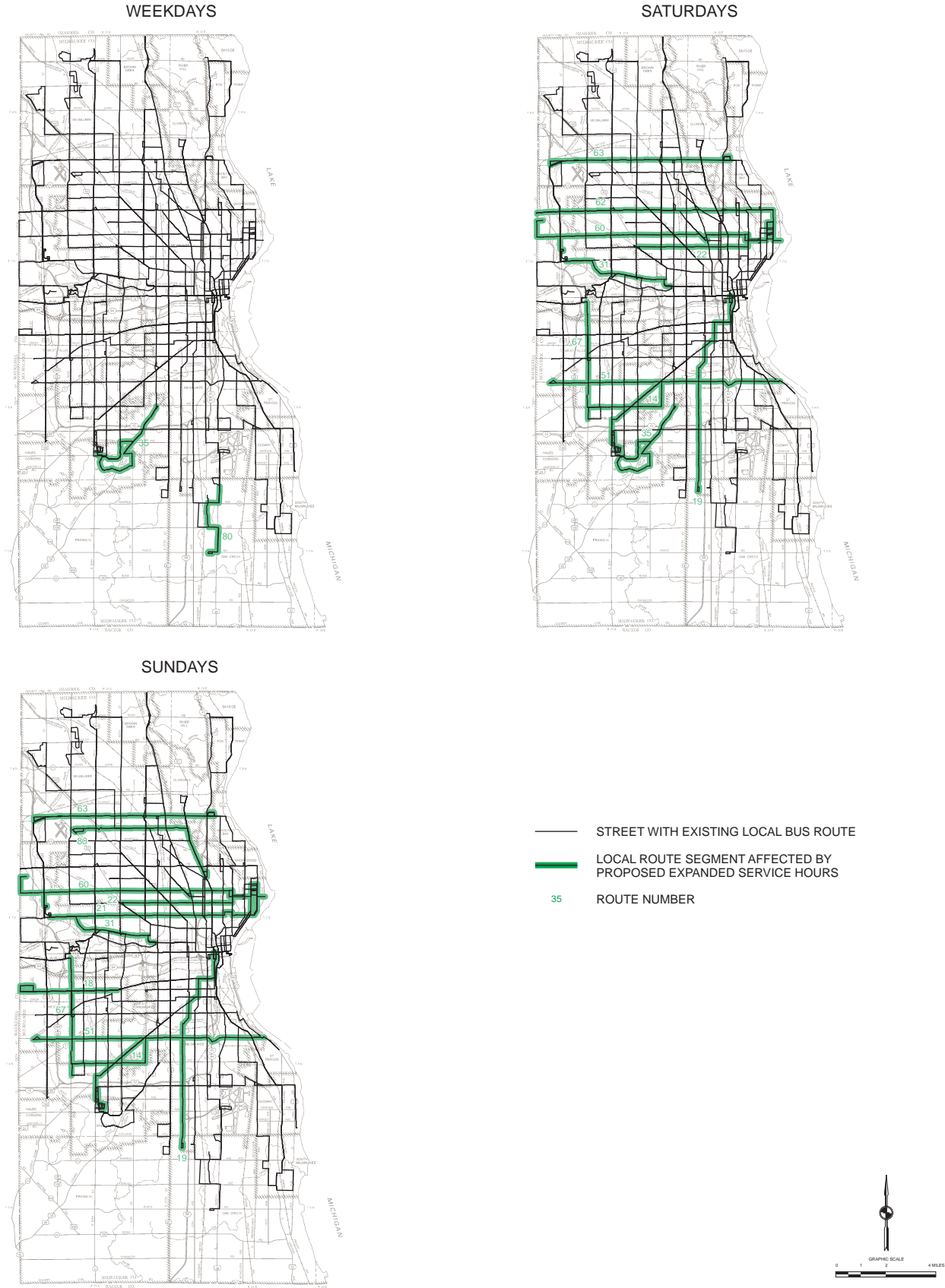
The freeway flyer services described above represent a service increase of about 32,000 additional annual bus hours, or about 2 percent, over year 2010 levels.

New Express Bus Service

The plan recommends converting three high-ridership local bus routes into express bus routes in order to improve transit travel times. Map 61 displays the recommended express bus routes. All routes would operate between 5:00 a.m. and 1:00 a.m. seven days a week, with frequent service. Buses would arrive every seven to 10 minutes during weekday peak periods; every nine to 16 minutes during weekday off-peak periods; and every 10 to 20 minutes on weekends.

- Route 10/30X would run from the Milwaukee Regional Medical Center in Wauwatosa to the University of Wisconsin-Milwaukee (UWM) over portions of Route Nos. 10 and 30. This route could also be extended north on Oakland Avenue to the intersection of Oakland Avenue and Kensington Boulevard in Shorewood.
- Route 18/23X would operate between Summit Place (S. 70th St. and W. Greenfield Avenue) and Midtown Center (N. 60th Street and Fond du Lac Avenue) over portions of Route Nos. 18 and 23.

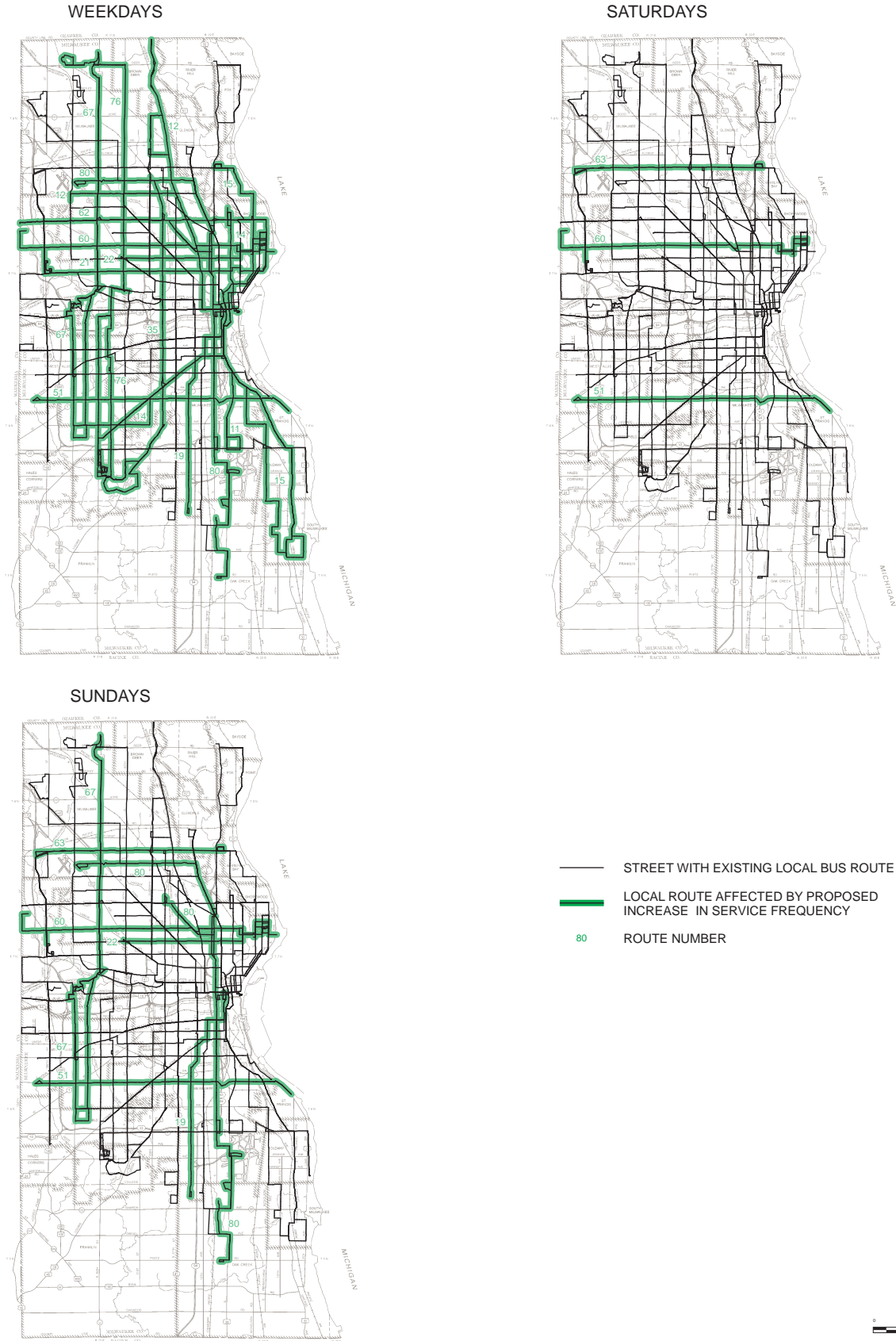
**LOCAL ROUTE SEGMENTS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE
SERVICE HOURS ARE PROPOSED TO BE EXPANDED UNDER THE RECOMMENDED PLAN**



Source: Milwaukee County Transit System and SEWRPC.

Map 60

**LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM WHERE SERVICE
FREQUENCY IS PROPOSED TO BE INCREASED UNDER THE RECOMMENDED PLAN
(OUTSIDE OF EXPRESS BUS CORRIDORS)**



EXPRESS BUS ROUTES PROPOSED UNDER THE RECOMMENDED PLAN



- Route 27X would be a north-south route between the Bayshore Town Center and Wal-Mart (S. 27th Street and Sycamore Street) over the entire length of Route No. 27, with the addition of an extension to the Bayshore Town Center. This route could be extended south to the Northwestern Mutual Life Insurance Co. Campus at S. 27th Street and W. Drexel Avenue, or to the new Wheaton Franciscan Healthcare hospital near S. 27th Street and W. Oakwood Road.
- A possible fourth express bus route also shown on Map 61 would be Route 11X running from the near north side at W. Capitol Drive and Holton Street through downtown to Milwaukee County's General Mitchell International Airport. The City of Milwaukee has indicated that the airport deserves consideration for express service.

Local bus service would be retained over the portions of the affected local routes not converted to express service by operating new or restructured local routes. A potential restructuring of these local routes could be undertaken as follows:

- A new route with two branches would be created from Route 18 to serve W. Greenfield Avenue and W. National Avenue west of S. 92nd Street.
- Two new routes would be created from the Route 23 branches serving the Bradley Woods Business Park and the Park Place Business Park.
- Route 10 would be restructured, retaining the eastern segments from Fond du Lac Avenue and North Avenue, through downtown Milwaukee and north to Bayshore Town Center. A new local route would be created along the section of Route 10 that currently serves W. Bluemound Road west of the Milwaukee Regional Medical Center.
- Route 30 would still operate on Sherman Boulevard and Wisconsin Avenue, but would terminate in downtown Milwaukee instead of continuing to the University of Wisconsin-Milwaukee campus. The Downer Avenue portion of Route 30 would be replaced by an extension of Route 62.
- A new shuttle route from Bayshore Town Center would provide service to Glendale Industrial Park (formerly served by Route 27).

The three basic express bus routes described above represent a service increase of about 54,000 additional annual bus hours, or 4 percent, over year 2010 levels. Because the express services will replace the existing local bus service, the additional annual bus hours needed are solely due to the improved service frequency.

The proposed express service represents an incremental move—achievable within a five-year planning period—toward a faster system. A basic level of express service would be created by eliminating infrequently used stops to achieve stop spacing of one-quarter mile outside downtown Milwaukee. The conversion to express service would retain the most frequently used stops (representing at least 75 percent of current boarding and alighting passenger activity on the local routes). The express service could be upgraded to bus rapid transit (BRT) service similar to proposals that have been advanced by the Milwaukee County Executive and the City of Milwaukee Mayor. Enhancements to upgrade express bus service to BRT service could include exclusive bus lanes, transit priority at traffic signals, next-bus information displays, buses of a different design or with special markings and paint schemes, and specially designed bump-out bus stops. The upgrading of express bus routes to BRT could also entail some route realignment and wider stop spacing, along with re-introduction of local bus service. The possibility of incorporating some of the BRT enhancements into the initial express bus route—including signal priority, minor street redesign at bus stops, and using buses with special paint schemes—could be explored as the express routes are moved into implementation. The costs associated with improvements to the arterial streets system would need to be shared between the City of Milwaukee, Milwaukee County, and the State.

Two projects that would implement BRT services are currently under development by Milwaukee County. One project was proposed as the transit improvement alternatives were released for public review and comment in January 2009. This BRT project would connect the Midtown Center at N. 60th Street and W. Capitol Drive to

Downtown Milwaukee and continue through Downtown to operate over W. National and W. Greenfield Avenues to Wisconsin State Fair Park. A second project was proposed under the Milwaukee County Executive's 2010 Budget. This project would connect the Milwaukee County Regional Medical Center with Downtown Milwaukee and continue through to the University of Wisconsin-Milwaukee, operating over Bluemound Road, Wisconsin Avenue, Prospect and Farwell Avenues, and Oakland Avenue and Kenwood Boulevard. These proposed BRT lines closely follow the alignments of express bus Routes 18/23X and 10/30X shown in Map 61. Service over the routes would be provided with specially marked buses to clearly identify the BRT service and would operate in mixed traffic utilizing traffic signal prioritization to speed up bus travel by extending the time of a green signal or reducing the time of a red signal as buses approach intersecting streets. Funding for the projects could potentially come through Federal Interstate Cost Estimate (ICE) funds awarded to Milwaukee County in 2009 or other Federal transit programs.

Passenger Fares

The plan proposes modest increases in passenger fares for both bus and for paratransit services over the five-year period of plan implementation. For MCTS bus service, the adult cash fare would be increased by \$0.25 from \$2.25 to \$2.50 per trip and the price of a weekly pass would rise from \$17.50 to \$18.50. The fare for people with disabilities using Transit Plus paratransit services would be increased by \$0.50 from \$3.25 to \$3.75 per trip. The proposed Transit Plus fares would remain less than the maximum of two times the base fare charged for bus service allowed under Federal regulations. Cash, ticket and pass fares in other categories would be increased by similar proportions. The proposed fare increases for the transit system would keep fare increases at the rate of general price inflation, and in pace with anticipated increases in operating expenses thereby maintaining a stable farebox recovery rate.

It is also recommended that the transit system offer promotional fares on the new express and local bus routes proposed under plan. This could include offering free rides or rides at half fare when service is initiated, lasting for a brief period such as the first week of operation. Funds are potentially available through the Federal Congestion Mitigation and Air Quality (CMAQ) Improvement Program to offset 80 percent of the costs of such a promotion.

The plan also recommends that a new weekly or monthly pass be established for disabled MCTS riders. The pass should be priced at \$8.75 per week or \$32.00 per month which is one-half the cost of the weekly and monthly adult passes currently offered by the transit system.

Paratransit Services for People with Disabilities

The plan proposes no significant changes to the County's paratransit service for people with disabilities provided by the Transit Plus Program. The paratransit service area includes all of Milwaukee County and the current paratransit service hours cover the expanded service hours proposed for the bus system. While no changes to the paratransit service are required to respond to the recommended changes in bus service, total operating costs for Transit Plus program since the year 2000 have increased twice as fast as the costs for the County bus service—by about 80 percent for Transit Plus compared to about 39 percent for bus service. Such increases in paratransit costs could draw local funding away from the fixed-route bus system if they continue in the future. This would increase the potential for service cuts and fare increases for the bus system, particularly in the absence of dedicated local funding.

The County will need to closely monitor future increases in paratransit service costs. In the recent past, Milwaukee County has used funds obtained through the Federal Section 5317 New Freedom Program to undertake actions directed at increasing the use of regular route accessible bus service by people with disabilities and slowing the growth in paratransit service expenditures. Past grants have been used to fund travel training for persons with disabilities on how to use the fixed route bus system and making physical improvements at bus stops to enhance accessibility for disabled persons such as by adding curb-cuts, concrete pads, shelters, or benches. These activities have resulted in increased use of the bus system by people using wheelchairs and smaller increases in Transit Plus paratransit ridership and costs.

Table 54

**KEY FACTORS AND ASSUMPTIONS AFFECTING THE
FUNDING NEEDS OF THE MILWAUKEE COUNTY TRANSIT SYSTEM**

Factor	Discussion
Operating Expense per Vehicle Hour of Service	Operating expense per vehicle hour increased by 2.8 percent annually between 1995 and 2000 (during system expansion) and by 5.6 percent annually between 2001 and 2009 (during system contraction).
State Operating Assistance	Annual operating assistance provided by the Wisconsin Department of Transportation through the Section 85.20 program has covered between 39 and 43 percent of the operating expenses for the transit system in recent years. The amount of Section 85.20 funding received by Milwaukee County increased by 5.2 percent annually from 1995 to 2000 (during system expansion) and by 2.5 percent annually from 2001 to 2009 (during system contraction).
Federal Formula Funds	The Federal Transit Administration (FTA) provides annual allocations of Section 5307/5340 formula funds, which are intended for capital purchases but can be used for the maintenance elements of operating expenses. These funds covered about 11 percent of transit system operating expenses in 2009. In the late 1990's, Milwaukee County accumulated a "bank" of about \$40 million in unused Section 5307 funds. In an attempt to avoid service cuts, since 2000 the banked allocations have been used to pay for operating expenses and capital projects, leaving less than \$5 million at the end of 2009. Since 2000, the County's annual allocation of new FTA Section 5307/5340 funding has ranged from \$17.0 million in 2000 to \$19.3 million in 2009. The County's 2010 allocation of Section 5307/5340 funds was approximately \$19.0 million.
Capital Needs and Federal Capital Assistance Funds (Section 5309 "Earmark" Funds and American Recovery and Reinvestment Act Funds)	Milwaukee County received about \$5.1 million annually in Federal earmarks through the FTA Section 5309 program from 1999 to 2003, and about \$3.1 million annually in earmark funds in 2004 and 2005. These funds provided the bulk of the funds used over this period to purchase bus replacements. From 2006 through 2009, the Federal earmarks were reduced to about \$2.1 million per year but the County was able to supplement the earmark funds with a one-time allocation in 2009 of about \$25.7 million in ARRA funds. The County is using the recent earmarks and ARRA funds to purchase 90 buses in 2009 and 35 buses in 2010. The County will need to replace an additional 198 ^a buses purchased between 1996 and 2001, and will also need 75 more buses to expand the fleet to implement the recommended service improvements. The total of 273 buses that will need to be purchased over the five-year plan implementation period will require a total of \$85.7 million in Federal funds, or about \$14.3 million per year. The current levels of Section 5309 earmark funds and Section 5307 formula funds are not sufficient to fund the County's additional bus replacement and fleet expansion needs. Therefore, a large portion of the annual allocation of Section 5307 funding (now used for operating expenses) will need to be used for bus purchases and more local funds will be required to cover operating expenses.
Transit Fares	Between 2003 and 2010, MCTS has raised transit fares by about 35 percent. Bus and paratransit fares are assumed to increase with inflation through 2016. Ridership is assumed to decrease 0.3 percent for every 1 percent increase in fares, in accordance with the Simpson-Curtin rule of transit fare elasticity, a commonly-used estimation tool in the transit industry.

^aIncluding 30 40-foot buses purchased in 1996; 9 30-foot buses purchased in 1998; 90 40-foot buses purchased in 2000; and 69 40-foot buses purchased in 2001.

Source: SEWRPC.

PLAN PERFORMANCE AND COST

Operating Funding Needs for the Recommended Plan Under Potential Funding Scenarios

In order to forecast the costs and local funding needs for the recommended plan, factors that affect the transit system operating budget were analyzed to identify in particular their recent trends. The factors, along with their trends, are discussed in Table 54. Using the recent trends of these factors, Commission staff developed projected values for the factors for the five-year planning period as displayed in Table 55. These values were then used to calculate the future operating costs and the public funds needed for the MCTS under the recommended plan as shown in Table 56 and in the detailed tables in Appendix E. Based on the assumptions in Table 55, the recommended plan will require annual operating assistance of approximately \$160.4 million at the end of the planning period. Table 56 also presents the estimated Federal, State, and Milwaukee County share of operating assistance for the recommended transit system.

Capital Needs for the Recommended Plan

Significant capital investments are necessary to maintain the existing transit system equipment and facilities as well as to provide for the recommended service improvements. As the recommended plan was being developed, Milwaukee County undertook several capital projects identified in Chapter VI as needed for the existing system:

- In 2009, the County purchased 90 replacement 40-foot buses using Federal funds made available through the American Recovery and Reinvestment Act (ARRA) of 2009, and Federal Transit Administration (FTA) Section 5309 Capital Program “earmark” funds awarded between 2006 and 2009. The ARRA funds covered 100 percent of the costs of 45 replacement buses and the FTA Section 5309 earmark funds covered approximately 80 percent of the costs of an additional 45 replacement buses. Delivery of these buses began in July 2010. In 2010, the County is using its remaining FTA Section 5309 earmark funds to purchase another 35 replacement buses with delivery anticipated in mid-2011. However, the available Federal funds are sufficient to cover only about 20 percent of the total costs for the bus order with the County covering the remaining 80 percent—about four times the minimum local share of 20 percent allowed under the Section 5309 program.
- The County’s 2009 ARRA grant also provided funds for additional equipment for all County buses, including new electronic fareboxes and a new bus stop annunciator and passenger information system.
- The County installed bicycle racks on all buses in the existing fleet in 2009 using Section 5307/5340 Formula Program “Transit Enhancement”² funds to cover 95 percent of the costs of the bicycle racks.

Table 55

ESTIMATES OF FACTORS DETERMINING FUTURE TRANSIT FUNDING NEEDS OF THE RECOMMENDED PLAN

Factor Used to Measure Future Funding Needs	Value Assumed for the Recommended Plan over the Five-Year Planning Period
Annual Increase in Transit System Operating Costs Per Vehicle Hour	2 percent
Annual Increase in State Operating Assistance	3.5 percent
Annual Increase in Federal Formula Funds	2.5 percent
Annual Amount of Federal Capital Assistance Funds from Earmarks and Other ^a Sources	\$8 million
Bus Purchases for Fleet Replacement and Expansion	Will entail a total expenditure of about \$103.3 million over the planning period, including about \$74.0 million for replacement buses, and about \$29.3 million for fleet expansion. A total of about \$85.7 million in Federal transit aid will be needed, including about \$61.4 million for replacement buses and about \$24.3 million for fleet expansion.
Transit Fares	Expected to increase with inflation (15 percent)

^aOther potential sources of Federal transit capital assistance include Congestion Mitigation and Air Quality (CMAQ) Improvement Program funds, Surface Transportation Program (STP) funds, and the Interstate Cost Estimate (ICE) funds (\$36.6 million) awarded to Milwaukee County in 2009.

Source: SEWRPC.

Table 56

FORECAST OPERATING COSTS FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM UNDER THE RECOMMENDED PLAN IN THE FINAL YEAR OF THE FIVE-YEAR PLANNING PERIOD

Category	2010 Budget ^a	Final Year of Five-Year Recommended Plan ^b (millions)
Costs and Revenues		
Operating Expenses	\$173.2	\$233.8
Passenger and Other Revenues	60.2	73.4
Required Operating Assistance	113.0	160.4
Sources of Assistance		
Federal.....	\$ 24.2	\$ 9.3
State.....	69.5	85.5
Milwaukee County ^c	19.3	65.6

^aData reflect the adopted 2010 operating budget for the Milwaukee County Transit System.

^bThe assumptions used to prepare the financial forecasts are identified in Table 55. Detailed operating costs are presented in Table E-1 of Appendix E.

^cNo constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

²The Federal Transit Administration requires grantees to spend a minimum of 1 percent of their annual allocations of Section 5307/5340 funds on “transit enhancement” projects designed to enhance public transit service or use. These funds can only be used on eligible transit enhancement projects and if they are not spent on such projects, they will revert back to the Federal Transit Administration for use in other parts of the nation. The purchase and installation of equipment for transporting bicycles on buses is one potential use for these transit enhancement funds.

The recommended plan will require additional capital projects to be undertaken over the five-year plan implementation period. The capital investment required over this period and the projected breakdown between Federal and local funding is provided in Table 57 and in Appendix E. The capital projects needed to implement the recommended plan during the five-year plan implementation period include:

- Continuing to replace the oldest vehicles in the fleet including 198 buses that were purchased between 1996 and 2001;
- Purchasing 75 additional 40-foot buses and fareboxes to expand the existing fleet and provide the buses needed to implement the recommended service improvements;
- Acquiring and installing bicycle racks for the additional 75 buses noted above using the transit enhancement³ funds available to Milwaukee County;
- Making various repairs, renovations, and upgrades to MCTS facilities currently scheduled in the transit system's capital improvement program; and
- Programming various transit enhancement projects such as improving bus stops, adding bus shelters, and adding accessibility features to make it easier for disabled persons to use bus services and facilities.

The total cost of the recommended capital projects over the plan implementation period is estimated at about \$113.5 million, or about \$18.9 million annually. Assuming approximately \$93.9 million in Federal funding through the FTA Section 5307/5340 and 5309 programs, Milwaukee County will need to provide about \$19.6 million over the implementation period, or about \$3.3 million annually.

Need for Dedicated Funding for Milwaukee County Transit System

The analysis of the capital and operating funding clearly indicates that the current local property tax levy funding would be inadequate to improve and expand the system. The proposed 0.5 percent sales tax would be sufficient to address the backlog in bus replacement needs and expand transit service by over 20 percent as proposed in the recommended plan, restoring service cuts over the past several years and greatly improving the speed and convenience of transit service.

Public transit in southeastern Wisconsin is uniquely funded in comparison to how other states and metropolitan areas fund transit in that it lacks a local dedicated funding source, as shown in Table 58. Public transit in southeastern Wisconsin relies heavily on State and Federal funding and on local property taxes. In the recent past

Table 57

ESTIMATED TOTAL CAPITAL EXPENDITURES FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM UNDER THE RECOMMENDED PLAN

Category	2010 Budget ^a (millions)	Total Costs Over Five-Year Planning Period ^b (millions)
Bus Fleet		
Replacement Buses	\$25.92	\$ 74.03
Buses for fleet expansion	- -	29.24
Subtotal	\$25.92	\$103.27
Facility Repairs and Renovations	2.79	9.00
Transit Enhancement Projects	- -	1.23
Total	\$28.71	\$113.50
Sources of Assistance		
Federal Share.....	\$12.33	93.90
Local Share	16.38	19.60
Total	\$28.71	\$113.50

^aData reflect the 2010 capital budget for the Milwaukee County Transit System.

^bDetailed capital costs are presented in Table E-2 of Appendix E.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

³*ibid.*, 222.

Table 58

**AVAILABILITY OF DEDICATED LOCAL TRANSIT FUNDING TO TRANSIT SYSTEMS
IN METROPOLITAN AREAS OF SIMILAR SIZE TO THE MILWAUKEE AREA**

Metropolitan Area	2000 Population (in millions)	Source of Local Dedicated Funding	Percent Operating Funding Provided by Local Funds
St. Louis, MO	2.08	0.25 percent Sales tax	87
Denver, CO	1.98	1.0 percent Sales tax	81
Cleveland, OH	1.79	1.0 percent Sales tax	88
Pittsburgh, PA	1.75	Sales tax	13
Portland, OR	1.58	0.6618 percent payroll tax	77
Cincinnati, OH	1.50	0.3 percent payroll tax	72
Norfolk, VA	1.39	--	28
Sacramento, CA	1.39	0.5 percent Sales tax	81
Kansas City, MO	1.36	0.375 percent Sales tax	78
San Antonio, TX	1.33	0.5 percent Sales tax	88
Las Vegas, NV	1.31	0.25 percent Sales tax	96
Milwaukee, WI	1.31	--	22
Indianapolis, IN	1.22	--	38
Providence, RI	1.18	6.25 cents per gallon gas tax	14
Columbus, OH	1.13	0.25 percent Sales tax	80
New Orleans, LA	1.01	1.0 percent Sales tax	76
Buffalo, NY	0.98	0.125 percent Sales tax	49
Memphis, TN	0.97	--	53
Austin, TX	0.90	1.0 percent Sales tax	90
Salt Lake City, UT	0.89	Sales tax	74
Jacksonville, FL	0.88	1.0 percent Sales tax	87
Louisville, KY	0.86	0.2 percent payroll tax	73
Charlotte, NC	0.76	0.5 percent Sales tax	79

Source: SEWRPC.

when State and Federal funds have not been sufficient to address inflationary increases in the cost of providing public transit, local officials have chosen to reduce transit services and raise fares rather than increase local property taxes levied to fund public transit. Given these trends and the above estimates of the funds needed for the recommended plan, Milwaukee County cannot continue to rely on the local property tax levy for transit. A dedicated source of local funds needs to be secured to fund the existing and proposed transit services.

The Commission concluded in the 2035 regional transportation system plan that a sales tax would be a necessary funding source to maintain and improve and expand transit service in southeastern Wisconsin. In November of 2008, an advisory referendum held in Milwaukee County passed approving a 1 percent County sales tax increase, which included an anticipated 0.5 percent for transit. Also in November of 2008, the former “temporary” and “limited authority” Southeastern Wisconsin Regional Transit Authority recommended that authority be given to enact up to a 0.5 percent sales tax for transit systems in southeastern Wisconsin. In the spring of 2009, Wisconsin Governor James Doyle proposed legislation during the preparation of the 2009-2011 State budget that would have provided authority to levy up to a 0.5 percent sales tax for transit under legislation that created a regional transit authority for Milwaukee, Racine, and Kenosha Counties. The State legislature rejected the Governor’s proposal, and proposed legislation for a Kenosha-Racine-Milwaukee (KRM) commuter rail authority and for a Milwaukee County transit authority. Governor Doyle vetoed the Milwaukee County transit authority, which would

have permitted a 0.5 percent sales tax. In April of 2010, another attempt to pass legislation providing authority to enact a 0.5 percent sales tax for transit in Milwaukee County was made, but the legislation was not passed by the State Legislature.

The implementation of the recommended plan would require that legislation providing for a 0.5 percent sales tax for the Milwaukee County Transit System be enacted. The earliest this may occur would be as part of the State 2011-2013 budget legislation. With allowance for the time for the State to administer sales tax collections, this means that implementation could at the earliest begin in 2012. The recommended transit system development plan proposes that service improvement and expansion would be staged over a subsequent five-year period.

In the absence of dedicated local transit funding, it will not be possible to implement the recommended plan of service improvement and expansion. Rather, it will be necessary to continue the service reductions and fare increases (well beyond the rate of general price inflation) which have occurred over the last 10 years. In addition, the need to replace up to 198 buses over the next few years could result—in the absence of some significant infusion of Federal funds like stimulus or special earmark funds—in the need for a significant reduction of transit service. This reduction could be as high as 25 to 35 percent if all 198 buses need to be replaced. The number of buses that will need to be replaced over the planning period will be affected by whether the size of the bus fleet is reduced by future service reductions.

PLAN ADOPTION AND IMPLEMENTATION

Plan Adoption

Adoption or endorsement of the recommended Milwaukee County transit system development plan is important to ensuring a common understanding among the concerned units and agencies of government and to enable the staffs of those governments to work cooperatively toward plan implementation. Accordingly, the following plan adoption actions are recommended:

- ***Milwaukee County***
The Milwaukee County Board of Supervisors should act to formally adopt the plan as a guide to the provision of transit services in the Milwaukee County area. Importantly, this action would not commit the County to implement any of the recommended service changes, but would indicate that the County agrees the plan would serve as a valuable reference document. The adoption action should be certified to the Southeastern Wisconsin Regional Planning Commission with a request that the plan be incorporated into the regional transportation system plan.
- ***Southeastern Wisconsin Regional Planning Commission***
Upon receipt of notification of adoption of the plan from Milwaukee County, the Southeastern Wisconsin Regional Planning Commission should adopt the plan as an amendment and extension of the regional transportation system plan and formally certify such adoption to all of the local units of government in Milwaukee County, to the Wisconsin Department of Transportation, and to the Federal Transit Administration.
- ***Wisconsin Department of Transportation***
Upon receipt of the certification by the Regional Planning Commission, the Wisconsin Department of Transportation should act to endorse the plan as a guide for the programming, administration, and granting of State transit assistance funds.
- ***Federal Transit Administration***
Upon endorsement of the plan by the Wisconsin Department of Transportation, the Federal Transit Administration should endorse the plan as a guide for the programming, administration, and granting of Federal transit funds.
- ***Local Units of Government***
Upon receipt of the certified plan, the concerned city, village, and town boards in Milwaukee County should act to adopt the plan, thereby indicating support to the County in the implementation of that plan. Such actions on the part of the communities concerned would indicate general agreement with services proposed under the plan.

Plan Implementation

It is recommended that Milwaukee County have the primary responsibility for implementing the service changes proposed under the recommended plan. The County's actions should include the following:

- ***Dedicated Funding for MCTS***
Milwaukee County officials and transit system staff should continue to pursue State legislation that will provide dedicated funding for the Milwaukee County Transit System.
- ***Refinement of Recommended Service Changes***
Subject to the approval of the Transportation, Public Works, and Transit Committee of the Milwaukee County Board of Supervisors, Milwaukee County Transit System staff should prepare detailed operating plans which refine the service changes proposed by the plan. The details for the recommended changes should be completed and approved early in the fall of year preceding implementation to coincide with County budget preparation and completion of transit aid applications. Staff in the Milwaukee County Department of Transportation and Public Works should work with transit system staff in establishing the final service changes.
- ***Public Hearings***
Federal regulations require transit systems using Federal funds to provide the opportunity for comment through public hearings prior to the implementation of significant service and fare changes. The County will need to conduct one or more public hearings for the specific service and fare changes recommended under the transit system development plan.
- ***Federal and State Grant Applications***
Milwaukee County should prepare the applications for the Federal and State funds needed over the planning period to implement the recommended plan. Such applications would need to be prepared annually based on the operating budgets and capital needs identified by transit system staff on a schedule that meets the requirements of the agencies concerned.

SUMMARY

This chapter has presented the recommended short-range transit system development plan for the Milwaukee County Transit System (MCTS), identifying a set of operational and capital improvements for a five-year period. The recommended plan is based on the transit service improvements proposed under Alternative Improvement Plan 1, Extensive Service Expansion. This alternative plan proposed the broadest level of service improvement of the alternative improvement plans considered under the study. The public comments received on the alternative plans at public informational meetings held in January 2009 indicated strong support for making these improvements to the MCTS. The improvements recommended under the plan would restore the MCTS services which have been eliminated over the last several years, returning systemwide service levels to about 1 percent below the year 2000 service level by expanding the availability of transit service and improving the convenience and speed of the transit services provided by the system.

The recommended plan focuses on transit improvements that would restore transit service which was eliminated in recent years, reconnect transit service with jobs throughout Milwaukee County, and improve the speed, frequency, and convenience of transit service. The specific improvements to MCTS bus services that are recommended under the plan include:

- Adding new local bus routes and making changes to existing local routes to provide service to unserved areas in Milwaukee County with significant population and employment concentrations;
- Eliminating bus turn-back points on three local routes—Route Nos. 35, 57, and 64—so the same service level is provided over the entire lengths of each route including at the ends of the routes;
- Extending the service hours for selected local bus routes to cover 20 hours a day on weekdays and weekends. In addition to the five routes converted to express service, service periods would be lengthened on two local routes on weekdays and on the 15 highest-ridership local routes on Saturdays and Sundays.

- Increasing the frequency of service on the 15 highest-ridership local routes, in addition to the five routes converted to express service to desirable service frequencies—no more than 10 minutes during weekday peak periods, 20 minutes during weekday off-peak periods and 30 minutes on weekends. Higher service frequencies will increase the convenience of using the service and result in higher ridership;
- Upgrading freeway flyer service to ensure that all passengers have a seat, to improve transit travel times, and to expand service availability; and
- Converting local bus service to express bus service over five routes serving high ridership corridors in order to improve transit travel times. The express routes—Route Nos. 10/30X, 18/23X, and 27X—would operate between 5:00 a.m. and 1:00 a.m. seven days a week, with frequent service (seven to 10 minutes during weekday peak periods, nine to 16 minutes during weekday off-peak periods, 10 to 20 minutes on weekends).

The plan also proposes that increases in passenger fares for both bus and for paratransit services be limited to an increase of no more than the rate of overall price inflation over the planning period. The MCTS adult cash bus fare would be increased by \$0.25 from \$2.25 to \$2.50 per trip and the price of a weekly pass would rise from \$17.50 to \$18.50. Cash, ticket and pass fares in other categories would be increased by similar proportions and a new weekly or monthly pass for disabled MCTS riders is proposed to be created. The fare for people with disabilities using Transit Plus paratransit services would be increased by \$0.50 from \$3.25 to \$3.75 per trip. The proposed fare increases will be needed in order for fares to keep pace with anticipated increases in operating expenses thereby maintaining a stable farebox recovery rate. It is also recommended that the transit system offer promotional fares on the new express and local bus routes proposed under the plan including offering free rides or rides at half fare when service is initiated.

Factors affecting costs and funding for the transit system were analyzed by Commission staff along with projections for the next several years. The recommended plan will require total annual operating assistance of approximately \$160.4 million at the end of the five-year planning period. Significant capital investments will also be necessary to maintain the existing transit system equipment and facilities as well as to provide for the recommended service improvements. The total cost of these needed capital projects over the planning period were estimated at about \$113.5 million with the County's share estimated at about \$19.6 million.

An analysis of the capital and operating funding required for the recommended plan clearly indicated that the current local property tax levy funding would be inadequate to improve and expand the system. A 0.5 percent sales tax would be sufficient to address the backlog in bus replacement needs and expand transit services as proposed under this plan. In the absence of local dedicated funding, the continued reduction in transit service and increases in transit fares well beyond the rate of general price inflation may be expected. Moreover, a reduction in transit service may be expected when the transit system replaces up to 198 buses over the next few years. The reduction could be as high as 25 to 35 percent if all of the 198 buses are replaced with the number of replacement buses dependent on whether the size of the bus fleet is reduced by future service reductions.

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Chapter VIII

SUMMARY AND CONCLUSIONS

INTRODUCTION

At the specific request of Milwaukee County, the Southeastern Wisconsin Regional Planning Commission, together with the Milwaukee County Transit System and the Milwaukee County Department of Public Works, prepared this short-range, five-year transit development plan for the Milwaukee County Transit System. The plan includes a review of population, employment, land use, and travel patterns in Milwaukee County and the Milwaukee area; review of the existing transit system and trends in its operation; definition of transit system objectives and standards to evaluate system performance; assessment of transit system and route performance and identification of unmet transit travel needs of Milwaukee County residents; review of a comparison of the Milwaukee County Transit System to peer transit systems; evaluation of the future financial condition of the transit system; consideration of potential transit service improvements; and the development of a recommended plan of operating and capital improvements for the transit system and their associated funding needs.

Study Organization

Work on the Milwaukee County Transit System development plan was overseen by the Milwaukee County Public Transit Planning Advisory Committee, whose members were appointed by the Milwaukee County Executive (see inside front cover of report). After careful study and evaluation, the Advisory Committee proposed to Milwaukee County and the Commission a recommended transit system development plan which identifies operating and capital improvements for the Milwaukee County Transit System proposed to be implemented over a period of about five years. The Advisory Committee guided the technical staff in the preparation of the plan, including the design and evaluation of transit improvement and funding proposals.

Study Scope and Area

This transit system development plan provides a comprehensive evaluation of the fixed-route bus services provided by the Milwaukee County Transit System and recommends a set of service improvements for a five-year period. The study and the resulting plan did not provide a comprehensive analysis of the Milwaukee County Transit Plus service for disabled individuals, as it was determined that such an analysis should be undertaken through the conduct of a separate study under the guidance of a separate advisory committee with representatives from a broad spectrum of the disabled community and organizations serving the disabled population. Also, given the plan's short-term focus, the study did not consider service options that propose fixed-guideway transit facilities such as the commuter rail service being studied for the Milwaukee-Racine-Kenosha travel corridor or streetcar service under consideration by the City of Milwaukee. As these services are implemented, some changes to the alignments and schedules of the Milwaukee County bus routes will need to be considered to integrate bus services with the commuter rail and streetcar services, and this short-range plan will require appropriate amendments.

LAND USE AND TRAVEL PATTERNS

As part of the transit development plan, information was gathered and reviewed on historic and current population, employment, land use, and travel patterns in Milwaukee County. The following paragraphs present some of the key findings.

Population

Between 1960 and 2003, Milwaukee County's total resident population decreased from about 1,036,000 persons to about 941,300 persons, or by about 9 percent, while the total population in adjacent Ozaukee, Washington, and Waukesha Counties increased by about 138 percent. The total County population in 2009 was about 931,800 persons, or about 1 percent less than in 2003. The decline in County population has modestly reduced the size of the market for public transit service. Meanwhile, average household size has decreased, resulting in an increase in total County households of about 21 percent.

Five population groups whose access to the automobile is more limited than the population as a whole may be categorized as "transit dependent": school-age children (age 12-16), elderly persons (age 65 and older), persons in low-income families, disabled persons, and households with no vehicle available. The highest residential concentrations of transit-dependent persons are in the east-central and northwestern portions of the County (see Map 7 in Chapter II). This transit-dependent population generally coincides with the minority population of Milwaukee County (see Map 6 in Chapter II).

Employment

Total employment in Milwaukee County increased from about 503,300 jobs in 1960 to about 589,800 jobs in 2003, or by about 17 percent, a much lower rate of growth than in adjacent Ozaukee, Washington, and Waukesha Counties, where the number of jobs increased by 550 percent during the same period. The total County employment in 2009 was about 582,400 jobs, or about 1 percent less than in 2003. The significant job growth in bordering counties and in the northern, western, and southern portions of Milwaukee County led to the creation of new transit services, some operated by the Milwaukee County Transit System, designed to connect Milwaukee County residents to jobs.

Land Use

Research on transit-supportive land uses indicates that fixed-route bus service may be supported by employment densities of at least four jobs per acre and residential densities of at least seven dwelling units per acre. Areas with transit-supportive residential and/or employment density can be found throughout Milwaukee County, except for the far southern portion (see Map 17 in Chapter II).

Most Milwaukee-area major activity centers for medical, school, shopping, government, recreation and intercity rail and bus passenger transport are located within Milwaukee County. Many of these centers, therefore, are served by the Milwaukee County Transit System. However, the major activity centers related to employment (large employers and major office and industrial parks) are more widely dispersed throughout the four-county Milwaukee area (see Maps 13 through 15 in Chapter II). Of the 134 Milwaukee area employers in 2005 with 500 or more employees, 48 were located in surrounding Ozaukee, Washington, or Waukesha County. Of the 89 major office and industrial parks identified in the Milwaukee area in 2005, 64 were located in the surrounding counties.

Travel Habits and Patterns

Travel surveys undertaken by the Regional Planning Commission indicate that average weekday total intra-county person trips—those made entirely within Milwaukee County—increased by about 14 percent from 1963 to 2001. Inter-county trips—those made between Milwaukee County and one of the other six counties in the Southeastern Wisconsin Region—increased by about 210 percent from 1963 to 2001. Despite the large increase in inter-county trips, a large majority (77 percent) of all Milwaukee County person trips in 2001 were made entirely within the County. Of the inter-county trips, those made between Milwaukee and Waukesha County accounted for about two-thirds of all the Milwaukee County inter-county person trips in 2001 (see Map 16 in Chapter II). A majority of the trips made between Milwaukee and Waukesha Counties occurred between central Milwaukee County and eastern Waukesha County.

THE MILWAUKEE COUNTY TRANSIT SYSTEM

The Milwaukee County Transit System has been owned by Milwaukee County since July 1975 when the County acquired the assets of the former private bus company serving the County. The system is operated by a private contract management firm, Milwaukee Transport Services, Inc., with oversight of the management firm provided by staff within the Milwaukee County Department of Transportation and Public Works and the Transportation Public Works and Transit Committee of the Milwaukee County Board of Supervisors. Under this arrangement, the management firm assumes full responsibility for day-to-day transit system operating and management decisions while the County assumes the principal role in determining the transit budget and transit policy and is responsible for providing the management firm with the capital equipment and facilities and the public funds needed for operating the transit system.

Fixed Route Bus Service and Fares

The fixed-route bus services provided by the Milwaukee County Transit System in 2005 are illustrated on Map 31 in Chapter V. The regular transit services provided by the system include:

- Freeway flyer bus service, which consisted of high speed direct service between downtown Milwaukee and outlying residential areas or park-ride lots in the County. Service is provided only during weekday morning and afternoon peak periods;
- Regular local and shuttle bus service provided by routes operated over arterial and collector streets with frequent stops; and
- Special school day bus services, including high school and middle school routes and UBUS routes. The UBUS routes operated over freeways and arterial streets between outlying areas and park-ride lots to and from the University of Wisconsin-Milwaukee campus.

The routes of the transit system also connected with other bus routes sponsored by other local governments in southeastern Wisconsin (see Map 32 in Chapter V), some of which provide reverse commute service between Milwaukee County and adjacent counties for Milwaukee County residents to use for accessing jobs and major activity centers outside Milwaukee County. These routes include Milwaukee County Transit System routes funded by Ozaukee and Waukesha Counties, and routes operated by Wisconsin Coach Lines, Inc. and the Waukesha Metro Transit System funded by Waukesha County and/or the City of Waukesha. There were also other connecting bus routes which did not provide for reverse commute travel, including the Kenosha-Racine-Milwaukee bus service sponsored by the City of Racine; the West Bend-Milwaukee bus service sponsored by Washington County; and the Oconomowoc-Milwaukee and Mukwonago-Milwaukee bus service sponsored by Waukesha County.

In 2006, the base adult cash fare was \$1.75 per one-way trip for local routes and \$2.25 per one-way trip for freeway flyer routes. Elderly and disabled individuals were charged reduced fares of \$0.85 per one-way trip while students were charged \$1.30 per one-way trip. Tickets and passes were available at a discount from cash fares.

Transit Plus

The transit system also operated the Transit Plus paratransit service throughout Milwaukee County for disabled individuals who were unable to use the fixed-route bus service. Transit Plus provided curb-to-curb taxicab service for ambulatory disabled individuals, and door-to-door van service for disabled individuals who required an accessible vehicle and/or some driver assistance. The Transit Plus services were available during the same periods as the Milwaukee County Transit System fixed-route bus service. Disabled individuals could also use the accessible bus service provided on all regular routes of the transit system.

Ridership and Service Levels

Transit ridership is highly linked with the level of service provided, such as hours of operation, and frequency of service. Vehicle miles and vehicle hours of bus service are commonly used to measure the total service provided

by a transit system. Figure 4 in Chapter III shows historic ridership and service levels for the Milwaukee County Transit System. Transit ridership increased from 1975 through 1980, which was a period of major transit service improvement and expansion and increasing price of motor fuel. In most of the 14 years that followed, ridership and service declined. Then, from 1995 through 1999, expanded service and new bus pass programs contributed to increased ridership. Between 2000 and 2009, the transit system cut annual revenue vehicle miles and hours by 20 percent and 18 percent, respectively; increased adult cash fares three times; and raised the price of weekly passes five times. Ridership on the bus system declined by 25 percent between 2000 and 2009.

Several factors have also contributed to the general decline of ridership on the transit system since the early 1980's. These factors include the drop in population in Milwaukee County, the decline in residential and employment density, and an increase in automobile ownership and use. Fare increases and service reductions implemented by the transit system during the period also resulted in drops in ridership. Finally, a lack of funding has contributed to the inability to significantly expand transit to better serve Milwaukee County and more of the metropolitan area, provide faster service with more express and rapid routes, and increase service frequencies to make it reasonably convenient and attractive to use transit.

Operating and Capital Costs

Total operating expenses for the transit system have risen since the system began public operation in 1975, as displayed in Figure 6 in Chapter III. The increase in operating expenses since 1990 reflects the bus service expansion between 1995 and 2000, and changes to the paratransit service to comply with Federal ADA service requirements. Between 2001 and 2005, fares and other revenue paid for about 32 percent of the average annual operating expenditures for the combined bus and paratransit system. For the remainder of operating costs over this period, about 19 percent was provided by Federal transit funding; 63 percent by State transit funding, and 28 percent by County funds generated through local property taxes. In those same budgets, about 80 percent of capital expenditures came from Federal transit capital assistance programs, and the remaining 20 percent came from Milwaukee County.

Milwaukee County increased the amount of Federal transit assistance funds used by the system from 2001 to 2005. This increase was possible because the transit system had not fully spent Federal Transit Administration (FTA) Section 5307 transit assistance funds it had been allocated in previous years, and those unspent funds were still available to Milwaukee County. For the past few years, the transit system has been able to use these carryover Section 5307 funds, intended principally for capital projects, to limit the need for increases in County tax levy funding, fare hikes, and service reductions. As the County increased its use of these funds, the balance decreased from about \$37 million at the beginning of 2001 to about \$12 million at the beginning of 2006. The balance was full depleted during 2010.

SERVICE OBJECTIVES AND STANDARDS

The Advisory Committee adopted the following five transit service objectives to provide a basis for assessing the performance of the transit system, identifying unmet transit service needs, and designing and recommending improvements:

1. The public transit system should effectively serve the existing land use pattern and support the implementation of planned land uses, meeting the demand and need for transit services, and particularly the needs of the transit-dependent population;
2. The transit system should promote effective utilization of transit service and operate service that is reliable and provides for user convenience and comfort;
3. The transit system should promote the safety and security of its passengers, operating equipment and facilities, and personnel;
4. The public transit system should promote efficiency in the total transportation system; and
5. The public transit system should be economical and efficient, meeting all other objectives at the lowest possible cost.

Each of the above transit service objectives is supported by a planning principle and a set of standards intended to quantify the achievement of each objective. For example, the service standards specify:

- The land uses which should be connected and served by public transit, based on their density and type and size of activity center;
- The desirable hours of service operation;
- The desirable frequency of transit service; and,
- The comparability of travel time by transit to that by automobile.

EVALUATION OF EXISTING TRANSIT SYSTEM AND IDENTIFICATION OF UNMET NEEDS

Using the transit service objectives and standards, a systemwide and route-by-route evaluation of the existing year 2005 Milwaukee County Transit System was conducted. The evaluation identified areas of excellent performance of the transit system, as well as areas of travel needs not being met by the transit system. The Milwaukee County Transit System has excellent performance with respect to area within Milwaukee County served, bus loading standards, and on-time performance.

- In 2005, the Milwaukee County Transit System provided excellent overall coverage of residential areas and employment in Milwaukee County (see Maps 33 through 36 in Chapter V). About 90.5 percent of the total County population resided within convenient walking distance of the existing transit system. Virtually all of the census block groups with concentrations of transit-dependent persons and census tracts with above-average minority populations within the County were within a one-quarter mile walk of the system routes. About 94 percent of the jobs in the County were within a one-quarter mile walk of the system.
- Activity centers and transit-supportive land areas were also served well within the County in 2005 with 81 of the 86 major employers, 22 of the 25 office and industrial parks, and 68 of the 70 other activity centers served by the transit system routes (see Maps 37 and 38 in Chapter V). The majority of the transit-supportive areas in Milwaukee County—areas with the residential and employment densities considered necessary to support fixed-route bus service—were covered by the local routes of the Milwaukee County Transit System. However, due to the reductions in transit service over the last several years, service to employment and activity centers has declined significantly.
- The transit system generally does not experience overcrowding on buses, that is, there is a seat for every passenger on freeway flyers, on local bus routes during off-peak periods, and there are no more than four passengers for every three seats on nearly all local bus routes during peak periods. However, some problems did occur on selected routes during weekday peak hours when student transit use overlapped with that of the general public.
- Bus on-time performance is excellent, with 90 percent or greater on-time service.
- Of the 30 local routes, 26 met or exceed the weekday performance standard for route effectiveness (22 boarding passengers per revenue bus hour). These routes served areas with high concentrations of minority and transit-dependent populations, operated for more than 20 hours on weekdays, and offered the most frequent service. On weekends, 25 of the 30 local routes exceeded the route effectiveness performance standards defined for Saturday (15 passengers per revenue bus hour) and Sunday (10 passengers per revenue bus hour).

Comparison to Peer Transit Systems Nationwide

A management performance audit of the Milwaukee County Transit System was completed by the Wisconsin Department of Transportation (WisDOT) in 2003. The performance audit compared the Milwaukee County Transit System to a peer group of 13 similar transit systems in the United States. The peer transit systems all operated

within metropolitan areas with populations similar to Milwaukee County, were located in a northern climate, and had a similar bus fleet size. The peer comparison concluded that the Milwaukee County Transit System outperformed its peers for all measures of ridership and financial performance, as shown in Table 44 in Chapter V. While noting the exceptional performance of the Milwaukee County Transit System, the audit referred to the service reductions which were implemented since 2000, principally due to budgetary constraints, and warned that further transit system reductions could potentially damage the system's performance and effectiveness.

Unmet Transit Service Needs

While Milwaukee County Transit System performs well in many areas, and compared to peer transit systems is very efficient and effective, the evaluation found that the transit system did not fully meet all transit service needs of Milwaukee County residents. The unmet needs fell into four specific areas: service area, hours of operation, service frequency, and transit travel times. In addition, there was limited transit service connecting Milwaukee County residents to outlying counties.

Areas Not Served

Some areas in the western, southern, northwest and northeast portions of Milwaukee County with transit-supportive residential and employment densities and/or major activity centers were not served at all by the routes of the transit system (see Map 38 in Chapter V).

Inadequate Service Hours

On weekdays, 25 of the 30 local routes met the desirable standard for service hours of 20 hours of service. Freeway flyers did not meet this standard, as they operated only during weekday peak periods, with no midday or evening service. Transit service provided for less than 16 hours a day did not permit travel for the starting and ending times of all work shifts, specifically second and third shifts. There were also large areas served by routes not meeting the desirable 20 hours of service on weekends: only 14 out of 30 local routes met that standard on Saturday, and only nine out of 29 routes met it on Sunday. Moreover, portions of some routes had no service on weekends.

Inadequate Frequency of Service

The Milwaukee County Transit System relies upon a grid system of local routes where transfers between one or more routes are generally required to complete a trip by public transit. The frequency of service on the routes directly affects the convenience of transferring, with longer headways between buses increasing transfer wait times, making service inconvenient and discouraging use. Most local routes of the 2005 transit system did not meet the desirable headway service standards during peak hours. During weekday peak periods, less than 30 percent of the County population, and less than 37 percent of the jobs in the County, were served by routes with desirable headways of 10 minutes or less (see Table 39 in Chapter V). During weekday off-peak periods, about 60 percent of the County population and jobs were served by routes and route segments with desirable headways of 20 minutes or less. No freeway flyer or UBUS routes have headways that conform with desirable headways. The low service frequency largely resulted from the service reductions which occurred between 2001 and 2005.

Lengthy Transit Travel Times

Transit travel time was generally between two and four times more than automobile travel time for comparable trips. Ratios of transit-to-automobile travel times between selected locations within the County in 2005 were displayed on Map 44 in Chapter V. The lengthy transit travel time stems from a combination of factors: local bus routes with low overall operating speeds providing the majority of transit service in the system; the lack of transportation system management tools—traffic signal priority and reserved lanes—to increase bus travel speeds; and service cuts enacted from 2001 through 2005 that increased operating headways and eliminated routes and route segments.

Limited Service Connecting Milwaukee County Residents to Outlying Counties

The unmet needs of County residents for travel between Milwaukee County and the other surrounding counties of Southeastern Wisconsin included:

- **Lack of Service:** Many major activity centers and significant job concentrations outside Milwaukee County did not have public transit services connecting to Milwaukee County residents (see Map 46 in Chapter V).
- **Limited Service Hours and Frequency:** The transit services available to connect Milwaukee County residents with jobs and activity centers in the surrounding counties with rare exception had limited weekday service hours and were operated with infrequent trips (see Maps 47 and 48 in Chapter V).
- **Lengthy Travel Times:** Transit services that connected Milwaukee County residents with surrounding counties in many cases involved slower local bus service, and/or required use of a connecting local bus route in Milwaukee County.
- **Transit Fares:** While discounted fares for passengers transferring between the different transit systems were offered in 2005, the discounts and transfer arrangements were not uniform among all the transit services connecting with the Milwaukee County Transit System.

ALTERNATIVE TRANSIT IMPROVEMENT PLANS

Three alternative transit service improvement plans were developed to address the unmet needs identified by staff in the transit system performance evaluation, and the concerns expressed by the public during the first set of public informational meetings held in late February and early March 2007. In general, the public comments were supportive of public transit and confirmed the unmet needs identified by staff in the performance evaluation. Given the short-term nature of the plan, staff focused on potential service improvements that would make transit more competitive with travel by private automobile, but also could feasibly be implemented over the five-year planning period. These included:

- Extending routes to unserved areas in Milwaukee County;
- Reducing transit travel times;
- Increasing the frequency of service; and,
- Expanding weekday and weekend service periods.

These priorities are reflected in the service improvements proposed under both Alternatives 1 and 2. These two alternatives attempt to address the identified unmet transit service needs. Alternative 3, which would maintain the transit system at 2008 service levels, represented a baseline for comparison. Table 48 in Chapter VI compares the proposed service expansions, equipment needs, and estimated ridership under the three alternative transit service improvement plans.

Alternative 1: Extensive Service Expansion

Of the three potential service improvement plans, Alternative 1 represents the most aggressive attempt to address the priorities for service improvements identified above. Overall, the plan would:

- Expand fixed-route bus service by about 22 percent (4 percent per year) from 1,340,000 bus hours budgeted for in 2008, to 1,629,000 bus hours after five years. This service level would be about 1 percent below the 1,650,000 bus hours provided in 2000.
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership).
- Boost annual ridership by an estimated 10 percent, from 42.8 million (in 2008 budget) to 47.1 million after five years.

Alternative 2: Limited Service Expansion

Alternative 2 represents a scaling back of the proposals in Alternative 1, but would still address most of the priorities for service improvements. Overall, Alternative 2 would:

- Expand fixed-route bus service by about 15 percent (3 percent per year) starting from the 1,340,000 bus hours budgeted for in 2008 and increasing to 1,540,000 bus hours after five years. This service level would be about 5 percent below the 1,650,000 bus hours provided in 2000.
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership).
- Boost annual ridership by an estimated 6 percent, from 42.8 million (in 2008 budget) to 45.3 million after five years.

Alternative 3: Maintain Existing System

Alternative 3 represents a “no expansion” approach. Under this alternative, the transit system would maintain fixed-route bus service at the existing 2008 levels. Overall, Alternative 3 would:

- Maintain fixed-route bus service at the 1,340,000 bus hours budgeted for 2008. This service level is about 19 percent less than the 1,650,000 bus hours of service operated in the year 2000.
- Increase Transit Plus paratransit service by about 3 percent (keeping pace with anticipated growth in ridership).
- Depress annual ridership by an estimated 5 percent, from 42.8 million (in 2008 budget) to 40.5 million after five years, due to assumed fare increases and no off-setting service increases.

Capital Needs For Alternatives

Regardless of the alternative service plan, significant capital investments would be needed over the five-year planning period to maintain the existing transit system equipment and facilities. This would include the need to purchase 204 buses to replace part of the current aging fleet. The alternatives proposing service expansion would also require additional buses (75 for Alternative 1, and 65 for Alternative 2) to implement the proposed service improvements. Other capital needs identified for the alternatives included replacement fareboxes; bicycle racks; and various repairs, renovations, and upgrades to MCTS facilities. Milwaukee County’s projected local share for the necessary capital investments over the five year period would be \$20.6 million to implement the extensive service expansion in Alternative 1, \$19.6 million for the limited service expansion under Alternative 2, and \$15.6 million to maintain the existing system under Alternative 3.

Operating Funding Needs of Alternatives

To calculate total operating expenses and local funding needs for each alternative, Commission staff first analyzed recent trends of factors that affect the transit system budget; and then developed a range of factors to create three funding scenarios (best-case, average, and worst-case) for the five-year planning period. The scenarios were then used to calculate the possible range of operating costs and the public funds needed for each of the three transit service improvement alternatives (see Table 51 in Chapter VI). Depending on the change in operation costs under each scenario, by the end of the planning period, the total annual operating assistance needed for Alternative 1 (Extensive Service Expansion) could be as little as \$153.8 million, or as much as \$187.4 million. Alternative 3 (Maintain Existing System) could require total annual operating assistance of as little as \$128.0 million, or as much as \$155.7 million.

In 2008, Milwaukee County used \$22.2 million from the property tax levy for operating expenses. Even if the County were to simply maintain the existing system as in Alternative 3, it would have to contribute \$75.7 million of property tax levy by the end of the planning period under the worst-case scenario, \$49.5 million under the average scenario, and \$32.6 million under the best-case scenario. Alternative 1 (Extensive Service Expansion) would require a County tax levy of \$111.3 million by the end of the planning period under the worst-case scenario, \$77.0 million under the average scenario, and \$58.5 million under the best-case scenario. Alternative 2 (Limited Service Expansion) would require a County tax levy of \$100.4 million by the end of the planning period under the worst-case scenario, \$68.3 million under the average scenario, and \$50.3 million under the best-case scenario.

Options for Dedicated Funding for Transit

Given the estimates of operating expenses and the potential local share needed as explained above, the Advisory Committee believed Milwaukee County should not, even in the short term, continue to rely on the local property tax levy to fund the transit system. The Committee considered two proposals for providing dedicated funding for transit which had been advanced by public officials in recent years including diverting the growth in the existing sales tax collected on vehicle-related purchases from the State general fund and to provide the needed funding for public transit; and levying a 0.5 percent additional local sales tax for public transit needs. These two possibilities are described below.

1. Future growth in sales tax on vehicle sales

Under this proposal, State legislation would be required to take the incremental growth in the current sales tax on motor vehicle-related purchases and designate it for mass transit. However, Wisconsin Department of Revenue data indicate that statewide sales tax revenues on vehicle-related purchases declined from \$675 million in 2003, to \$630 million in 2006, an average annual decrease of 2.2 percent. In Milwaukee County, sales tax revenues on vehicle-related purchases declined by 2.3 percent annually over this same period. Thus, in recent years there has been no vehicle sales tax revenue growth to capture.

Furthermore, this proposal would entail the removal of future revenue from the general fund of the State budget, which has been running a substantial deficit. Moreover, obtaining approval of the use of these funds to replace local property tax funds of public transit can be expected to be very difficult, because it would eliminate any local funding of public transit under a Wisconsin transportation responsibility structure in which transit is considered to be a local responsibility. Lastly, to provide adequate funding to meet Milwaukee County transit needs, Milwaukee County would need to receive substantially more than the growth in vehicle-related sales tax generated in Milwaukee County alone, even during periods when such revenue growth was observed.

2. Dedicated sales tax of 0.5 percent

Under this option, an additional 0.5 percent sales tax would be levied to raise revenues for the transit system. If the trend in County sales tax collections from 2002 to 2007 continues, a 0.5 percent sales tax in Milwaukee County would generate \$66.7 million for public transit in 2009 and \$72.2 million by 2013. Table 52 in Chapter VI displays the revenue that would be generated by a 0.5 percent sales tax in Milwaukee County, compared to the local share of the combined operating and capital funding needs of Alternatives 1, 2 and 3 under the average scenario.

Public transit local funding needs over the next five years may be expected to increase faster than projected local sales tax revenues. This is due in part to the need to address long-deferred bus replacement, and under the expansion alternatives, an aggressive 15 to 22 percent expansion of service proposed to be implemented over only five years. However, it is also due to the expectation that transit system operating costs per vehicle hour of service may be expected to increase by 3 percent annually, while Federal, State, and local (sales tax) revenues are only projected to increase by 2 percent annually, based on the trend of the past five years. This indicates a need to adopt strategies to aggressively use available Federal funding—such as Federal Highway Administration Congestion Mitigation and Air Quality or Surface Transportation Program-Milwaukee Urbanized Area funds—to reduce local funding needs and a need to “bank” excess sales tax funds in early years to address this concern, until economic conditions improve and sales tax revenues begin to increase at 3 to 4 percent annually as they did in the 1990's. The projections indicate potential surpluses under each alternative through 2013. This is a conservative assessment, as it assumes no additional Federal funds beyond Federal formula and limited discretionary funds.

The current funding sources for the transit system are insufficient to maintain the system at current levels, let alone make needed improvements. The future of transit in Milwaukee County depends on securing a permanent source of dedicated funding.

THE RECOMMENDED PLAN

The recommended transit system development plan for the Milwaukee County Transit System (MCTS) includes a set of operational and capital improvements for a five-year period. The plan is based on the transit service improvements proposed under Alternative Improvement Plan 1, Extensive Service Expansion. This alternative plan proposed the broadest level of service improvement of the alternative improvement plans considered under the study. The public comments received on the alternative plans at public informational meetings held in January 2009 indicated strong support for making these improvements to the MCTS. The improvements recommended under the plan would restore the MCTS services which have been eliminated over the last several years, and improve the convenience and speed of the transit services provided by the system.

The recommended plan focuses on transit improvements that would make public transit in Milwaukee County more competitive with travel by private automobile and increase transit ridership. This would be accomplished by extending routes to unserved areas in Milwaukee County with significant population or employment concentrations; eliminating bus turn-back points so the same service level is provided over the entire lengths of each route including at the ends of the routes; expanding weekday and weekend service periods to provide for desirable hours of service on more routes; increasing the frequency of service to provide for desirable headway levels on more routes; and reducing transit travel times by adjusting Freeway Flyer service and by converting major local routes to express routes. The specific improvements to MCTS bus services that are recommended under the plan include:

- Add new local bus routes and make changes to existing local routes to provide service to unserved areas in Milwaukee County with significant population or employment concentrations. The proposed local route changes will provide: an east-west route to serve the commercial and office development along Brown Deer Road; better transit service coverage in north-central and western Milwaukee County; an extension of local bus service to the Village of Hales Corners; and an extension of local bus service to industrial and office parks in Franklin and Oak Creek. The changes would restore the local bus services over Route Nos. 14, 33, and 35 that were reduced or eliminated under the 2010 Milwaukee County budget.
- Eliminate bus turn-back points along local routes where some of the buses turn around before reaching the terminus of the route thereby providing less frequent service at the ends of the route. The recommended plan proposes to provide the same service levels on weekdays and weekends over the entire lengths of Route Nos. 35, 57, and 64, including at the ends of each route.
- Extend service hours for selected local bus routes to cover 20 hours a day on weekdays and weekends. Most local routes currently operate 20 hours a day on weekdays, but only about one-half operate 20 hours a day on Saturdays, and about a third operate 20 hours a day on Sundays. Under the plan, weekday schedules would be extended for two routes, and Saturday and Sunday schedules would be lengthened on the 15 highest-ridership local routes, and on the five routes converted to express service.
- Increase the frequency of service on the 15 highest-ridership local routes, in addition to the five routes converted to express service. The plan recommends that “headways”, or the amount of time between bus arrivals at a stop, should be no more than 10 minutes during weekday peak periods; no more than 20 minutes during weekday off-peak periods; and no more than 30 minutes on weekends. Service frequencies directly affect the times passengers spend waiting for each bus. Higher service frequencies will increase the convenience of using the service and result in higher ridership.
- Upgrade freeway flyer service to ensure that all passengers have a seat, to improve transit travel times, and to expand service availability. The proposed improvements include providing a minimum of 10 bus trips over each freeway flyer route during weekday morning and afternoon peak periods; creating one new freeway flyer route so that each route stops at no more than two park-and-ride lots (a service standard); and adding two midday round-trips to each freeway flyer route.
- Convert local bus service to express bus service over five routes serving high ridership corridors in order to improve transit travel times. The express routes would include: Route 10/30X running from the

Milwaukee Regional Medical Center in Wauwatosa to the University of Wisconsin-Milwaukee (UWM) over portions of Route Nos. 10 and 30; Route 18/23X operating between Summit Place (S. 70th St. and W. Greenfield Avenue) and Midtown Center (N. 60th Street and Fond du Lac Avenue) over portions of Route Nos. 18 and 23; and Route 27X extending from the Bayshore Town Center to Wal-Mart over Route No. 27. All routes would operate between 5:00 a.m. and 1:00 a.m. seven days a week, with frequent service (seven to 10 minutes during weekday peak periods, nine to 16 minutes during weekday off-peak periods, and 10 to 20 minutes on weekends). The proposed express service represents an incremental move—achievable within a five-year planning period—toward a faster system.

The express service could be upgraded to bus rapid transit (BRT) service similar to proposals that have been identified by the Milwaukee County Executive. One proposal would institute BRT service between Midtown Center and State Fair Park over Fond du Lac Avenue, McKinley Street, 2nd and 3rd Streets, and W. National and W. Greenfield Avenues. The second proposal calls for BRT service to be operated between the Milwaukee Regional Medical Center and the University of Wisconsin-Milwaukee using Wisconsin Avenue, Prospect Avenue, Farwell Street, Oakland Avenue, and Kenwood Boulevard. Both proposed BRT lines closely follow the alignments of express bus routes (18/23X and 10/30X) recommended under the final plan. Enhancements to upgrade express bus service to BRT service could include exclusive bus lanes, transit priority at traffic signals, next-bus information displays, buses of a different design or with special markings and paint schemes, and specially designed bump-out bus stops. The possibility of incorporating some of these enhancements into the initial express bus route—including signal priority, minor street redesign at bus stops, and using buses with special paint schemes—should be explored as the express routes are moved into implementation. Funding for the BRT projects could potentially come through Federal Interstate Cost Estimate funds awarded to Milwaukee County in 2009 or other Federal transit funding programs

The plan also proposes that increases in passenger fares for both bus and for paratransit services be limited to an increase of no more than the rate of overall price inflation over the planning period. The MCTS adult cash bus fare would be increased by \$0.25 from \$2.25 to \$2.50 per trip and the price of a weekly pass would rise from \$17.50 to \$18.50. Cash, ticket and pass fares in other categories would be increased by similar proportions and a new weekly or monthly pass for disabled MCTS riders is proposed to be created. The fare for people with disabilities using Transit Plus paratransit services would be increased by \$0.50 from \$3.25 to \$3.75 per trip. The proposed fare increases will be needed in order for fares to keep pace with anticipated increases in operating expenses thereby maintaining a stable farebox recovery rate. It is also recommended that the transit system offer promotional fares on the new express and local bus routes proposed under the plan including offering free rides or rides at half fare when service is initiated.

Factors affecting costs and funding for the transit system were analyzed by Commission staff along with projections for the next several years. The recommended plan will require total annual operating assistance of approximately \$160.4 million at the end of the five-year planning period. Significant capital investments will also be necessary to maintain the existing transit system equipment and facilities as well as to provide for the recommended service improvements. The total cost of these needed capital projects over the planning period were estimated at about \$113.5 million with the County's share estimated at about \$19.6 million.

An analysis of the capital and operating funding required for the recommended plan clearly indicated that the current local property tax levy funding would be inadequate to improve and expand the system. A 0.5 percent sales tax would be sufficient to address the backlog in bus replacement needs and expand transit services as proposed under this plan. In the absence of local dedicated funding, the continued reduction in transit service and increases in transit fares well beyond the rate of general price inflation may be expected. Moreover, a reduction in transit service may be expected when the transit system replaces up to 198 buses over the next few years. The service reduction could be as high as 25 to 35 percent if all 198 buses need to be replaced. The number of replacement buses will depend on whether the size of the bus fleet is reduced by future service reductions.

CONCLUSIONS

The transit development plan demonstrated that the Milwaukee County Transit System outperforms comparable transit systems in terms of ridership and financial performance, and does well at serving population, employment, and activity centers within Milwaukee County. However, due to the reductions in transit service over the last several years, service to employment and activity centers has declined significantly with an estimated 40,000 fewer jobs now served by public transit as compared to in 2001. Both the performance evaluation and the substantial public comment on the existing transit service generated over the course of the study identified areas where the system does not adequately serve Milwaukee County residents' travel needs. Two alternatives were formulated to identify needed service improvements, and the alternative proposing the broadest level of service improvement—about a 22 percent service expansion—was selected to be the recommended plan as it would restore eliminated services and improve the convenience and speed of transit service.

Financially, the transit system faces problems. Due to its heavy dependence on State transit operating funds that have not increased with inflation, and no increases in County funding provided through the property tax levy, the transit system has been forced over the past decade to reduce service, increase fares, and use Federal funds intended for capital improvements to pay for operating expenses. The funding sources currently relied on for the transit system are insufficient to maintain the current level of transit service, let alone make needed improvements. Given the estimates of operating and capital expenses and potential local share for the recommended service improvements, Milwaukee County cannot, even in the short term, continue to rely on providing the local funding needed for the transit system through the County property tax levy. The electorate in the County recognized this in November of 2008 when it approved an advisory referendum calling for a 1 percent increase in the County sales tax with an anticipated 0.5 percent going for public transit. The future of transit in Milwaukee County depends on securing such permanent dedicated transit funding. Without it, the proposed service improvement and expansion identified in the plan cannot be implemented, and the cycle of service reductions, fare increases, and declining ridership will continue into the future.

APPENDICES

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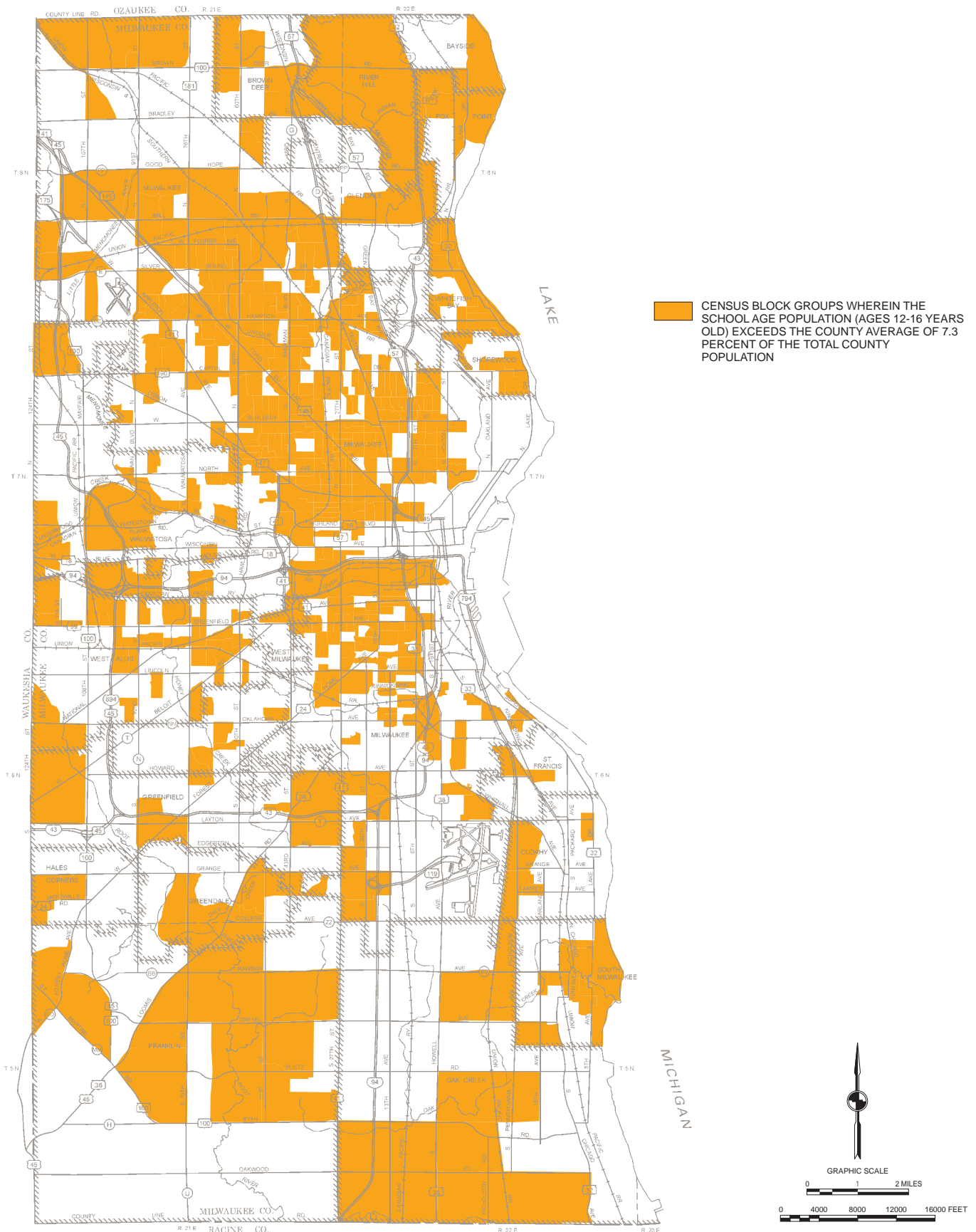
Appendix A

**DISTRIBUTION OF TRANSIT-DEPENDENT AND
MINORITY POPULATIONS IN MILWAUKEE COUNTY: 2000**

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Map A-1

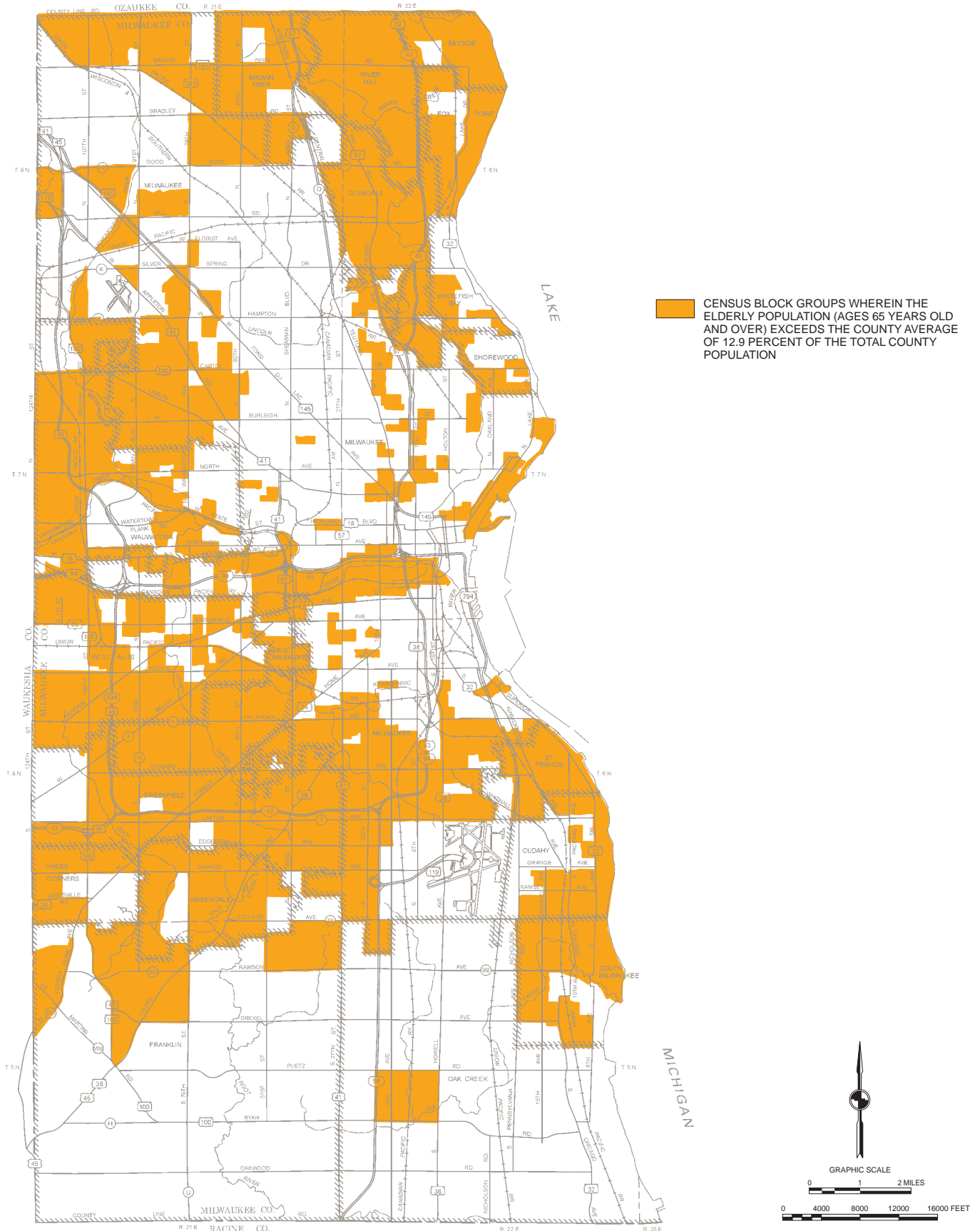
LOCATIONS OF CONCENTRATIONS OF SCHOOL-AGE CHILDREN WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-2

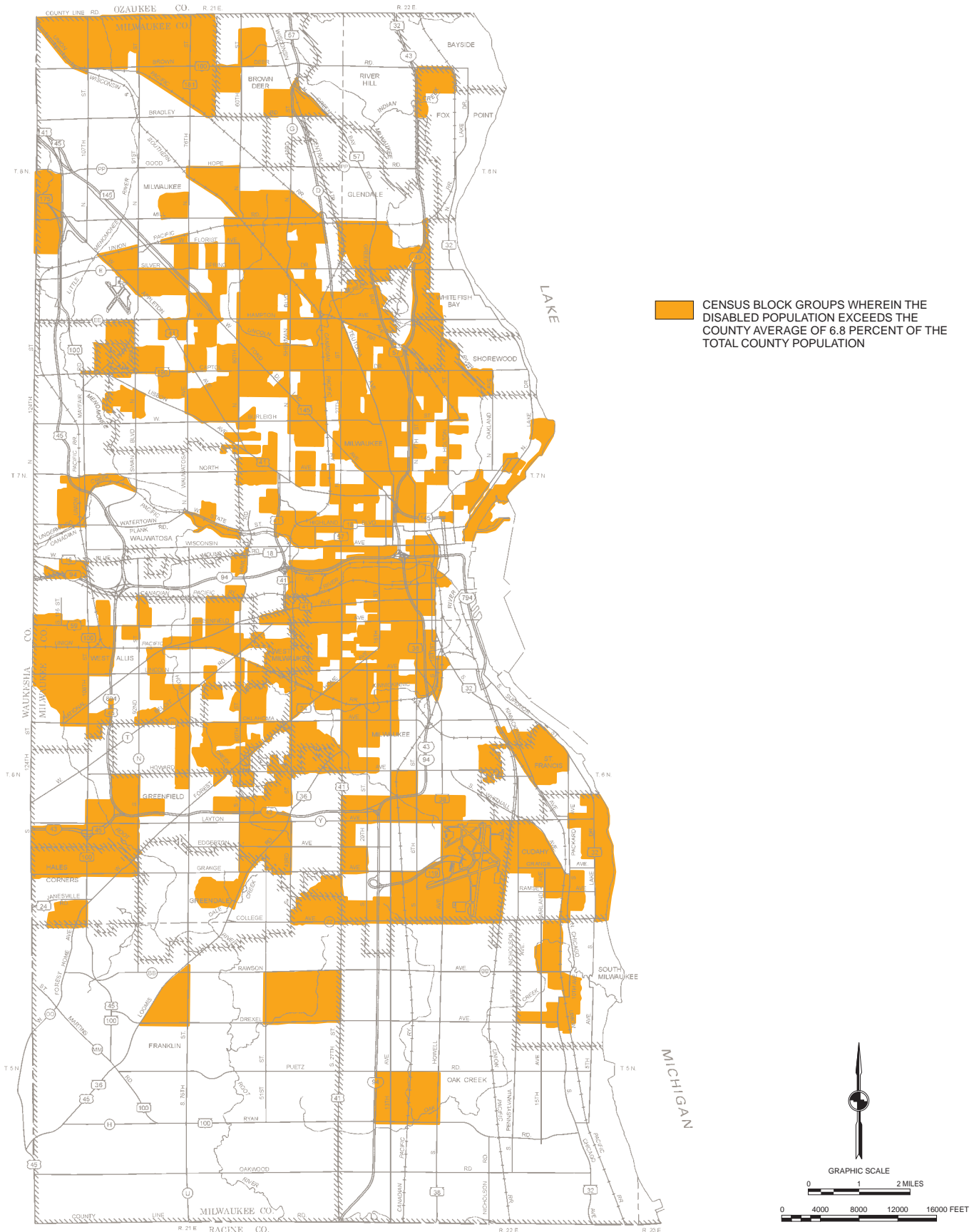
LOCATIONS OF CONCENTRATIONS OF ELDERLY PERSONS WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-3

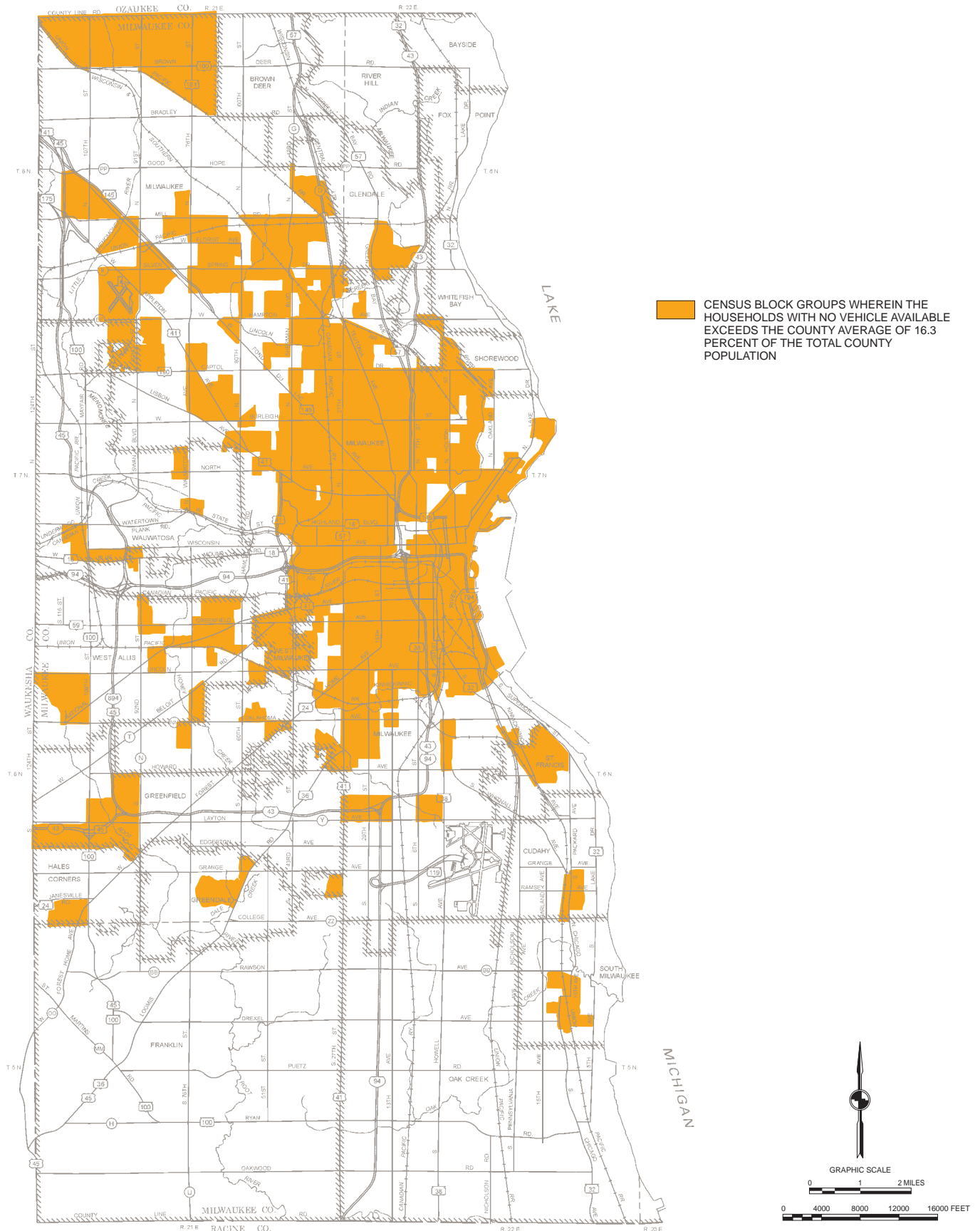
LOCATIONS OF CONCENTRATIONS OF DISABLED PERSONS WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-4

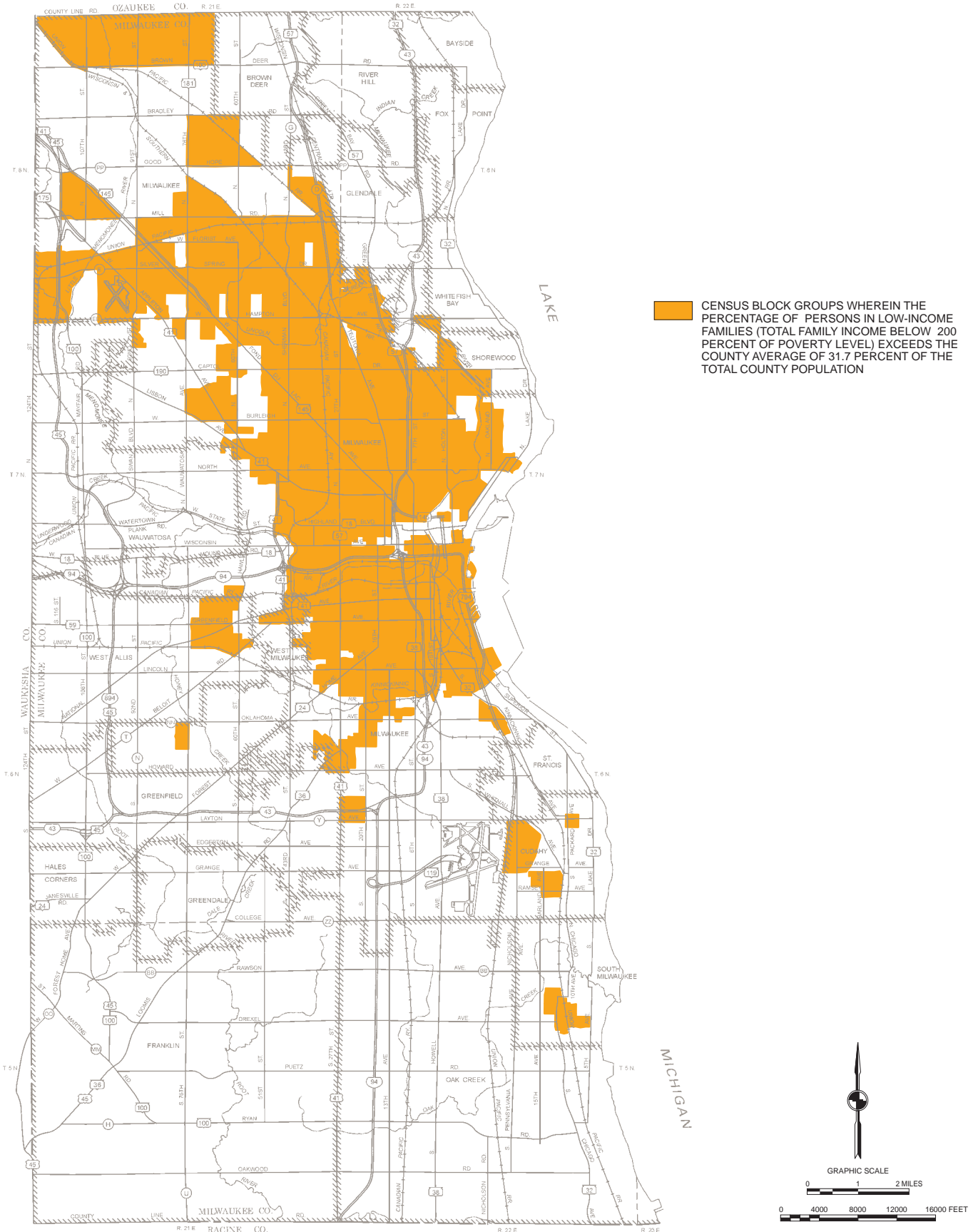
LOCATIONS OF CONCENTRATIONS OF HOUSEHOLDS WITH NO VEHICLE AVAILABLE WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-5

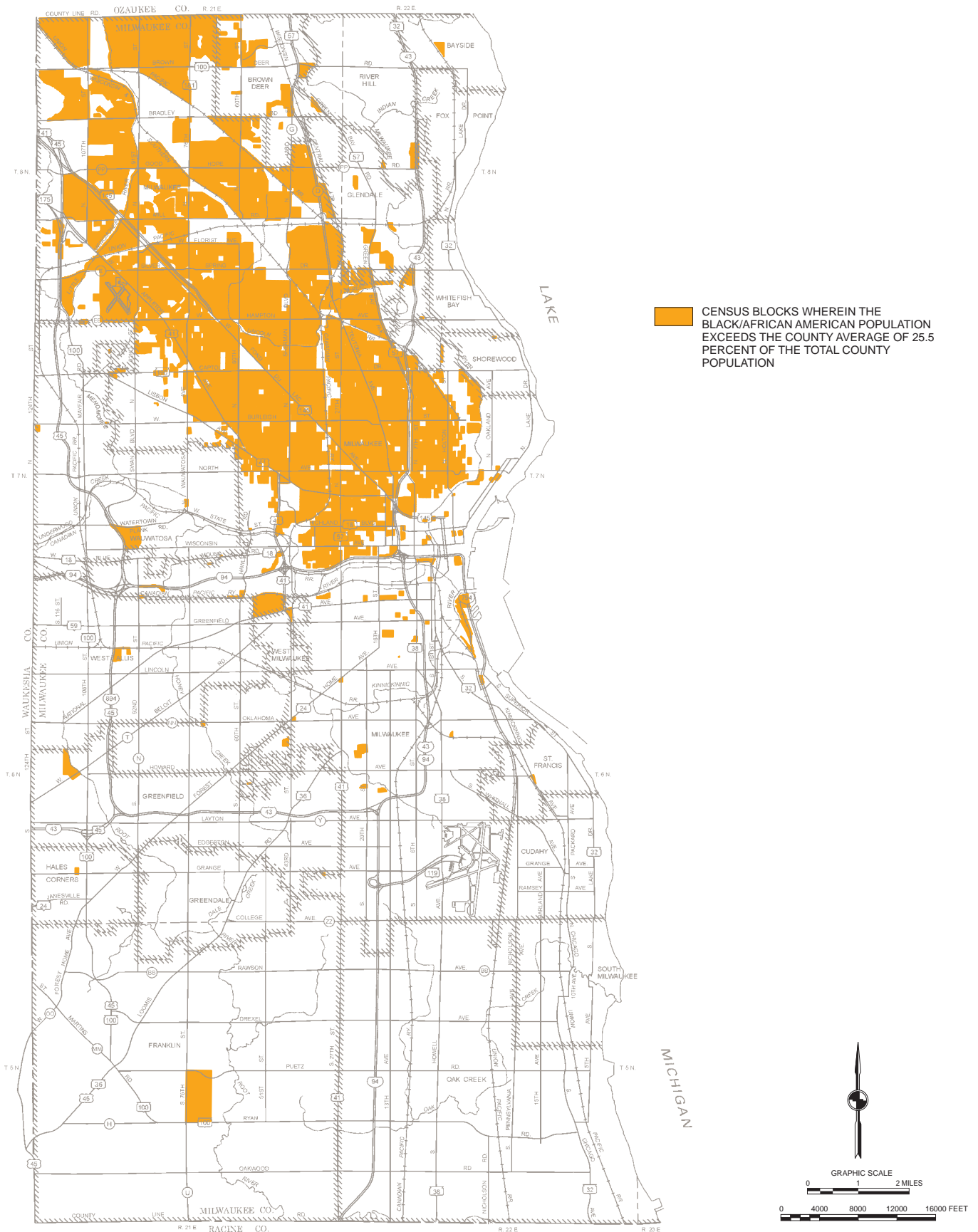
LOCATIONS OF CONCENTRATIONS OF PERSONS IN LOW-INCOME FAMILIES WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-6

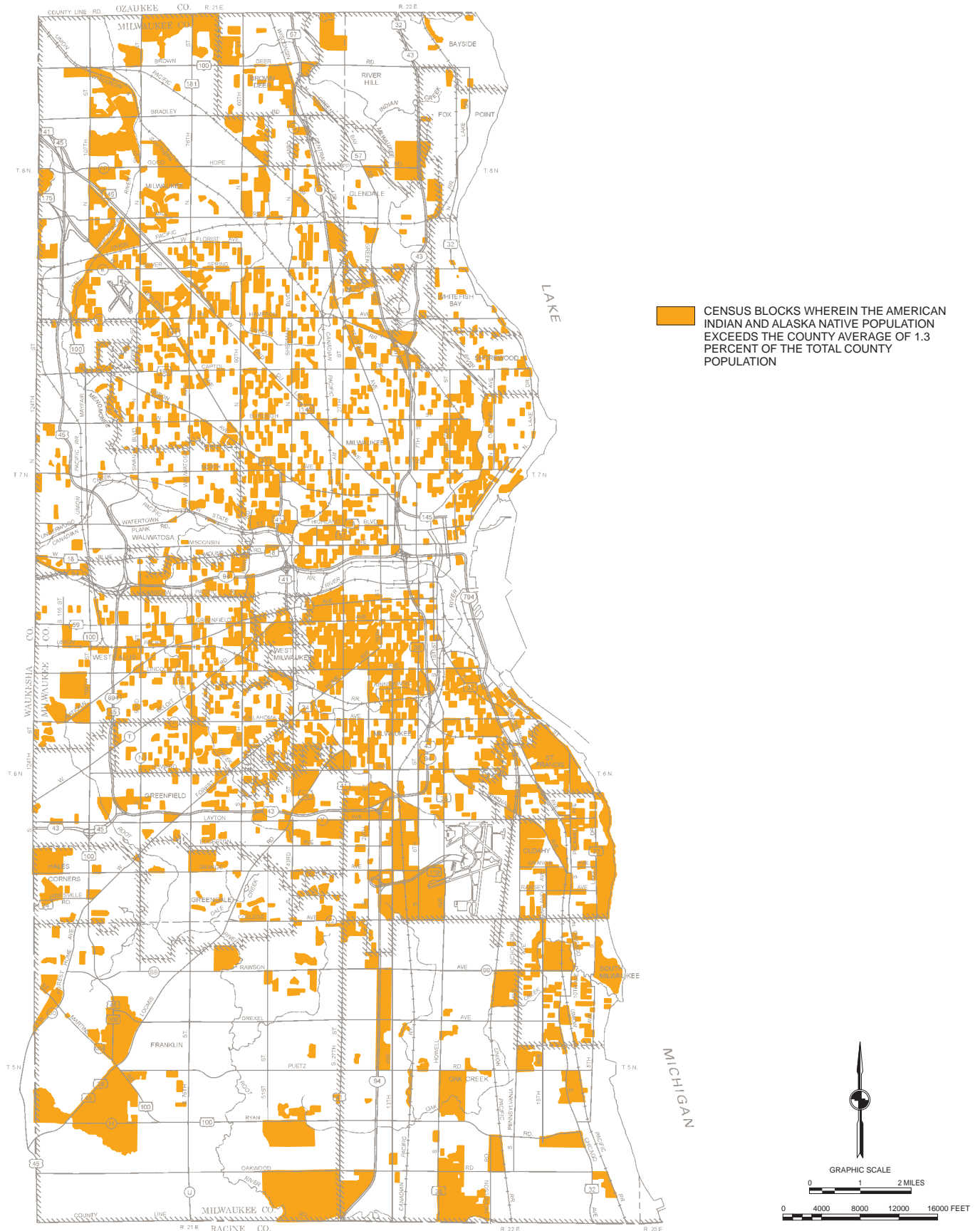
LOCATIONS OF CONCENTRATIONS OF BLACK/AFRICAN AMERICAN PERSONS WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Map A-7

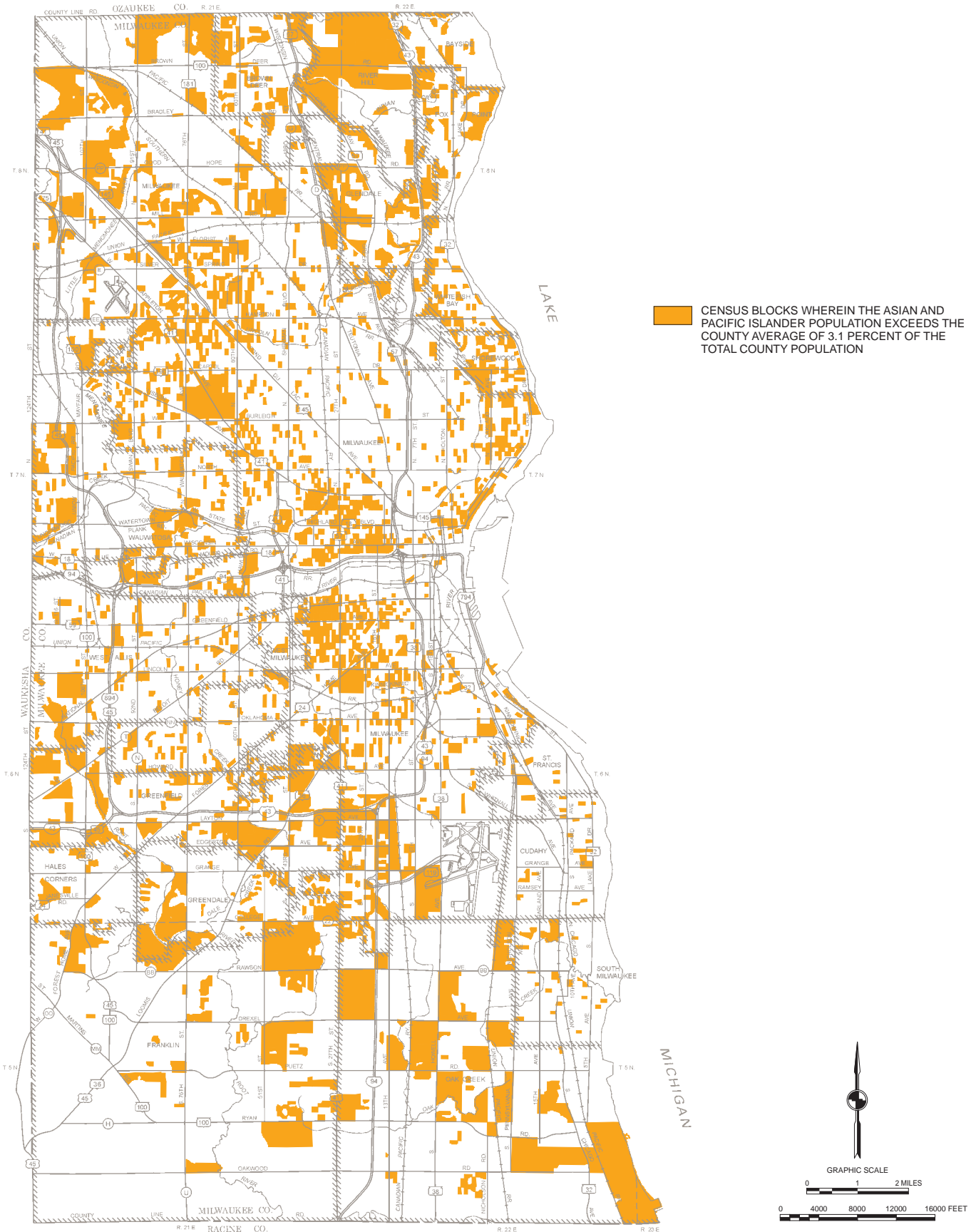
**LOCATIONS OF CONCENTRATIONS OF AMERICAN INDIAN AND
ALASKA NATIVE PERSONS WITHIN MILWAUKEE COUNTY : 2000**



Source: U.S. Bureau of the Census and SEWRPC.

Map A-8

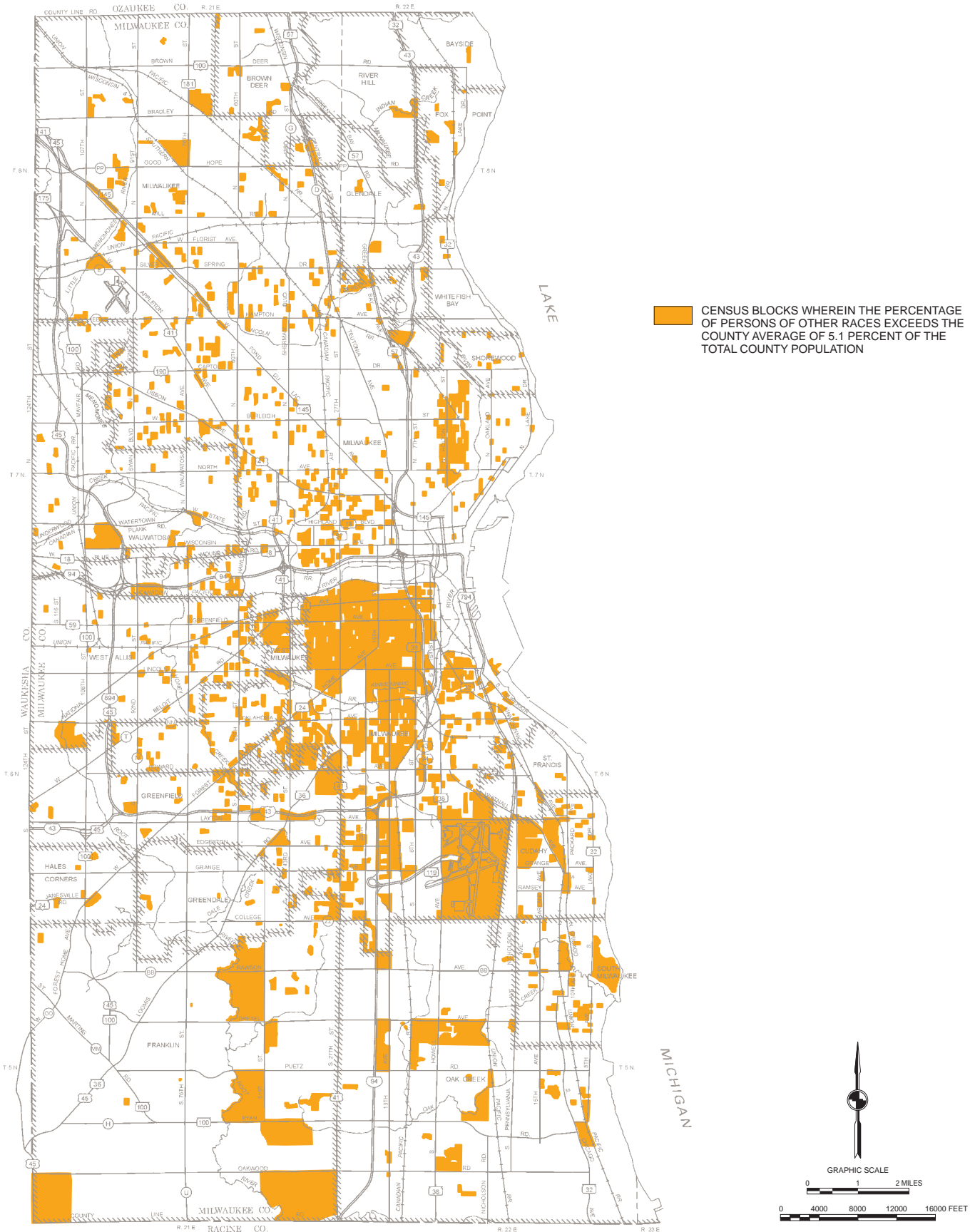
LOCATIONS OF CONCENTRATIONS OF ASIAN AND PACIFIC ISLANDER PERSONS WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

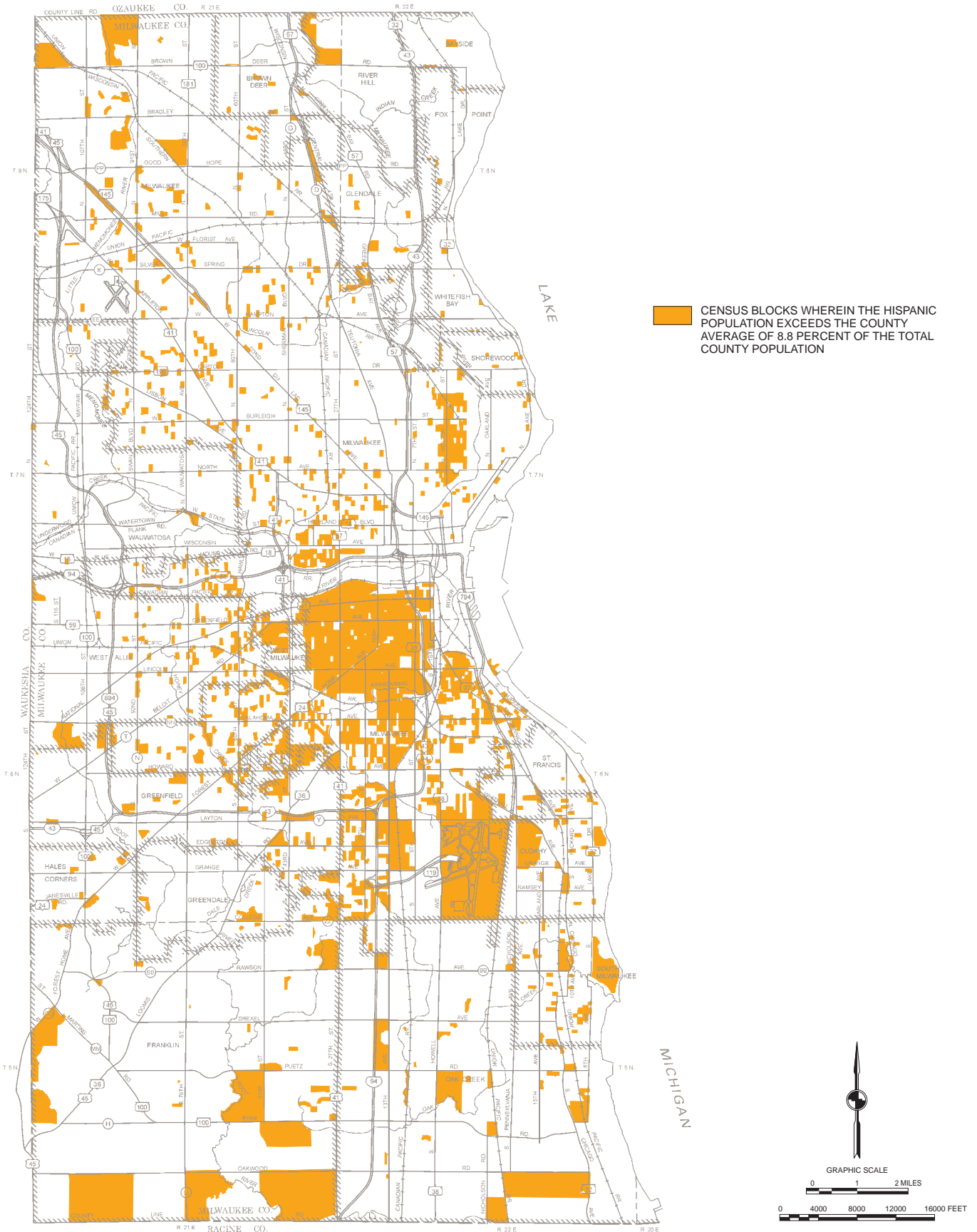
Map A-9

LOCATIONS OF CONCENTRATIONS OF PERSONS OF OTHER RACES WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

LOCATIONS OF CONCENTRATIONS OF HISPANIC PERSONS WITHIN MILWAUKEE COUNTY : 2000



Source: U.S. Bureau of the Census and SEWRPC.

Appendix B

MILWAUKEE COUNTY TRANSIT SYSTEM PASSENGER SURVEY FORM: 2001

**PLEASE COMPLETE THIS SURVEY EVEN IF
YOU HAVE ALREADY FILLED ONE OUT TODAY**

Please complete and deposit in any U.S. mailbox, or return on bus.

If you have any difficulty completing this form please call (262) 547-6721.

PUBLIC TRANSPORTATION SURVEY - BUS PASSENGER

Please tell us about this bus trip.

1. ON THIS BUS TRIP, I AM COMING FROM: Enter Number

- | | | | |
|---------|-------------|-------------------------------------|--------------------------|
| 1. Home | 3. School | 5. Social/Recreational activity | 7. Other (specify) _____ |
| 2. Work | 4. Shopping | 6. Personal business/medical/dental | |

2. WHICH IS LOCATED AT:

(nearest street intersection or street address) (name of community)

3. ON THIS BUS TRIP, I AM GOING TO:

Enter Number

- | | | | |
|---------|-------------|-------------------------------------|--------------------------|
| 1. Home | 3. School | 5. Social/Recreational activity | 7. Other (specify) _____ |
| 2. Work | 4. Shopping | 6. Personal business/medical/dental | |

4. WHICH IS LOCATED AT:

(nearest street intersection or street address) (name of community)

5. WILL YOU TRANSFER TO ANOTHER BUS TO COMPLETE THIS TRIP?

(check one)

☐ No
I will not transfer

☐ Yes
I will transfer to (check one) →

- | | |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> Milwaukee County Transit System (MCTS) Route(s) No. _____ and _____ | <input type="checkbox"/> Wisconsin Coach Lines Kenosha-Racine-Milwaukee |
| <input type="checkbox"/> Waukesha Metro | <input type="checkbox"/> Washington Co. Commuter Express |
| <input type="checkbox"/> Wisconsin Coach Lines Waukesha County Routes | |

6. HOW DID YOU GET TO THE BUS STOP WHERE YOU GOT ON THIS BUS?

Enter Number

1. I transferred from (check one)
2. I walked
3. By private auto/truck
4. Other (specify) _____

- | | |
|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| <input type="checkbox"/> Milwaukee County Transit System (MCTS) Route(s) No. _____ and _____ | <input type="checkbox"/> Wisconsin Coach Lines Kenosha-Racine-Milwaukee |
| <input type="checkbox"/> Waukesha Metro | <input type="checkbox"/> Washington Co. Commuter Express |
| <input type="checkbox"/> Wisconsin Coach Lines Waukesha County Routes | |

7. HOW DID YOU PAY FOR THIS BUS TRIP? (check one)

- | | | | |
|---------------------------------------------------------|------------------------------------------------|-------------------------------------------------|----------------------------------|
| <input type="checkbox"/> 1. Cash (give amount) \$ _____ | <input type="checkbox"/> 3. Weekly Pass | <input type="checkbox"/> 5. Commuter Value Pass | <input type="checkbox"/> 7. Free |
| <input type="checkbox"/> 2. Ticket | <input type="checkbox"/> 4. UPASS/Student Pass | <input type="checkbox"/> 6. Transfer | |

8. WHAT TIME OF DAY WAS IT WHEN YOU GOT ON THIS BUS? (enter time)

 : AM
(circle one) PM

9. IS THIS PART OF A ROUND TRIP BY BUS TODAY?

(check one) ☐ Yes ☐ No

10. HOW OFTEN DO YOU MAKE A ROUND TRIP BY BUS?

Enter Number

1. Less than once a month
2. One to three times a month
3. Once or twice a week
4. Three to five times a week
5. More than five times a week

11. HOW LONG AGO DID YOU BEGIN USING TRANSIT?

Enter Number

1. Less than three months
2. More than three months, but less than one year
3. One to two years
4. Three to four years
5. Five years or longer

12. MY HOME IS LOCATED AT:

(nearest street intersection or street address) (name of community)

13. OUR HOUSEHOLD HAS _____ VEHICLES AVAILABLE FOR PERSONAL USE.

14. THE NUMBER OF PERSONS LIVING IN OUR HOUSEHOLD IS _____.

15. I AM A LICENSED DRIVER:

(check one) ☐ Yes ☐ No

16. MY AGE IS:

- | | | |
|-------------------------------------------------------------------------------|----------------|-----------------|
| Enter Number | 01. 5 or under | 07. 35-44 |
| | 02. 6-12 | 08. 45-54 |
| | 03. 13-15 | 09. 55-64 |
| | 04. 16-18 | 10. 65-74 |
| | 05. 19-24 | 11. 75-84 |
| | 06. 25-34 | 12. 85 or older |

17. I AM: (check one) ☐ Male ☐ Female

18. I AM SPANISH/HISPANIC/LATINO: (check one) ☐ Yes ☐ No

19. MY RACE IS: (circle all that apply)

1. Black, African American, or Negro
2. White
3. American Indian or Alaska Native
4. Asian
5. Native Hawaiian or Other Pacific Islander
6. Other (specify) _____

20. OUR TOTAL HOUSEHOLD INCOME IS:

- | | | |
|-------------------------------------------------------------------------------|-----------------------|-----------------------|
| Enter Number | 01. Under \$5,000 | 06. \$25,000-\$29,999 |
| | 02. \$5,000-\$9,999 | 07. \$30,000-\$34,999 |
| | 03. \$10,000-\$14,999 | 08. \$35,000-\$39,999 |
| | 04. \$15,000-\$19,999 | 09. \$40,000-\$49,999 |
| | 05. \$20,000-\$24,999 | 10. \$50,000 or over |

21. WHAT SUGGESTIONS DO YOU HAVE FOR IMPROVING BUS SERVICE?

Thank you for your participation. Your cooperation is greatly appreciated.

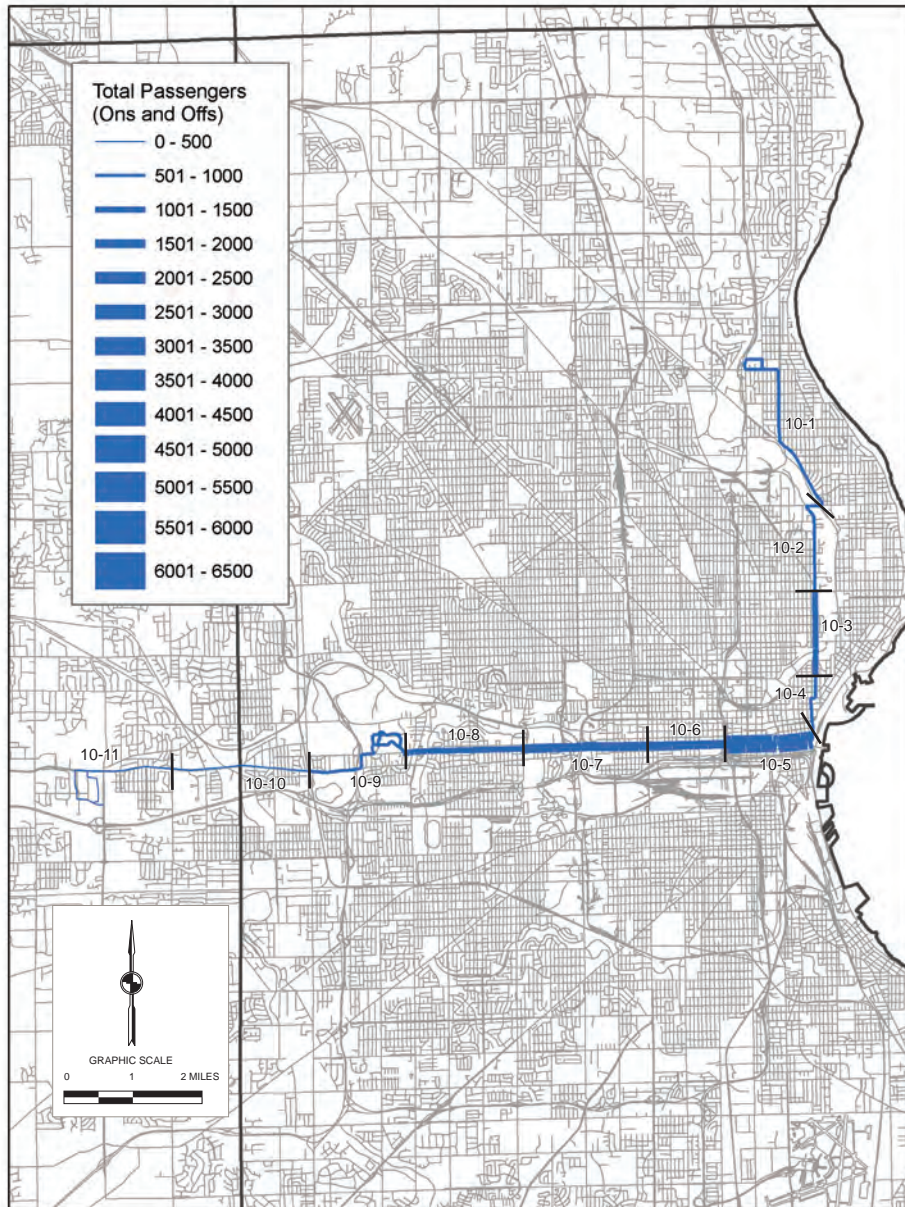
This survey is being conducted by the Milwaukee County Transit System and the Southeastern Wisconsin Regional Planning Commission in cooperation with the U.S. Department of Transportation and the Wisconsin Department of Transportation.

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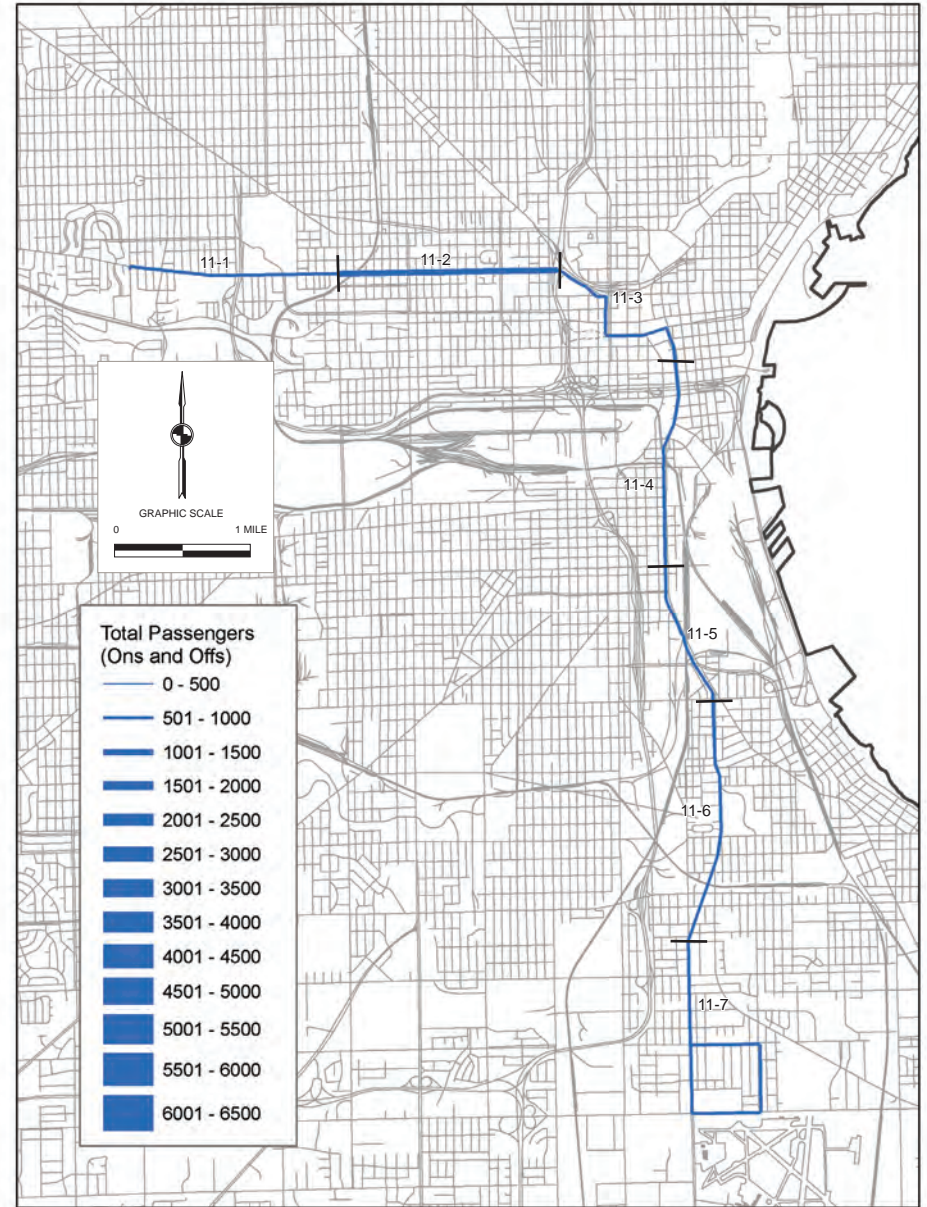
Appendix C

TOTAL PASSENGER ACTIVITY BY SEGMENT ON WEEKDAYS FOR THE REGULAR LOCAL ROUTES OF THE MILWAUKEE COUNTY TRANSIT SYSTEM: FALL 2004

ROUTE 10

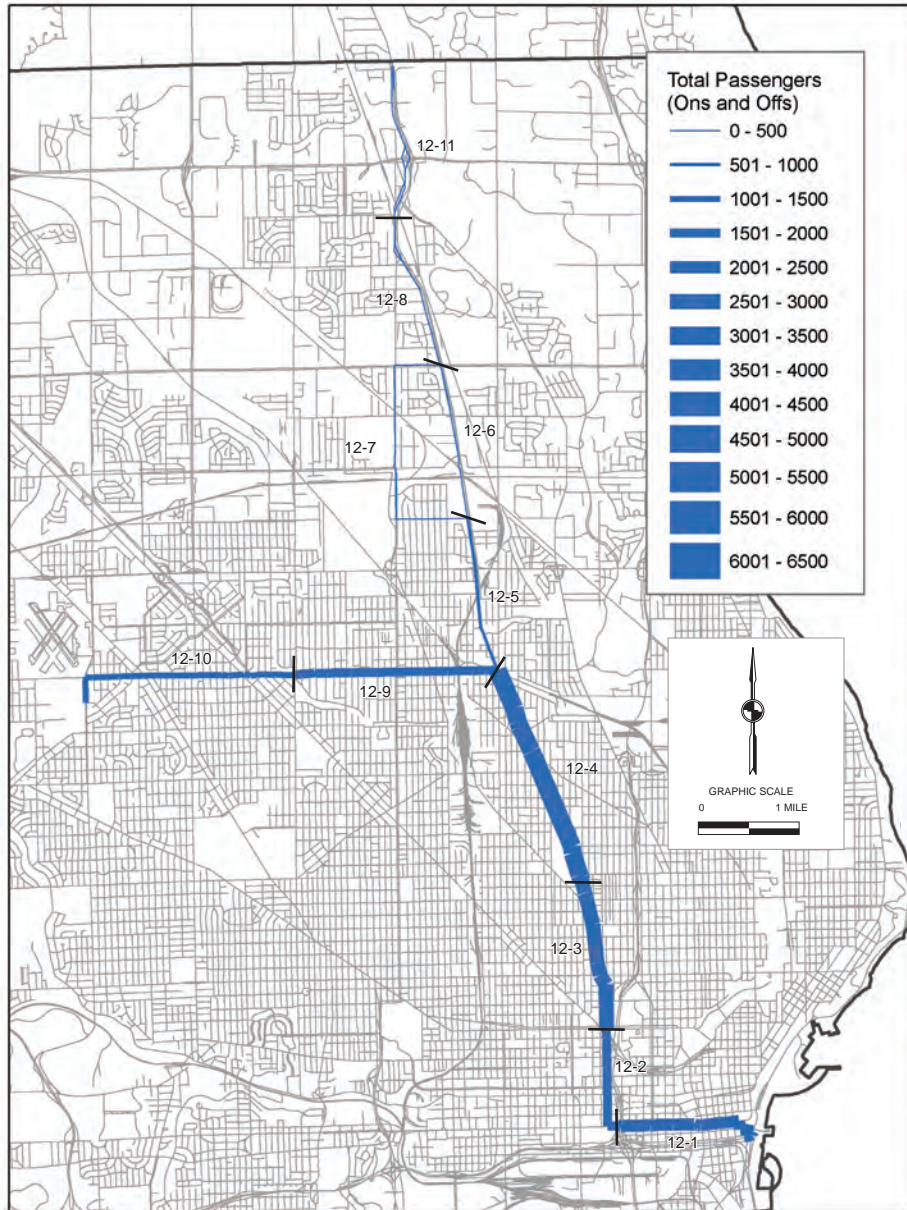


ROUTE 11

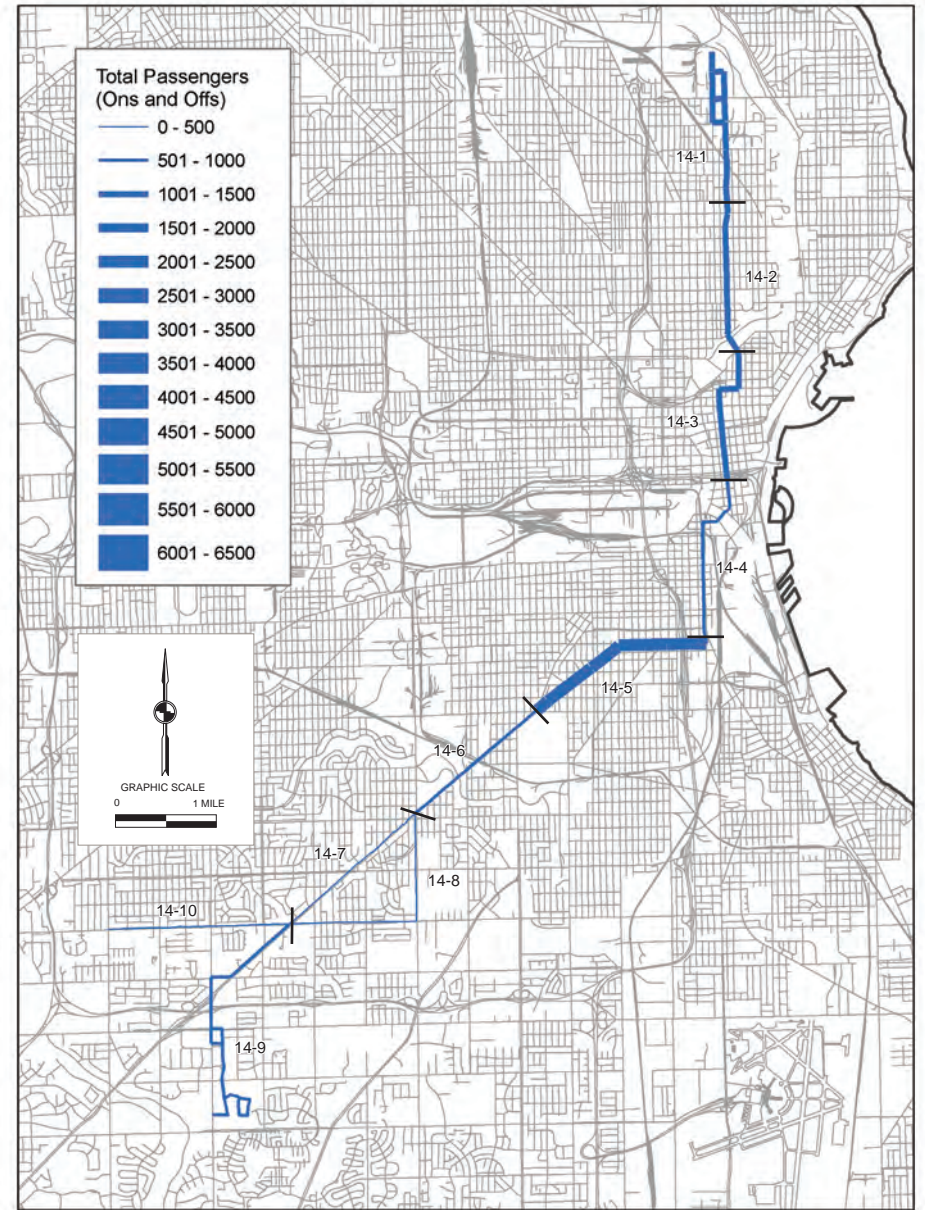


Appendix C (continued)

ROUTE 12

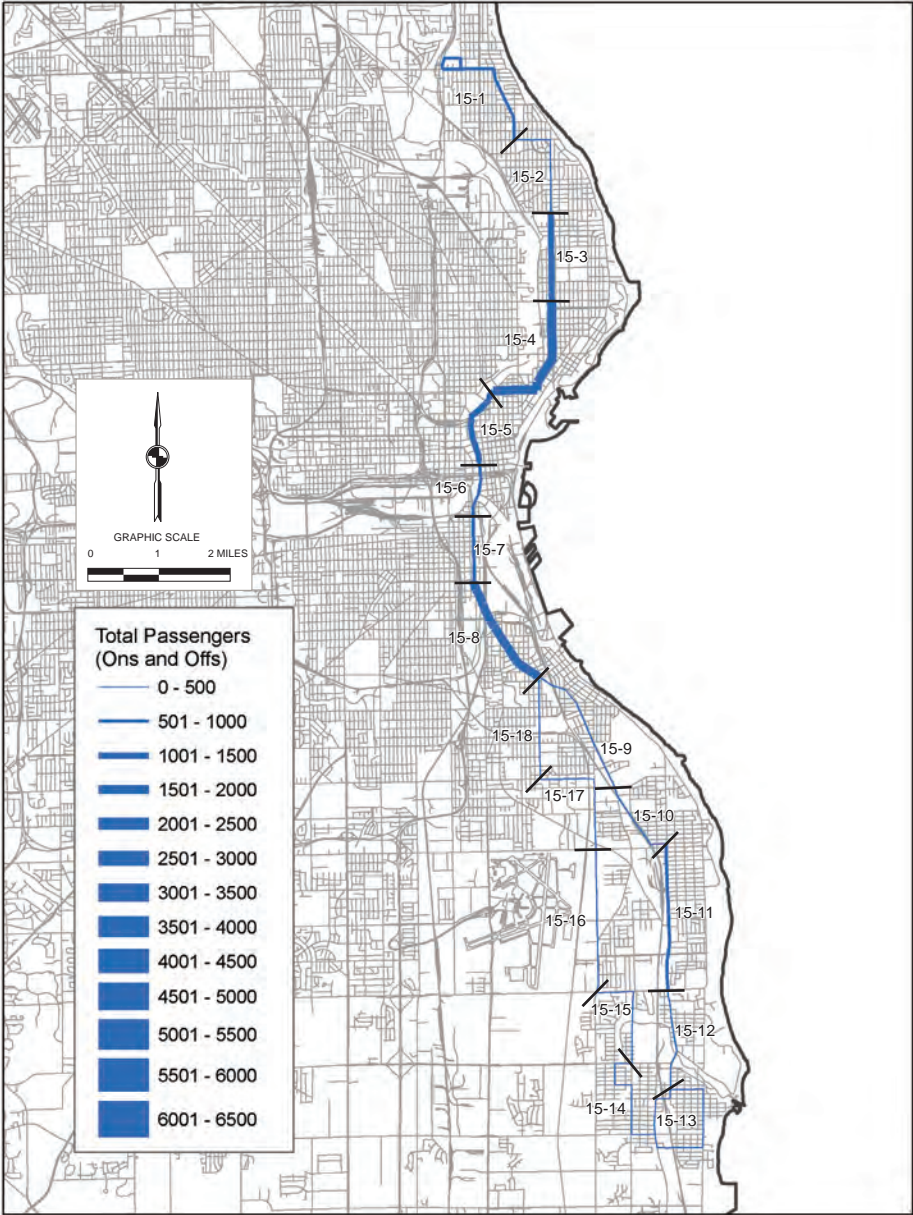


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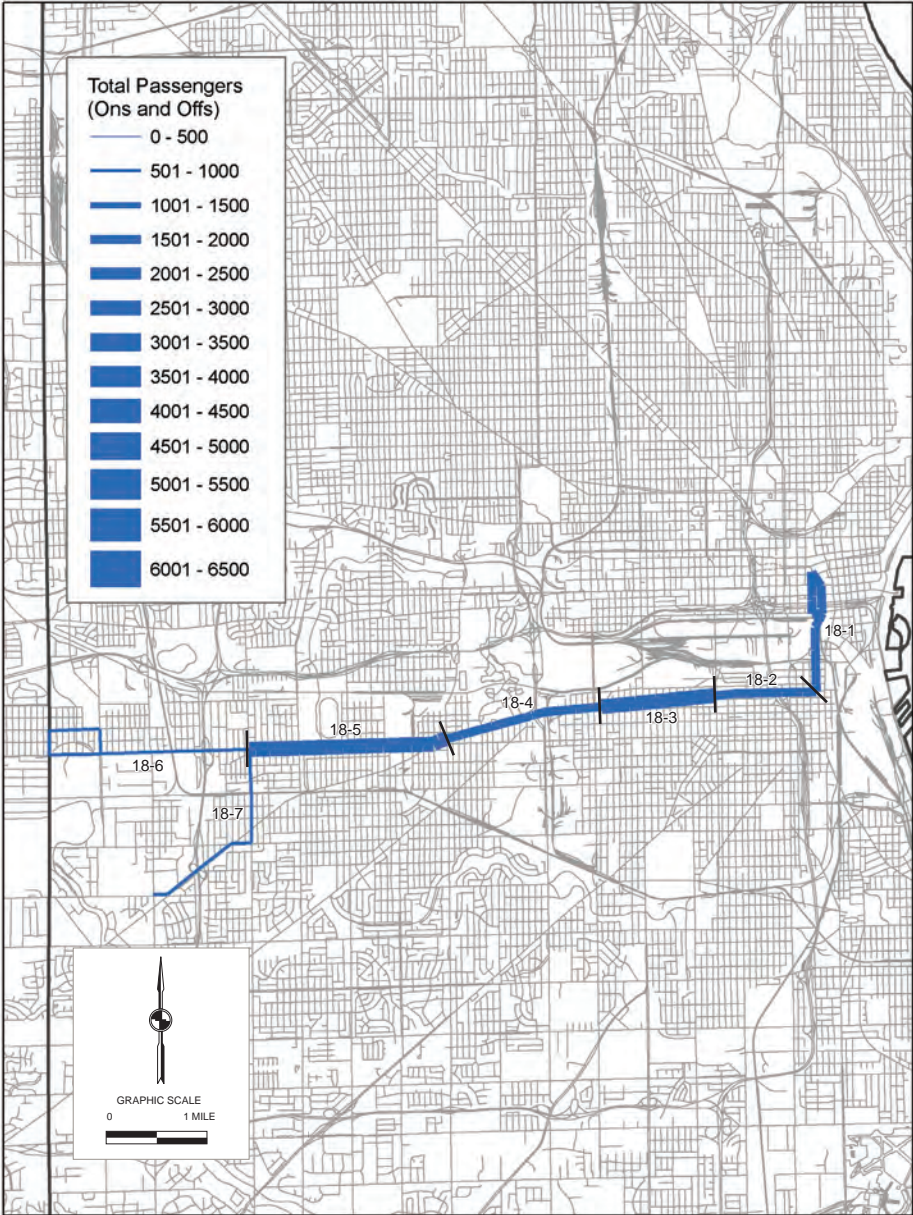


Appendix C (continued)

ROUTE 15

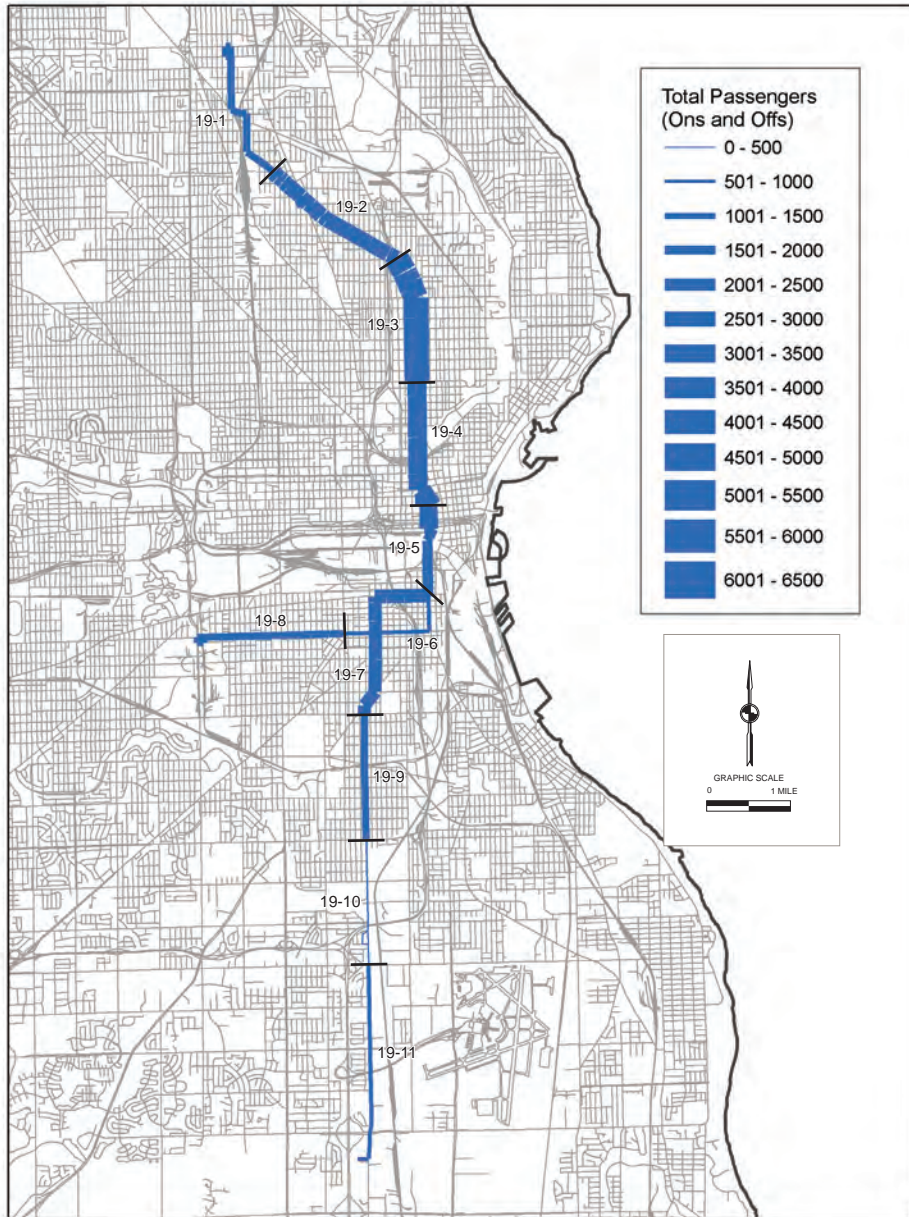


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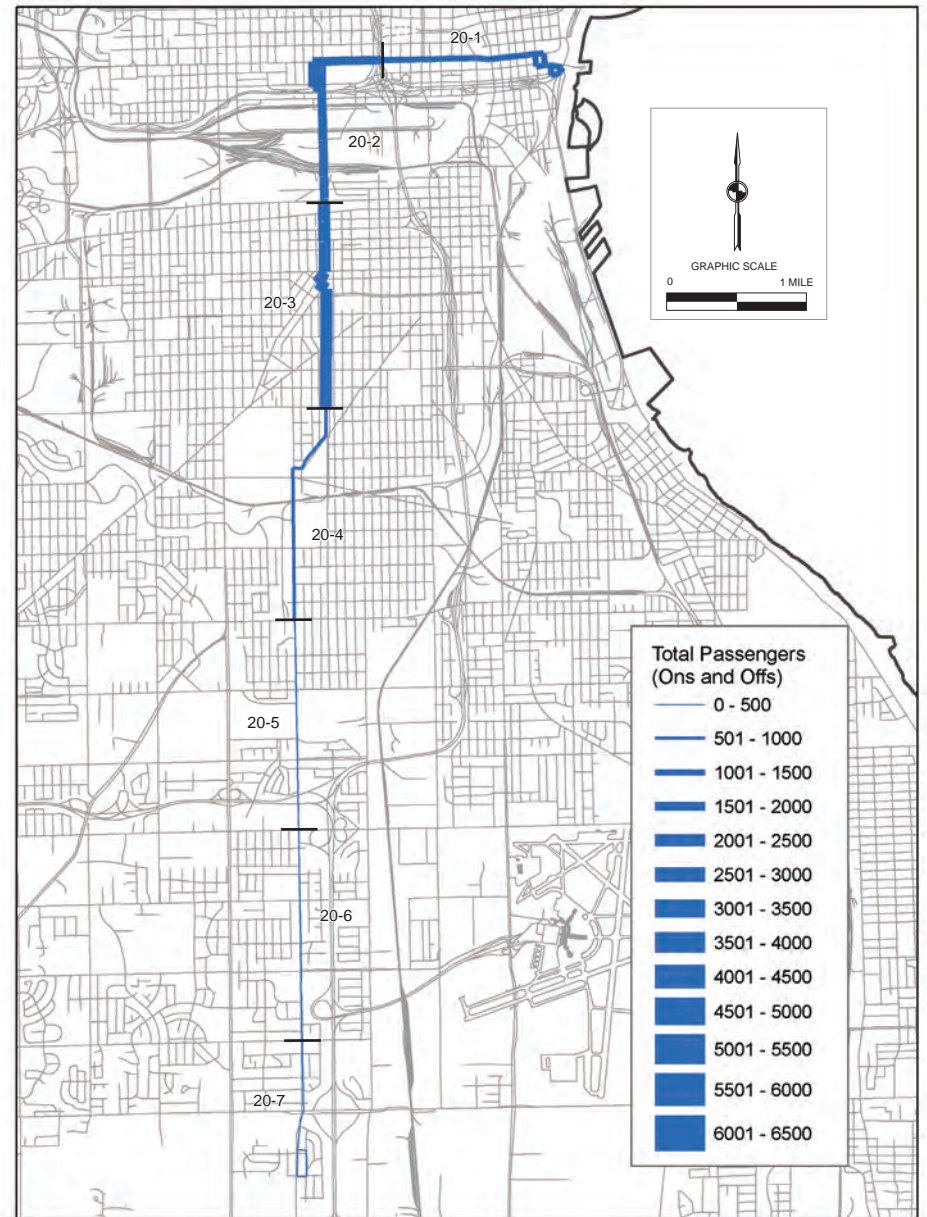


Appendix C (continued)

ROUTE 19

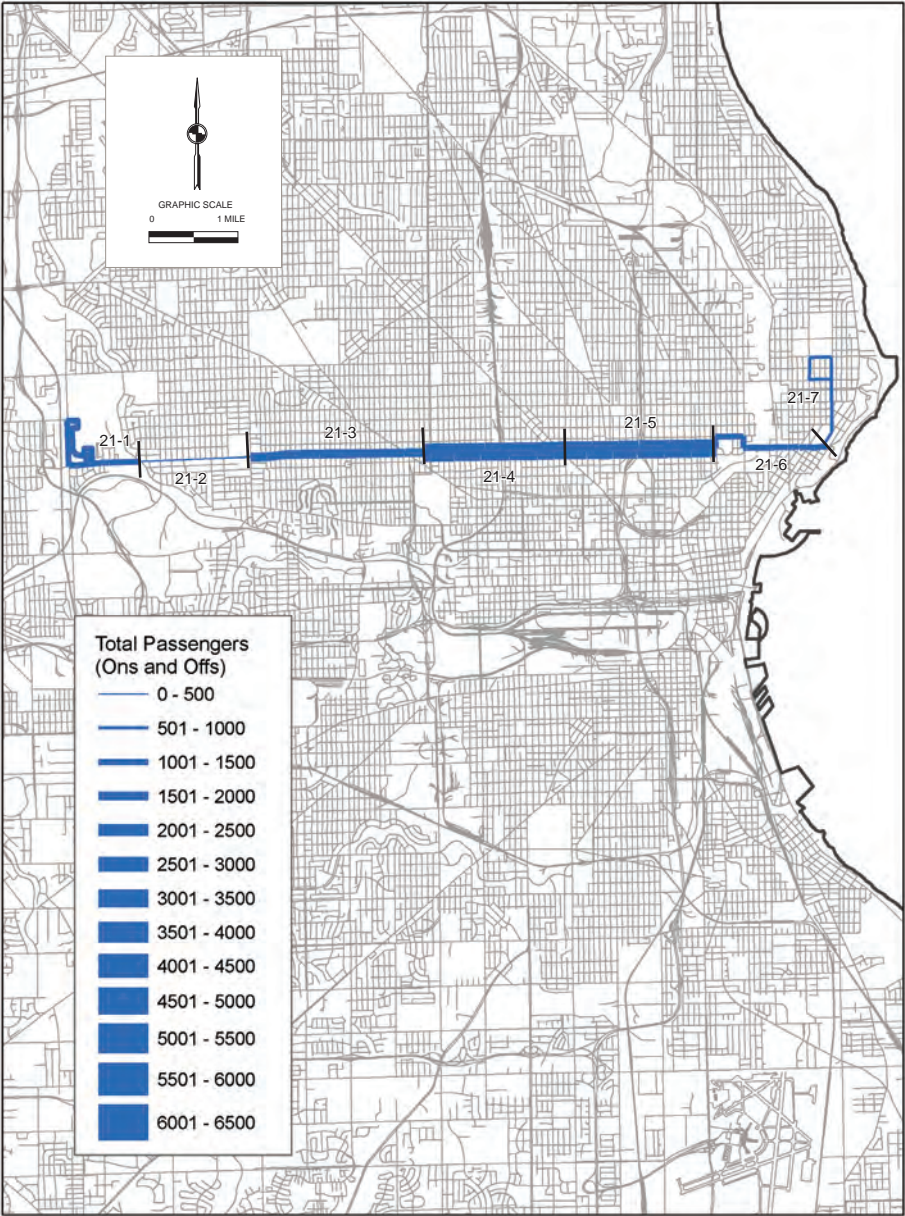


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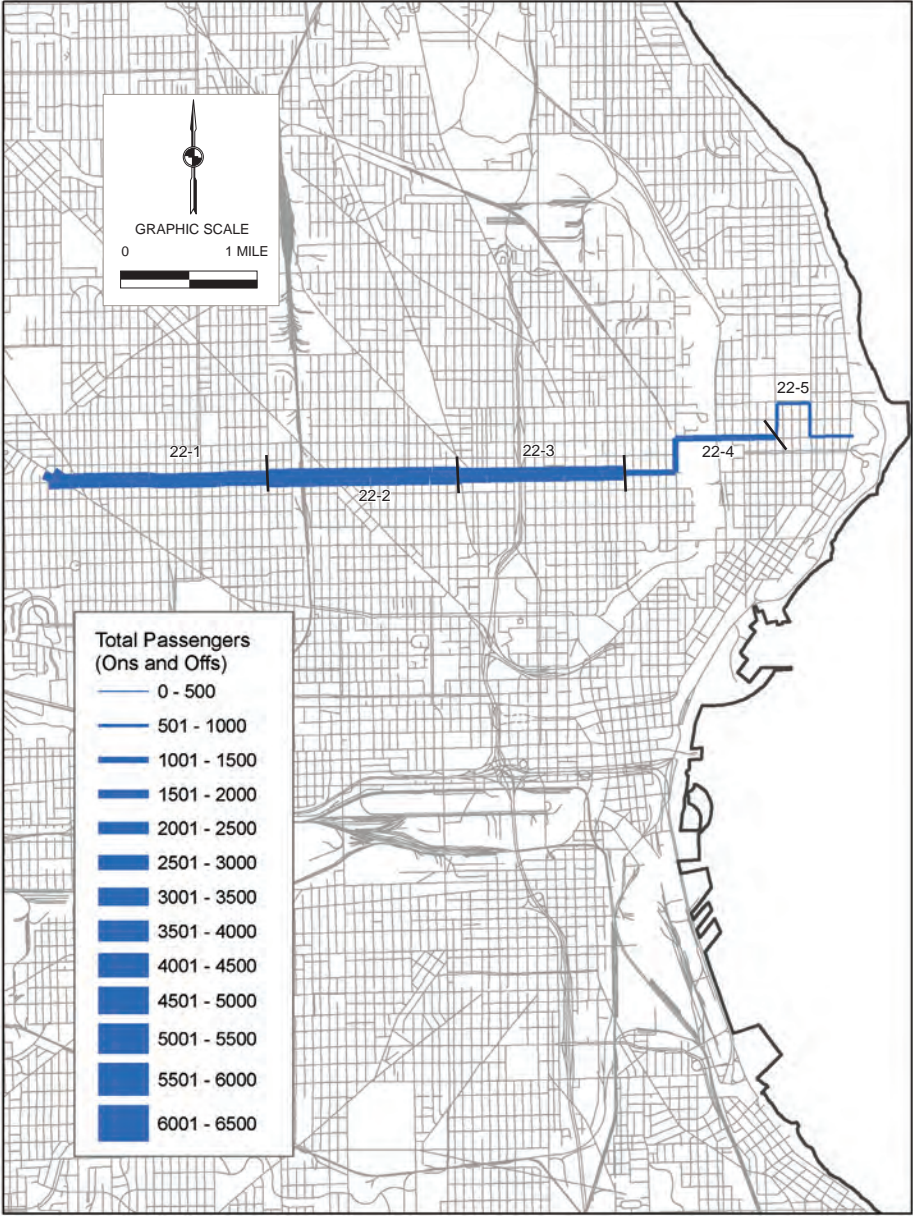


Appendix C (continued)

ROUTE 21

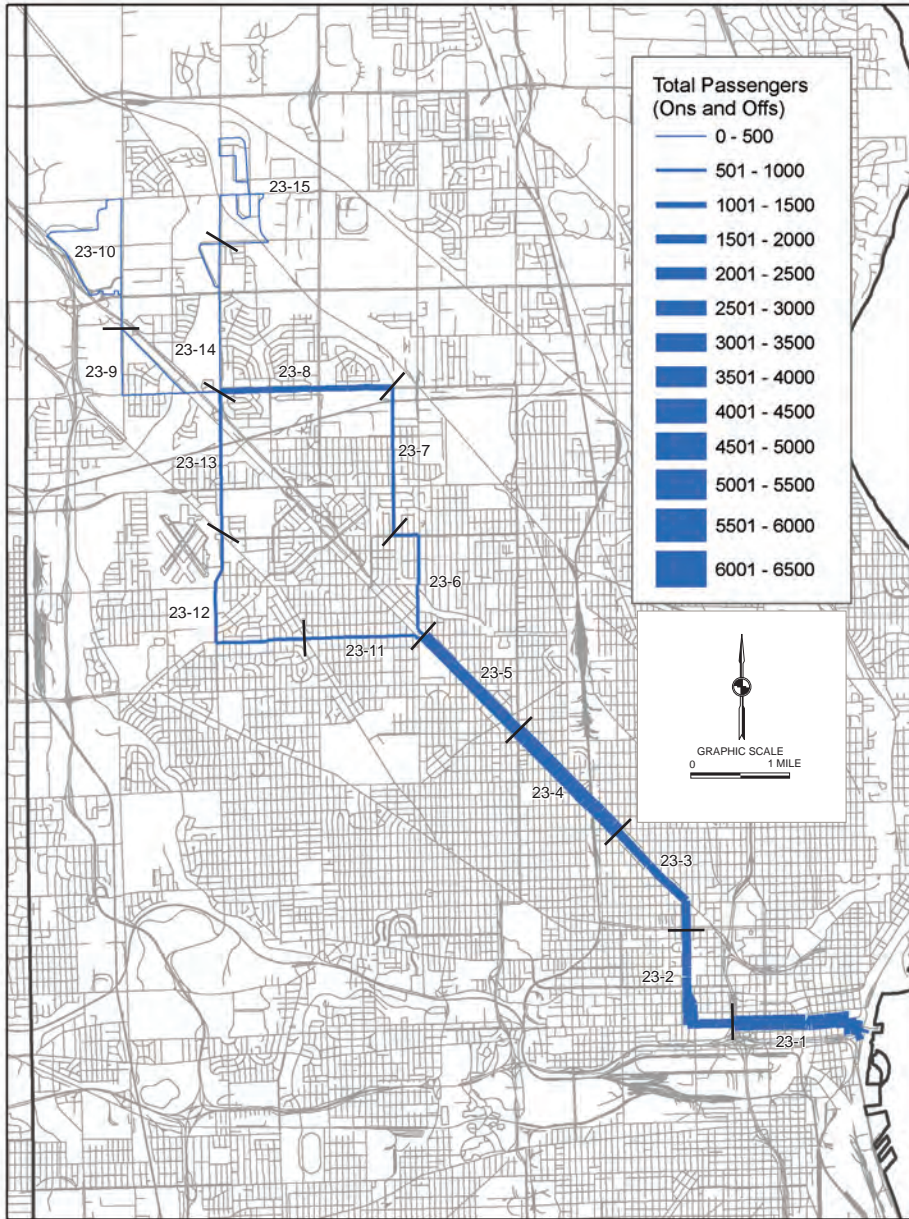


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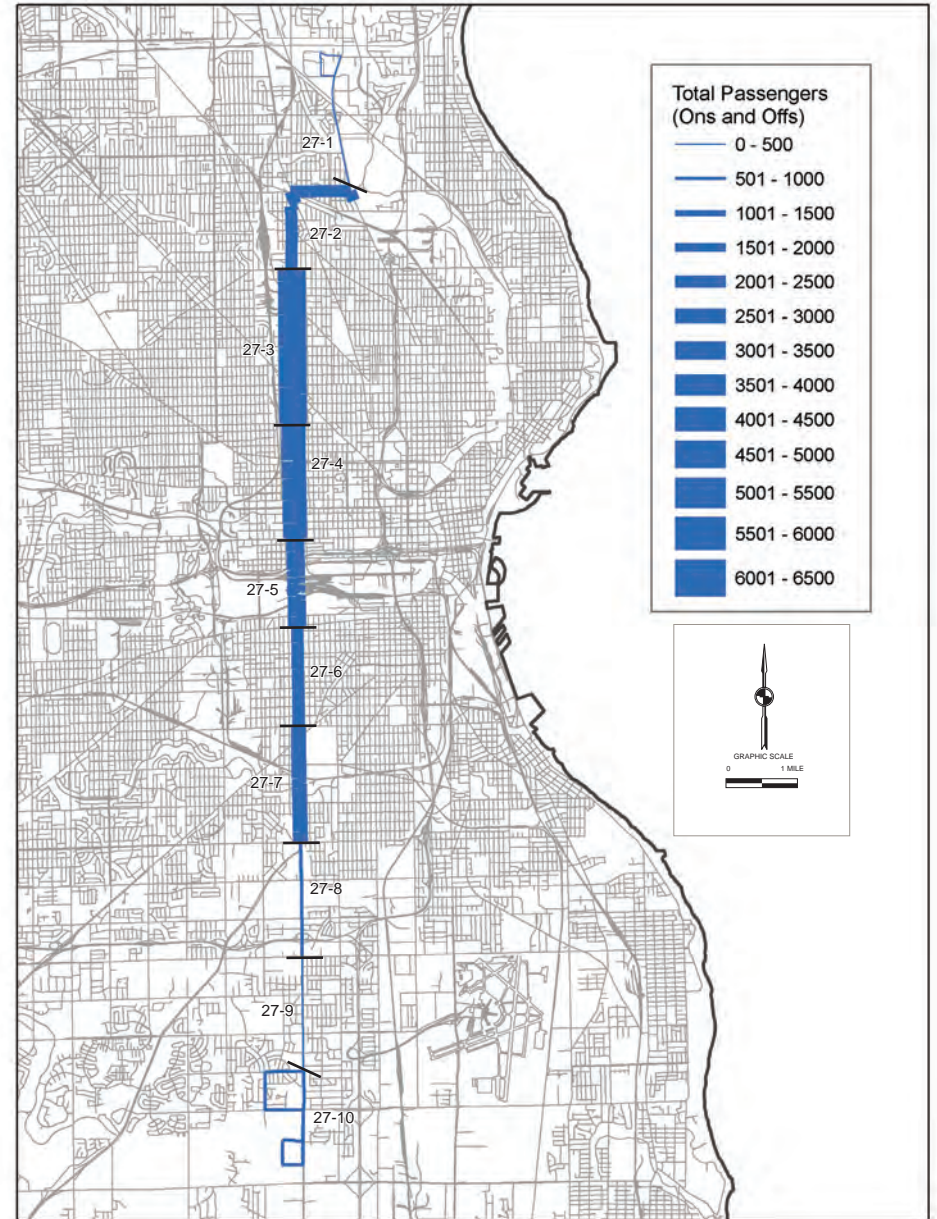


Appendix C (continued)

ROUTE 23

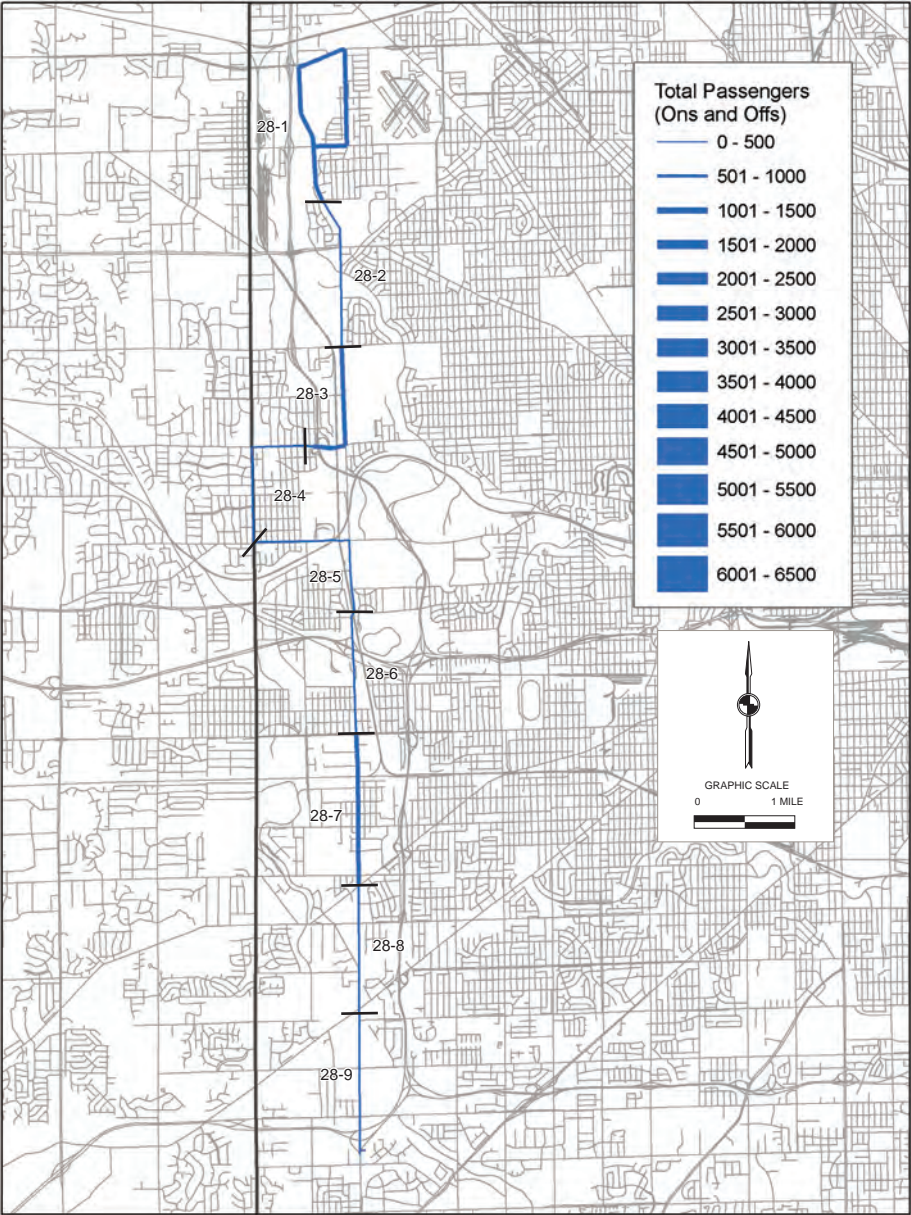


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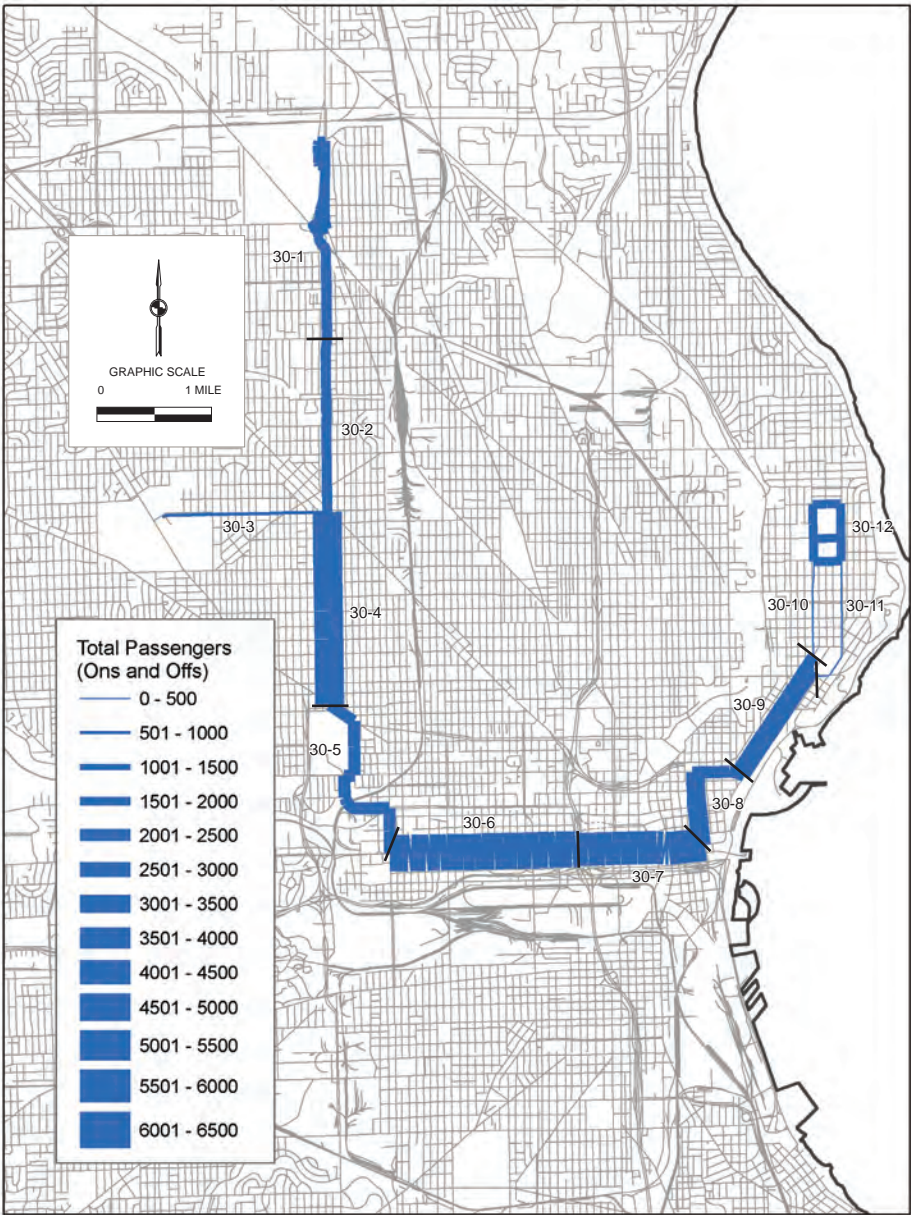


Appendix C (continued)

ROUTE 28

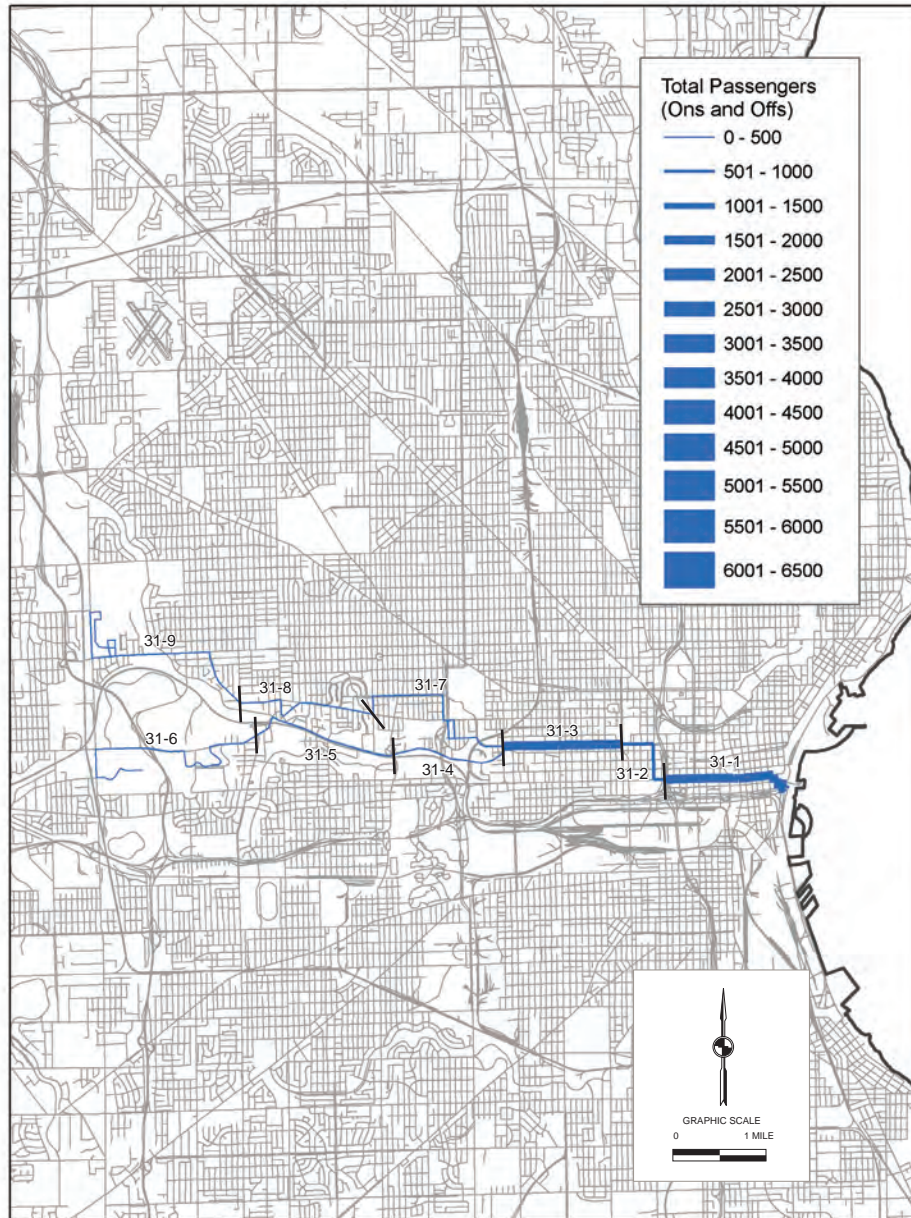


ROUTE 30

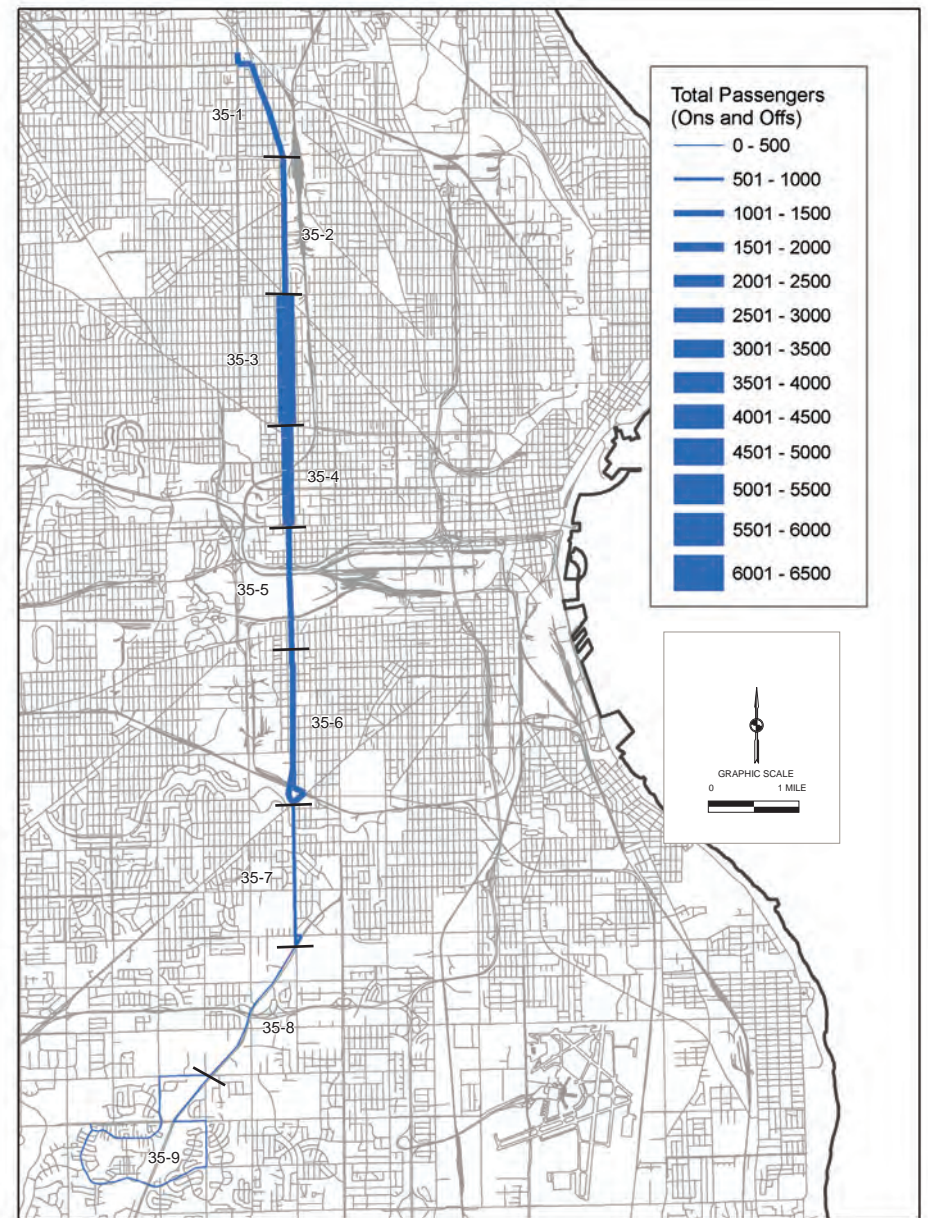


Appendix C (continued)

ROUTE 31

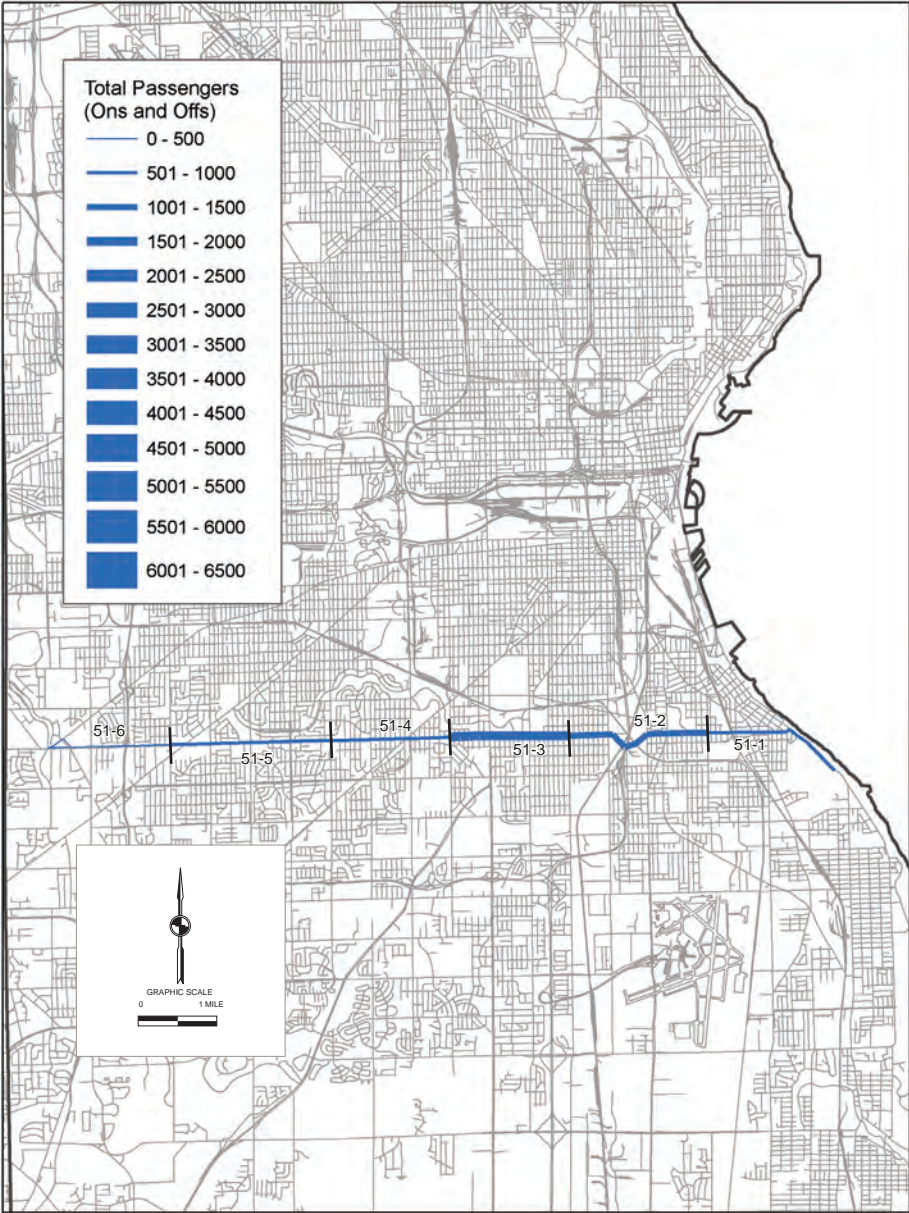


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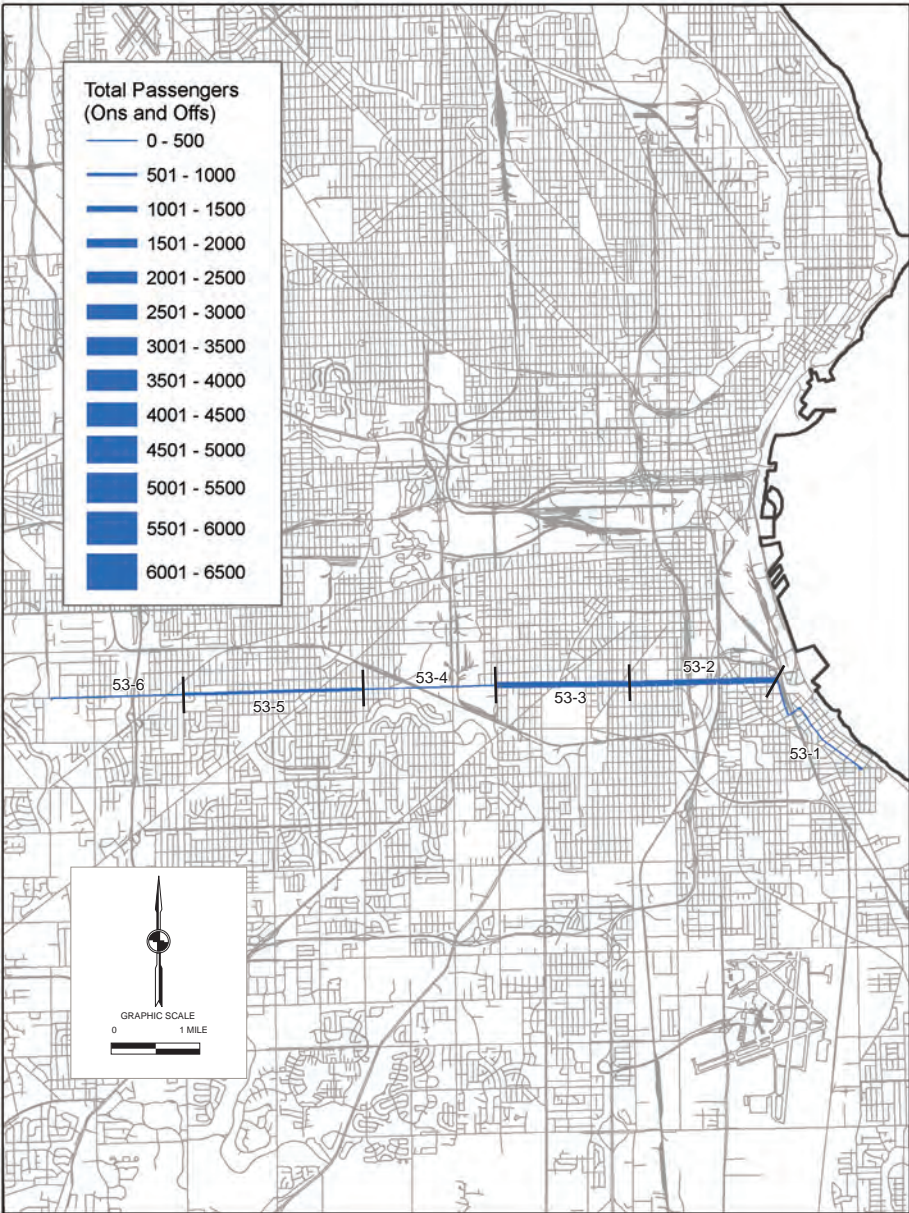


Appendix C (continued)

ROUTE 51

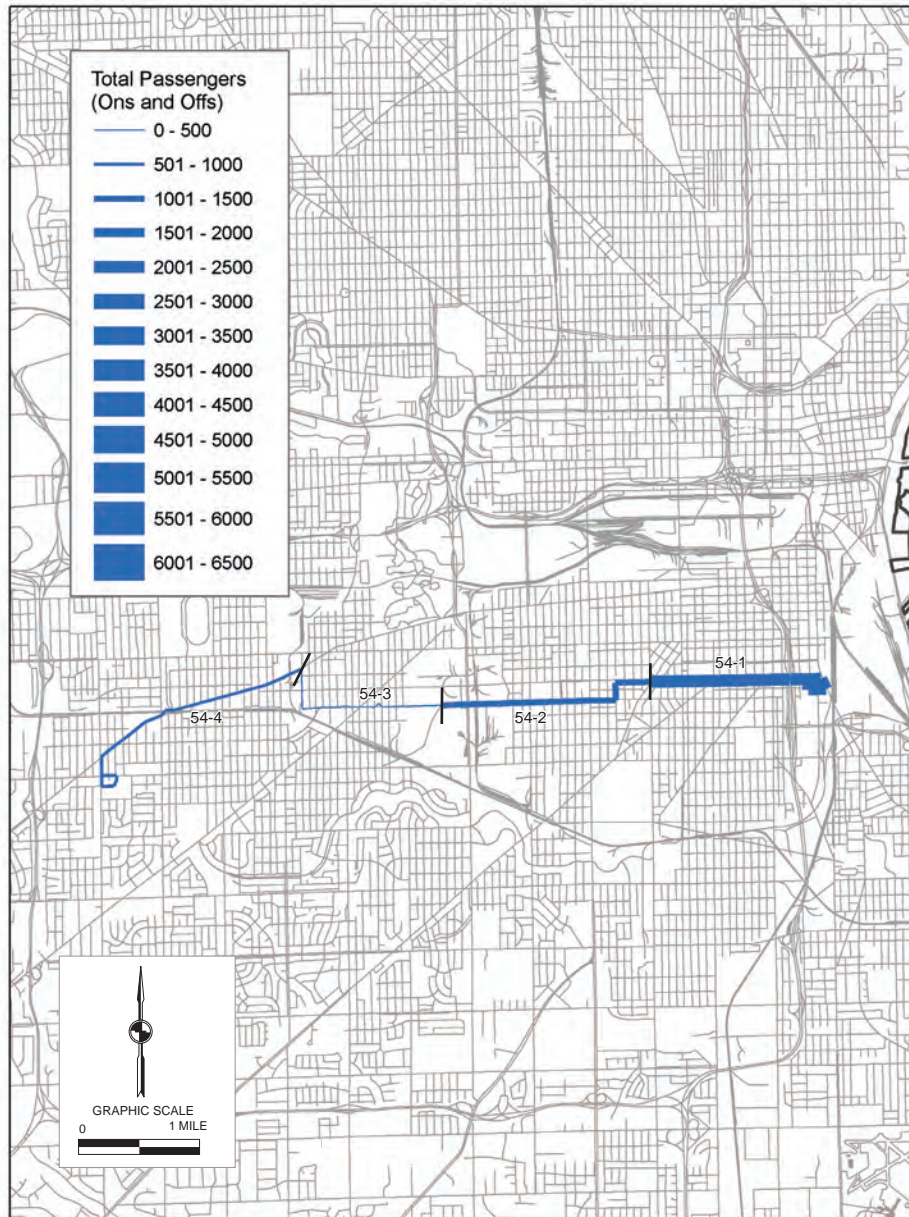


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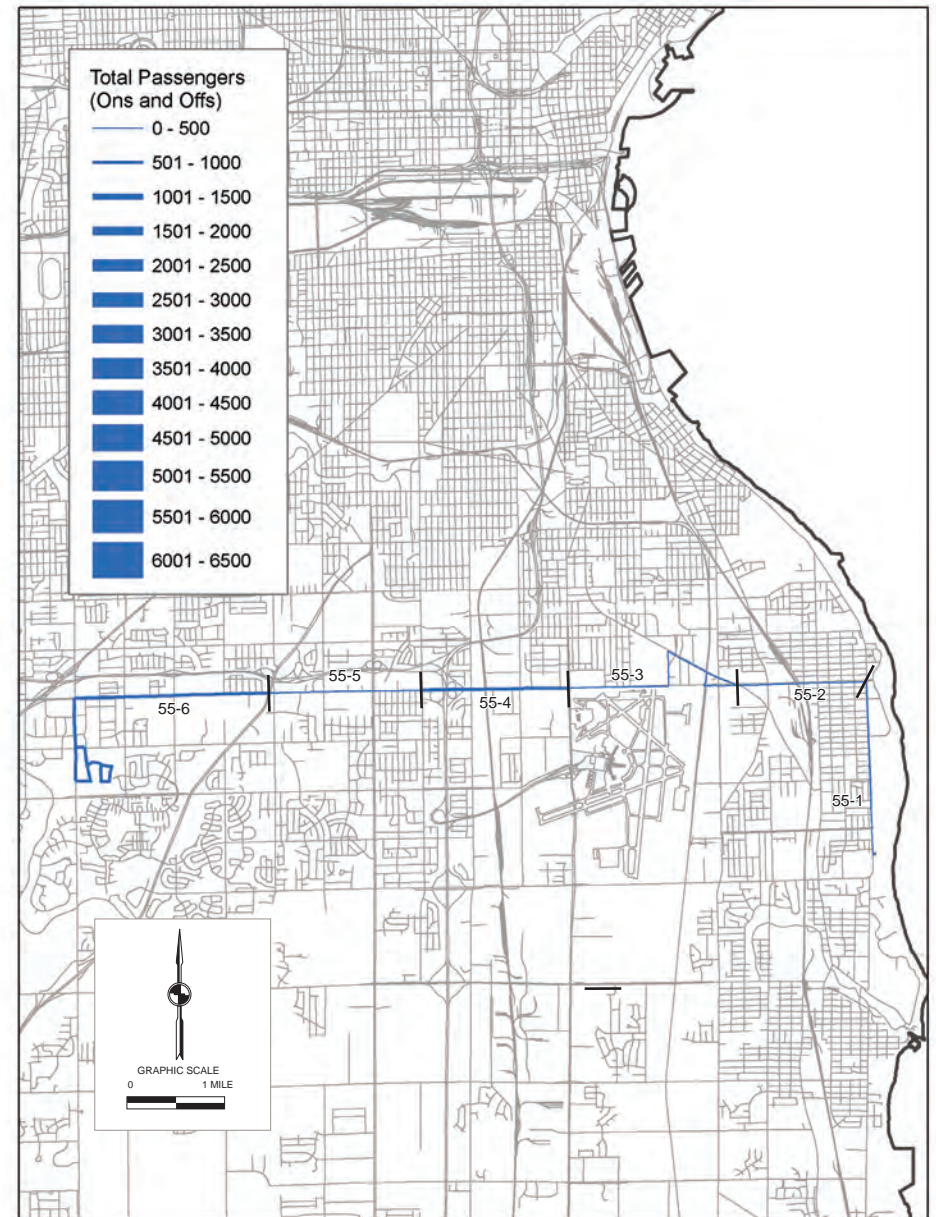


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ROUTE 54

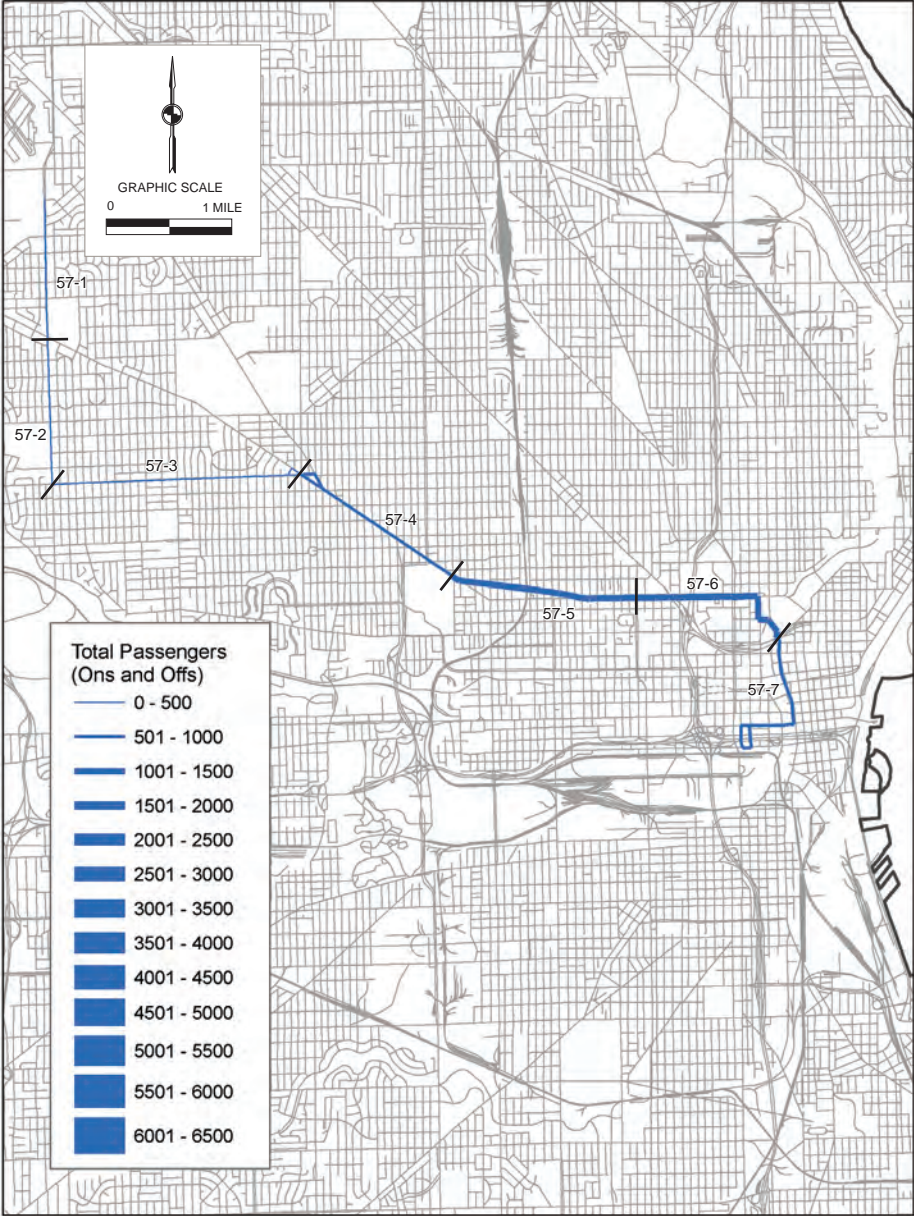


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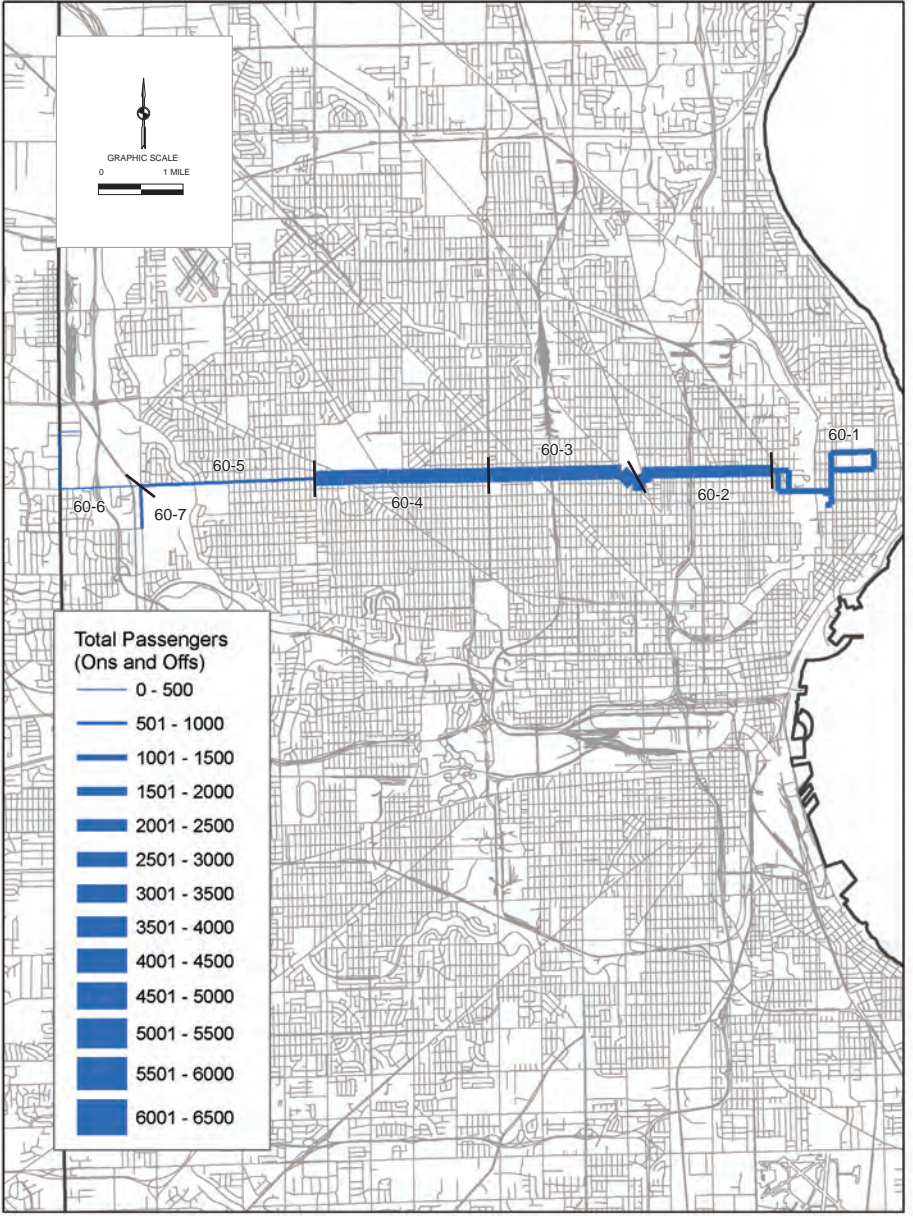


Appendix C (continued)

ROUTE 57

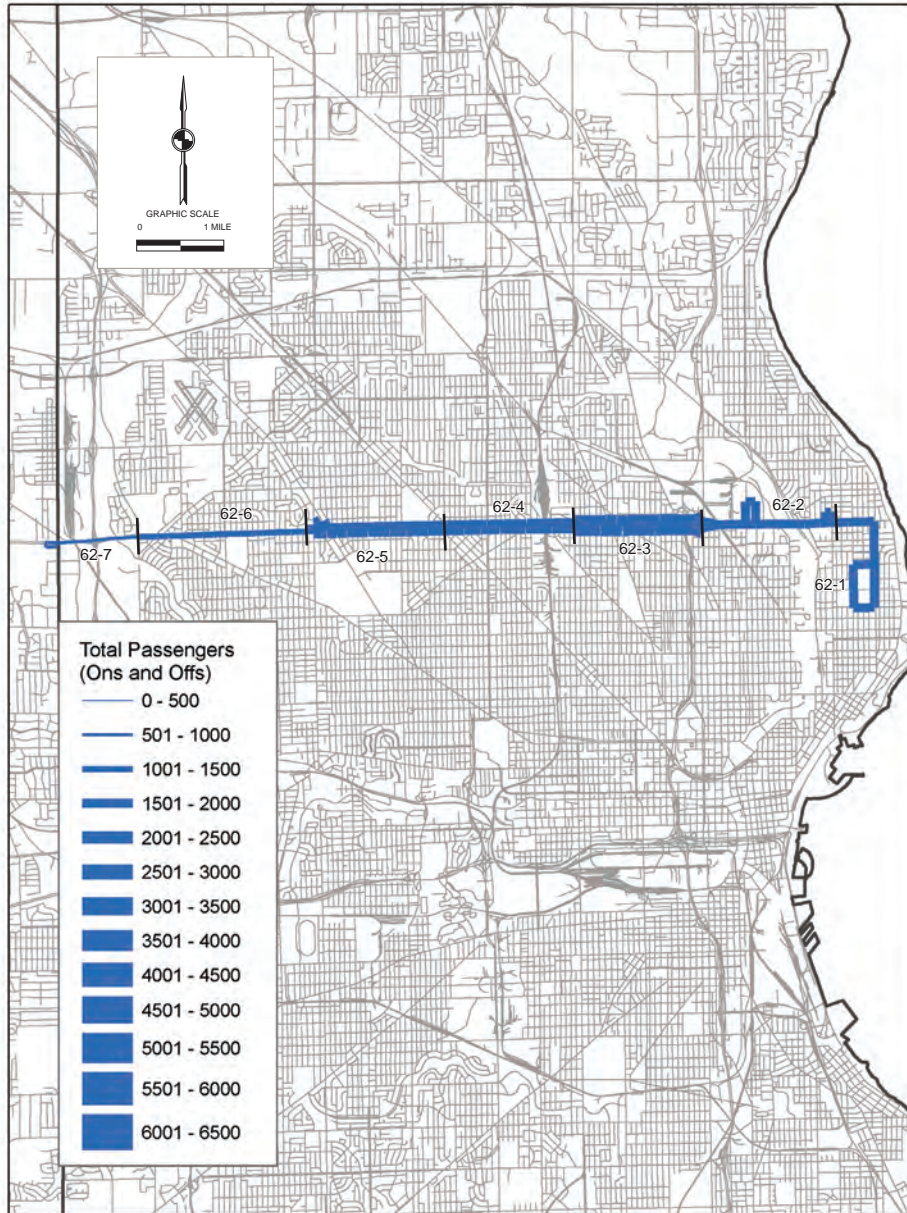


ROUTE 60

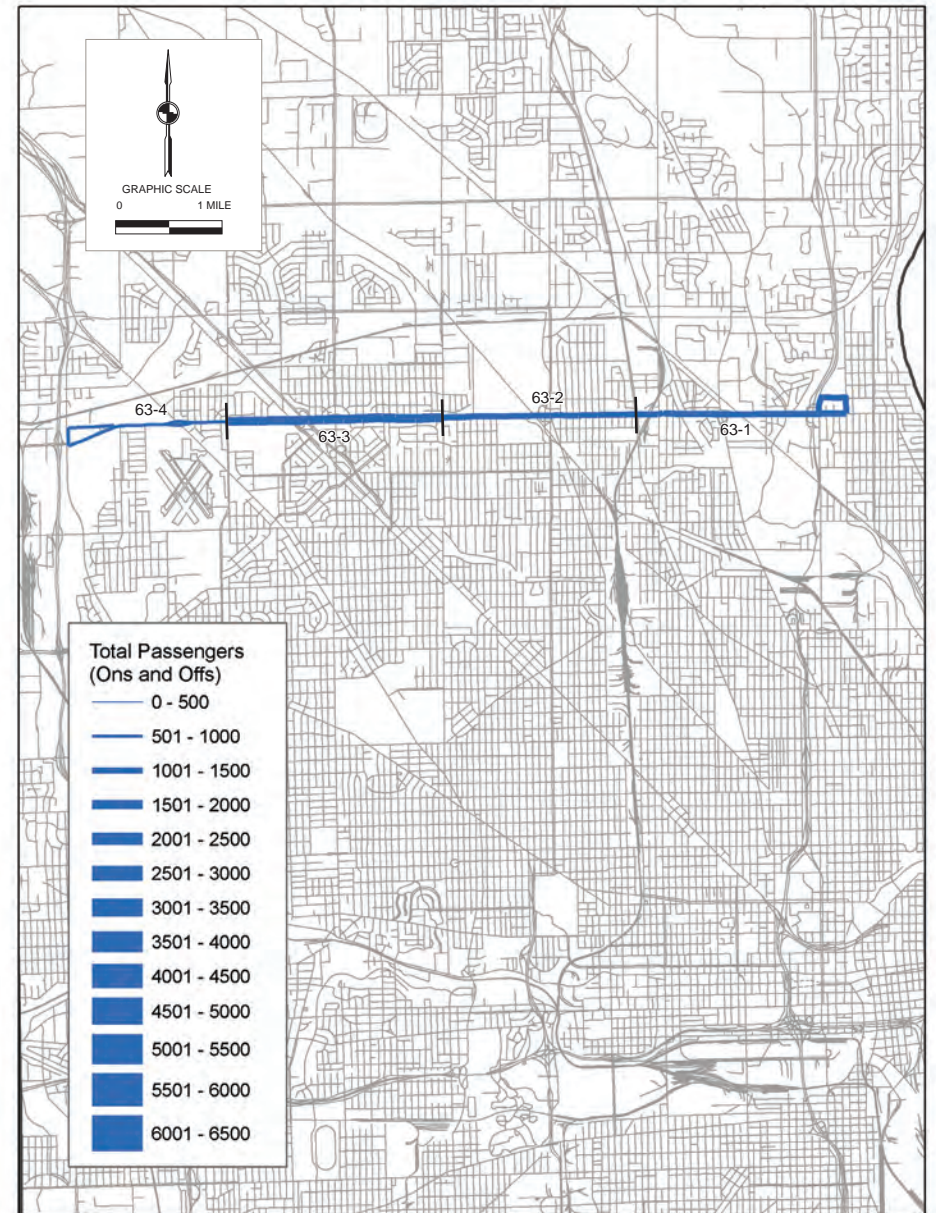


Appendix C (continued)

ROUTE 62

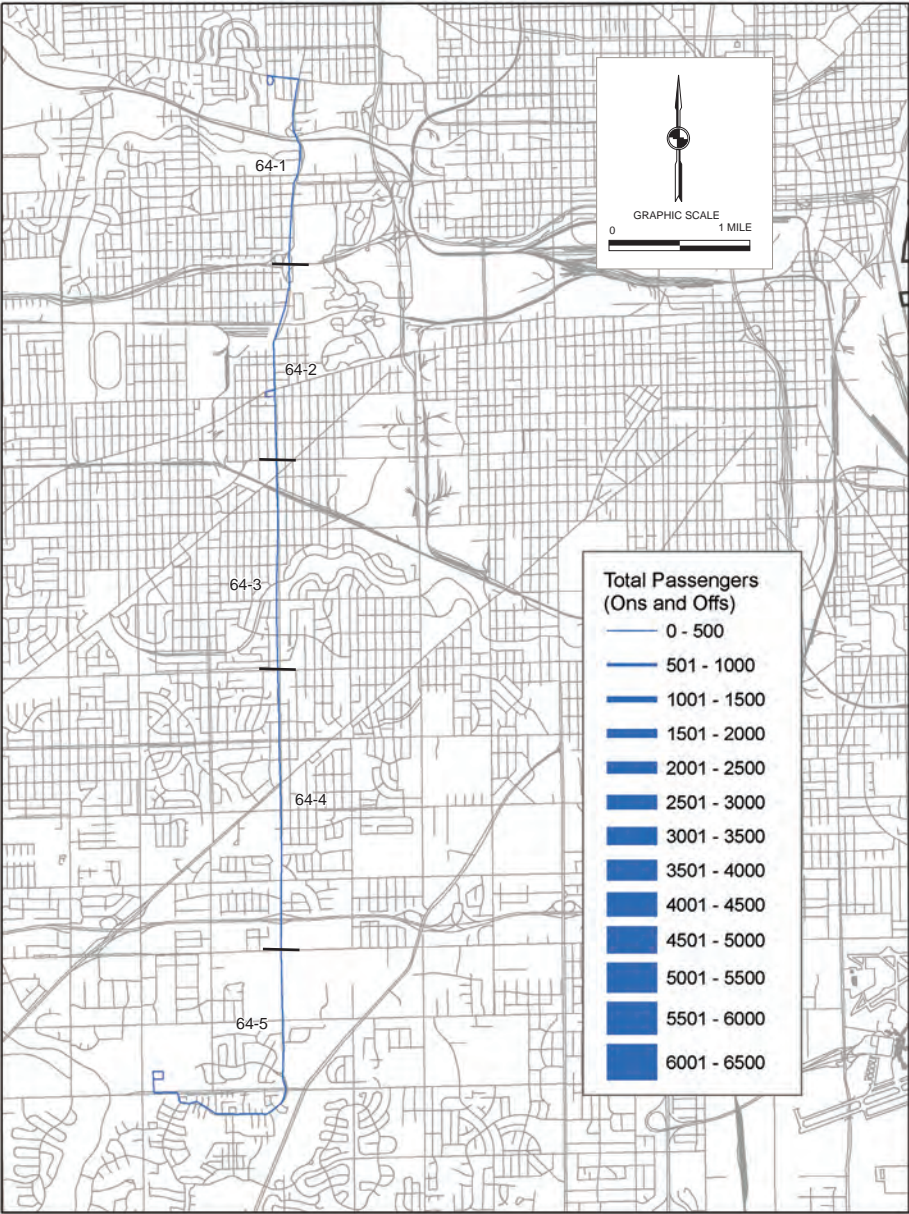


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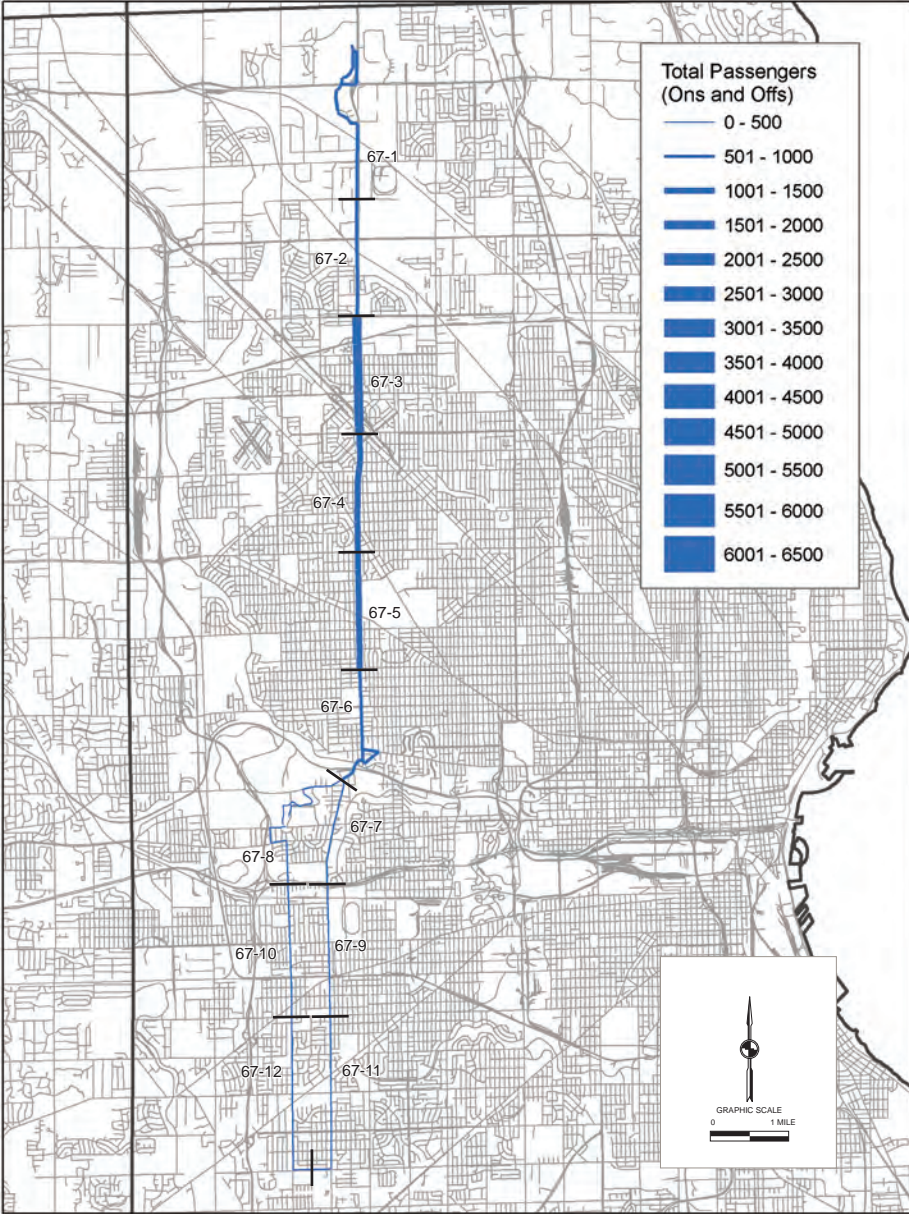


Appendix C (continued)

ROUTE 64

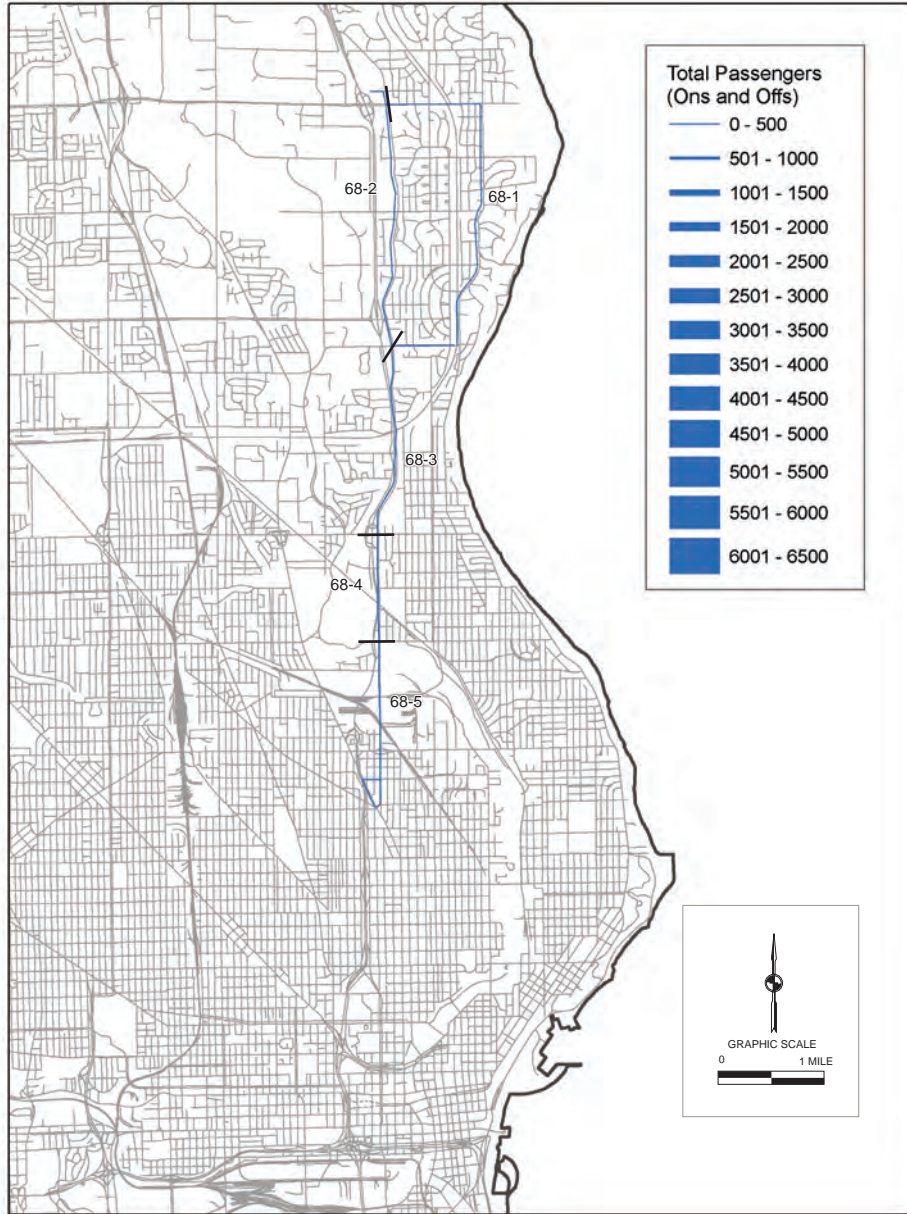


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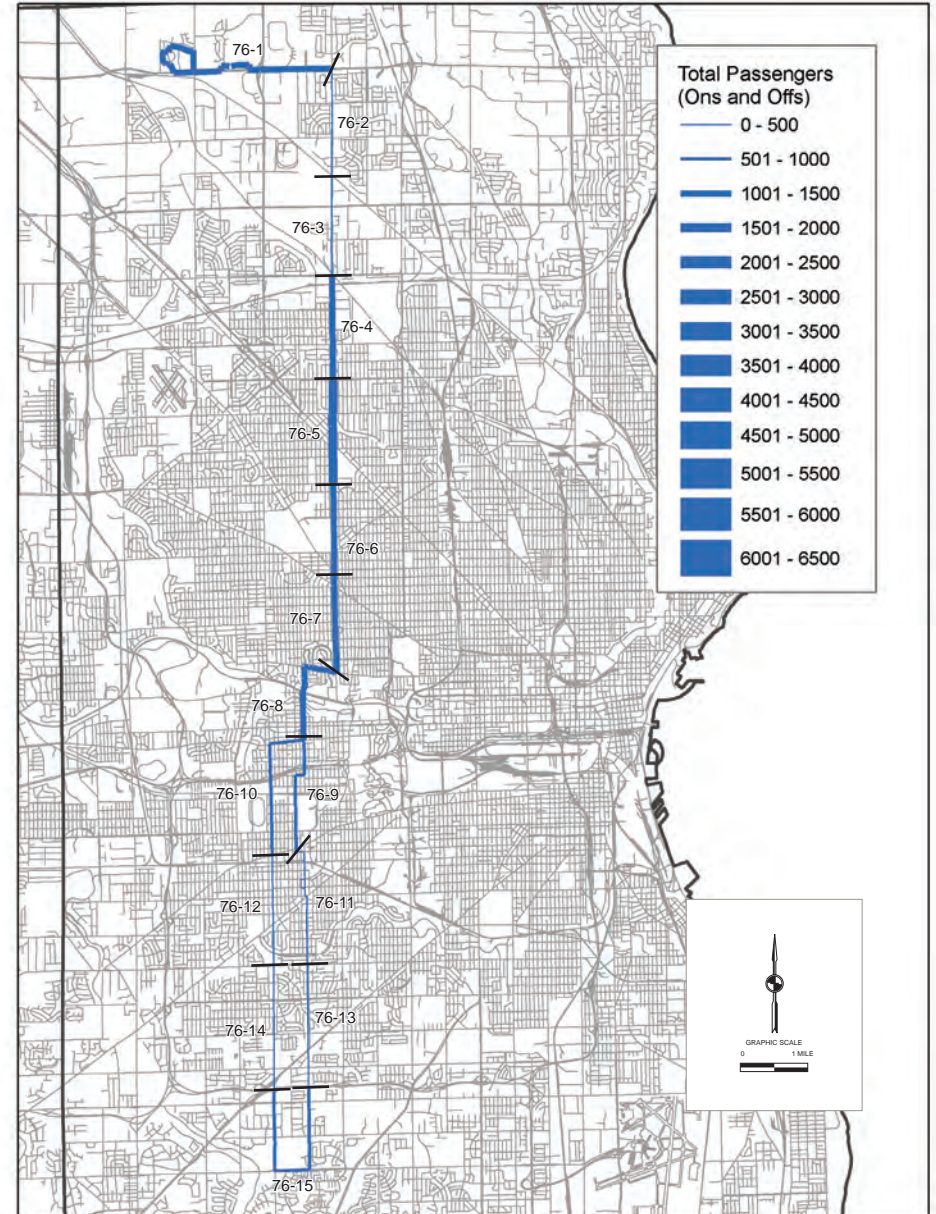


Appendix C (continued)

ROUTE 68

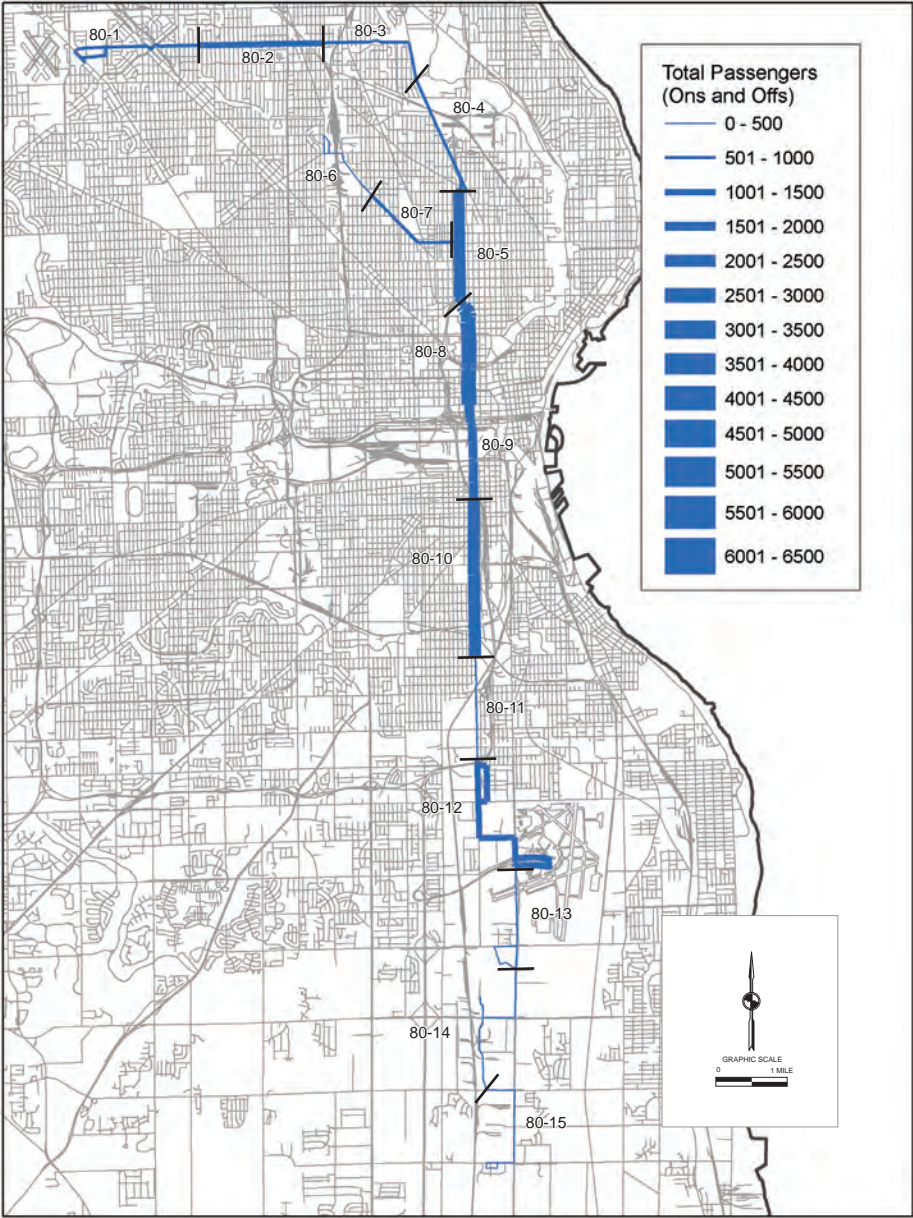


ROUTE 76



Appendix C (continued)

ROUTE 80



Source: Milwaukee County Transit System and SEWRPC.

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Appendix D

FORECAST ANNUAL SERVICE LEVELS, RIDERSHIP, AND OPERATING COSTS UNDER THE SERVICE IMPROVEMENT ALTERNATIVES

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Table D-1

**ALTERNATIVE 1—EXTENSIVE SERVICE EXPANSION UNDER THE BEST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,397,000	1,455,000	1,513,000	1,571,000	1,629,000
Revenue Passengers	41,714,900	43,115,800	44,416,000	44,306,000	45,657,000	46,022,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$149,773,000	\$159,104,000	\$168,760,000	\$178,733,000	\$189,046,000
Passenger and Other Revenues	47,258,900	48,721,000	51,813,000	53,510,000	55,028,000	57,280,000
Required Operating Assistance	93,540,100	101,052,000	107,291,000	115,250,000	123,705,000	131,766,000
Farebox Recovery Rate	33.6%	32.5%	32.6%	31.7%	31.8%	30.3%
Sources of Operating Assistance						
Federal	\$20,392,800	\$17,596,000	\$1,596,000	\$1,596,000	\$14,196,000	\$10,596,000
State	55,707,000	57,935,300	60,252,700	62,662,800	65,169,300	67,776,100
County	17,440,300	25,520,700	45,442,300	50,991,200	44,339,700	53,393,900
Total	\$93,540,100	\$101,052,000	\$107,291,000	\$115,250,000	\$123,705,000	\$131,766,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$23,864,000	\$24,851,000	\$24,196,000	\$25,149,000	\$26,194,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,309,000	21,225,000	20,206,000	21,081,000	22,044,000
Farebox Recovery Rate	15.2%	14.9%	14.6%	16.5%	16.2%	15.8%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$4,223,700	\$4,873,700	\$4,873,700
State	9,870,000	10,264,800	10,675,400	11,102,400	11,546,500	12,008,400
County	4,731,200	5,170,500	7,425,900	4,879,900	4,660,800	5,161,900
Total	\$19,474,900	\$20,309,000	\$21,225,000	\$20,206,000	\$21,081,000	\$22,044,000

Table D-1 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,828,000	1,895,000	1,933,000	1,999,000	2,066,000
Revenue Passengers	42,791,700	44,213,800	45,536,000	45,374,000	46,746,000	47,133,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$173,637,000	\$183,955,000	\$192,956,000	\$203,882,000	\$215,240,000
Passenger and Other Revenues	50,745,500	52,276,000	55,439,000	57,500,000	59,096,000	61,430,000
Required Operating Assistance	113,015,000	121,361,000	128,516,000	135,456,000	144,786,000	153,810,000
Farebox Recovery Rate	28.7%	28.0%	30.1%	29.8%	29.0%	28.5%
Sources of Operating Assistance						
Federal	\$25,266,500	\$22,469,700	\$4,719,700	\$6,469,700	\$19,069,700	\$15,469,700
State	65,577,000	68,200,100	70,928,100	73,765,200	76,715,800	79,784,500
County	22,171,500	30,691,200	52,868,200	55,221,100	49,000,500	58,555,800
Total	\$113,015,000	\$121,361,000	\$128,516,000	\$135,456,000	\$144,786,000	\$153,810,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 2 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$8 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 3 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$7.5 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 4 percent annually

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 2 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.4 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 4 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-2

**ALTERNATIVE 1—EXTENSIVE SERVICE EXPANSION UNDER THE AVERAGE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,397,000	1,455,000	1,513,000	1,571,000	1,629,000
Revenue Passengers	41,714,900	43,115,800	44,416,000	44,306,000	45,657,000	46,022,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$151,239,000	\$162,247,000	\$173,783,000	\$185,865,000	\$198,510,000
Passenger and Other Revenues	47,258,900	48,721,000	51,813,000	53,510,000	55,028,000	57,280,000
Required Operating Assistance	93,540,100	102,518,000	110,434,000	120,273,000	130,837,000	141,230,000
Farebox Recovery Rate	33.6%	32.2%	31.9%	30.8%	29.6%	28.90%
Sources of Operating Assistance						
Federal	\$20,392,800	\$14,496,000	\$1,596,000	\$1,596,000	\$4,996,000	\$6,696,000
State	55,707,000	57,378,200	59,099,500	60,872,500	62,698,700	64,579,700
County	17,440,300	30,643,800	49,738,500	57,804,500	63,142,300	69,954,300
Total	\$93,540,100	\$102,518,000	\$110,434,000	\$120,273,000	\$130,837,000	\$141,230,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,097,000	\$25,340,000	\$24,914,000	\$26,151,000	\$27,500,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,542,000	21,714,000	20,924,000	22,083,000	23,350,000
Farebox Recovery Rate	15.2%	14.8%	14.3%	16.0%	15.6%	15.1%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$3,123,700	\$4,873,700	\$4,873,700
State	9,870,000	10,166,100	10,471,100	10,785,200	11,108,800	11,442,100
County	4,731,200	5,502,200	8,119,200	7,015,100	6,100,500	7,034,200
Total	\$19,474,900	\$20,542,000	\$21,714,000	\$20,924,000	\$22,083,000	\$23,350,000

Table D-2 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,828,000	1,895,000	1,933,000	1,999,000	2,066,000
Revenue Passengers	42,791,700	44,213,800	45,536,000	45,374,000	46,746,000	47,133,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$175,336,000	\$187,587,000	\$198,697,000	\$212,016,000	\$226,010,000
Passenger and Other Revenues	50,745,500	52,276,000	55,439,000	57,500,000	59,096,000	61,430,000
Required Operating Assistance	113,015,000	123,060,000	132,148,000	141,197,000	152,920,000	164,580,000
Farebox Recovery Rate	28.7%	27.7%	29.6%	28.9%	27.9%	27.2%
Sources of Operating Assistance						
Federal	\$25,266,500	\$19,369,700	\$4,719,700	\$4,719,700	\$9,869,700	\$11,569,700
State	65,577,000	67,544,300	69,570,600	71,657,700	73,807,500	76,021,800
County	22,171,500	36,146,000	57,857,700	64,819,600	69,242,800	76,988,500
Total	\$113,015,000	\$123,060,000	\$132,148,000	\$141,197,000	\$152,920,000	\$164,580,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 3 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$5 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 2 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$4.3 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 3 percent annually

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 3 percent annually
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.1 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 3 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-3

**ALTERNATIVE 1—EXTENSIVE SERVICE EXPANSION UNDER THE WORST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,397,000	1,455,000	1,513,000	1,571,000	1,629,000
Revenue Passengers	41,714,900	43,115,800	44,416,000	44,306,000	45,657,000	46,022,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$154,173,000	\$168,605,000	\$184,087,000	\$200,696,000	\$218,514,000
Passenger and Other Revenues	47,258,900	48,721,000	51,813,000	53,510,000	55,028,000	57,280,000
Required Operating Assistance	93,540,100	105,452,000	116,792,000	130,577,000	145,668,000	161,234,000
Farebox Recovery Rate	33.6%	31.6%	30.7%	29.7%	27.4%	26.2%
Sources of Operating Assistance						
Federal	\$20,392,800	\$11,296,000	\$1,596,000	\$946,000	\$580,000	\$580,000
State	55,707,000	56,821,100	57,957,500	59,116,700	60,299,000	61,505,000
County	17,440,300	37,334,900	57,238,500	70,514,300	84,789,000	99,149,000
Total	\$93,540,100	\$105,452,000	\$116,792,000	\$130,577,000	\$145,668,000	\$161,234,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,567,000	\$26,334,000	\$26,393,000	\$28,239,000	\$30,275,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	21,012,000	22,708,000	22,403,000	24,171,000	26,125,000
Farebox Recovery Rate	15.2%	14.5%	13.8%	15.1%	14.4%	13.7%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$3,123,700	\$3,123,700	\$3,123,700
State	9,870,000	10,067,400	10,268,700	10,474,100	10,683,600	10,897,300
County	4,731,200	6,070,900	9,315,600	8,805,200	10,363,700	12,104,000
Total	\$19,474,900	\$21,012,000	\$22,708,000	\$22,403,000	\$24,171,000	\$26,125,000

Table D-3 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,828,000	1,895,000	1,933,000	1,999,000	2,066,000
Revenue Passengers	42,791,700	44,213,800	45,536,000	45,374,000	46,746,000	47,133,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$178,740,000	\$194,939,000	\$210,480,000	\$228,935,000	\$248,789,000
Passenger and Other Revenues	50,745,500	52,276,000	55,439,000	57,500,000	59,096,000	61,430,000
Required Operating Assistance	113,015,000	126,464,000	139,500,000	152,980,000	169,839,000	187,359,000
Farebox Recovery Rate	28.7%	27.2%	28.4%	27.3%	25.8%	24.7%
Sources of Operating Assistance						
Federal	\$25,266,500	\$16,169,700	\$4,719,700	\$4,069,700	\$3,703,700	\$3,703,700
State	65,577,000	66,888,500	68,226,200	69,590,800	70,982,600	72,402,300
County	22,171,500	43,405,800	66,554,100	79,319,500	95,152,700	111,253,000
Total	\$113,015,000	\$126,464,000	\$139,500,000	\$152,980,000	\$169,839,000	\$187,359,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 5 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$2 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 1 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$1.9 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 2 percent annually.

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 5 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$0.35 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 2 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-4

**ALTERNATIVE 2—LIMITED SERVICE EXPANSION UNDER THE BEST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,380,000	1,420,000	1,460,000	1,500,000	1,540,000
Revenue Passengers	41,714,900	42,722,800	42,756,000	43,171,000	44,143,000	44,169,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$147,950,000	\$155,277,000	\$162,849,000	\$170,655,000	\$178,717,000
Passenger and Other Revenues	47,258,900	48,311,000	50,015,000	52,234,000	53,327,000	55,123,000
Required Operating Assistance	93,540,100	99,639,000	105,262,000	110,615,000	117,328,000	123,594,000
Farebox Recovery Rate	33.6%	32.6%	32.2%	32.1%	31.2%	30.8%
Sources of Operating Assistance						
Federal	\$20,392,800	\$20,196,000	\$1,596,000	\$3,796,000	\$14,096,000	\$10,696,000
State	55,707,000	57,935,300	60,252,700	62,662,800	65,169,300	67,776,100
County	17,440,300	21,507,700	43,413,300	44,156,200	38,062,700	45,121,900
Total	\$93,540,100	\$99,639,000	\$105,262,000	\$110,615,000	\$117,328,000	\$123,594,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$23,864,000	\$24,851,000	\$24,196,000	\$25,149,000	\$26,194,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,309,000	21,225,000	20,206,000	21,081,000	22,044,000
Farebox Recovery Rate	15.2%	14.9%	14.6%	16.5%	16.2%	15.8%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$4,873,700	\$4,873,700	\$4,873,700
State	9,870,000	10,264,800	10,675,400	11,102,400	11,546,500	12,008,400
County	4,731,200	5,170,500	7,425,900	4,229,900	4,660,800	5,161,900
Total	\$19,474,900	\$20,309,000	\$21,225,000	\$20,206,000	\$21,081,000	\$22,044,000

Table D-4 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,811,000	1,860,000	1,880,000	1,928,000	1,977,000
Revenue Passengers	42,791,700	43,820,800	43,876,000	44,239,000	45,232,000	45,280,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$171,814,000	\$180,128,000	\$187,045,000	\$195,804,000	\$204,911,000
Passenger and Other Revenues	50,745,500	51,866,000	53,641,000	56,224,000	57,395,000	59,273,000
Required Operating Assistance	113,015,000	119,948,000	126,487,000	130,821,000	138,409,000	145,638,000
Farebox Recovery Rate	28.7%	28.0%	29.8%	30.1%	29.3%	28.9%
Sources of Operating Assistance						
Federal	\$25,266,500	\$25,069,700	\$4,719,700	\$8,669,700	\$18,969,700	\$15,569,700
State	65,577,000	68,200,100	70,928,100	73,765,200	76,715,800	79,784,500
County	22,171,500	26,678,200	50,839,200	48,386,100	42,723,500	50,283,800
Total	\$113,015,000	\$119,948,000	\$126,487,000	\$130,821,000	\$138,409,000	\$145,638,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 2 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The base \$2.00 adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$8 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 3 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$8.5 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 4 percent annually.

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 2 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.4 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 4 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-5

**ALTERNATIVE 2—LIMITED SERVICE EXPANSION UNDER THE AVERAGE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,380,000	1,420,000	1,460,000	1,500,000	1,540,000
Revenue Passengers	41,714,900	42,722,800	42,756,000	43,171,000	44,143,000	44,169,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$149,399,000	\$158,344,000	\$167,695,000	\$177,465,000	\$187,664,000
Passenger and Other Revenues	47,258,900	48,311,000	50,015,000	52,234,000	53,327,000	55,123,000
Required Operating Assistance	93,540,100	101,088,000	108,329,000	115,461,000	124,138,000	132,541,000
Farebox Recovery Rate	33.6%	32.3%	31.6%	31.1%	30.0%	29.4%
Sources of Operating Assistance						
Federal	\$20,392,800	\$16,996,000	\$1,596,000	\$1,596,000	\$7,296,000	\$6,696,000
State	55,707,000	57,378,200	59,099,500	60,872,500	62,698,700	64,579,700
County	17,440,300	26,713,800	47,633,500	52,992,500	54,143,300	61,265,300
Total	\$93,540,100	\$101,088,000	\$108,329,000	\$115,461,000	\$124,138,000	\$132,541,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,097,000	\$25,340,000	\$24,914,000	\$26,151,000	\$27,500,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,542,000	21,714,000	20,924,000	22,083,000	23,350,000
Farebox Recovery Rate	15.2%	14.8%	14.3%	16.0%	15.6%	15.1%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$3,123,700	\$4,873,700	\$4,873,700
State	9,870,000	10,166,100	10,471,100	10,785,200	11,108,800	11,442,100
County	4,731,200	5,502,200	8,119,200	7,015,100	6,100,500	7,034,200
Total	\$19,474,900	5,502,200	8,119,200	7,015,100	6,100,500	7,034,200

Table D-5 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,811,000	1,860,000	1,880,000	1,928,000	1,977,000
Revenue Passengers	42,791,700	43,820,800	43,876,000	44,239,000	45,232,000	45,280,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$173,496,000	\$183,684,000	\$192,609,000	\$203,616,000	\$215,164,000
Passenger and Other Revenues	50,745,500	51,866,000	53,641,000	56,224,000	57,395,000	59,273,000
Required Operating Assistance	113,015,000	121,630,000	130,043,000	136,385,000	146,221,000	155,891,000
Farebox Recovery Rate	28.7%	27.8%	29.2%	29.2%	28.2%	27.5%
Sources of Operating Assistance						
Federal	\$25,266,500	\$21,869,700	\$4,719,700	\$4,719,700	\$12,169,700	\$11,569,700
State	65,577,000	67,544,300	69,570,600	71,657,700	73,807,500	76,021,800
County	22,171,500	32,216,000	55,752,700	60,007,600	60,243,800	68,299,500
Total	\$113,015,000	\$121,630,000	\$130,043,000	\$136,385,000	\$146,221,000	\$155,891,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 3 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$5 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 2 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$5.2 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 3 percent annually.

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 3 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.1 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 3 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-6

**ALTERNATIVE 2—LIMITED SERVICE EXPANSION UNDER THE WORST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,380,000	1,420,000	1,460,000	1,500,000	1,540,000
Revenue Passengers	41,714,900	42,722,800	42,756,000	43,171,000	44,143,000	44,169,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$152,297,000	\$164,549,000	\$177,638,000	\$191,625,000	\$206,576,000
Passenger and Other Revenues	47,258,900	48,311,000	50,015,000	52,234,000	53,327,000	55,123,000
Required Operating Assistance	93,540,100	103,986,000	114,534,000	125,404,000	138,298,000	151,453,000
Farebox Recovery Rate	33.6%	31.7%	30.4%	29.4%	27.8%	26.7%
Sources of Operating Assistance						
Federal	\$20,392,800	\$13,896,000	\$1,596,000	\$980,000	\$1,596,000	\$1,596,000
State	55,707,000	56,821,100	57,957,500	59,116,700	60,299,000	61,505,000
County	17,440,300	33,268,900	54,980,500	65,307,300	76,403,000	88,352,000
Total	\$93,540,100	\$103,986,000	\$114,534,000	\$125,404,000	\$138,298,000	\$151,453,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,567,000	\$26,334,000	\$26,393,000	\$28,239,000	\$30,275,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	21,012,000	22,708,000	22,403,000	24,171,000	26,125,000
Farebox Recovery Rate	15.2%	14.5%	13.8%	15.1%	14.4%	13.7%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$3,123,700	\$3,123,700	\$3,123,700	\$3,223,700
State	9,870,000	\$10,067,400	\$10,268,700	\$10,474,100	\$10,683,600	\$10,897,300
County	4,731,200	\$6,070,900	\$9,315,600	\$8,805,200	\$10,363,700	\$12,004,000
Total	\$19,474,900	\$21,012,000	\$22,708,000	\$22,403,000	\$24,171,000	\$26,125,000

Table D-6 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,811,000	1,860,000	1,880,000	1,928,000	1,977,000
Revenue Passengers	42,791,700	43,820,800	43,876,000	44,239,000	45,232,000	45,280,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$176,864,000	\$190,883,000	\$204,031,000	\$219,864,000	\$236,851,000
Passenger and Other Revenues	50,745,500	51,866,000	53,641,000	56,224,000	57,395,000	59,273,000
Required Operating Assistance	113,015,000	124,998,000	137,242,000	147,807,000	162,469,000	177,578,000
Farebox Recovery Rate	28.7%	27.2%	28.1%	27.6%	26.1%	25.0%
Sources of Operating Assistance						
Federal	\$25,266,500	\$18,769,700	\$4,719,700	\$4,103,700	\$4,719,700	\$4,819,700
State	65,577,000	66,888,500	68,226,200	69,590,800	70,982,600	72,402,300
County	22,171,500	39,339,800	64,296,100	74,112,500	86,766,700	100,356,000
Total	\$113,015,000	\$124,998,000	\$137,242,000	\$147,807,000	\$162,469,000	\$177,578,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 5 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$2 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 1 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$2.5 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 2 percent annually

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 5 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$0.4 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 2 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-7

**ALTERNATIVE 3—MAINTAIN EXISTING SYSTEM UNDER THE BEST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000
Revenue Passengers	41,714,900	41,715,000	40,786,000	40,254,000	40,254,000	39,409,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$143,661,000	\$146,529,000	\$149,464,000	\$152,452,000	\$155,507,000
Passenger and Other Revenues	47,258,900	47,259,000	47,881,000	48,955,000	48,955,000	49,582,000
Required Operating Assistance	93,540,100	\$96,402,000	\$98,648,000	\$100,509,000	\$103,497,000	\$105,925,000
Farebox Recovery Rate	33.6%	32.9%	32.7%	32.8%	32.1%	31.9%
Sources of Operating Assistance						
Federal	\$20,392,800	\$20,296,000	\$13,996,000	\$8,896,000	\$14,096,000	\$10,696,000
State	55,707,000	57,935,300	60,252,700	62,662,800	65,169,300	67,776,100
County	17,440,300	18,170,700	24,399,300	28,950,200	24,231,700	27,452,900
Total	\$93,540,100	\$96,402,000	\$98,648,000	\$100,509,000	\$103,497,000	\$105,925,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$23,864,000	\$24,851,000	\$24,196,000	\$25,149,000	\$26,194,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,309,000	21,225,000	20,206,000	21,081,000	22,044,000
Farebox Recovery Rate	15.2%	14.9%	14.6%	16.5%	16.2%	15.8%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700
State	9,870,000	10,264,800	10,675,400	11,102,400	11,546,500	12,008,400
County	4,731,200	5,170,500	5,675,900	4,229,900	4,660,800	5,161,900
Total	\$19,474,900	\$20,309,000	\$21,225,000	\$20,206,000	\$21,081,000	\$22,044,000

Table D-7 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,771,000	1,780,000	1,760,000	1,768,000	1,777,000
Revenue Passengers	42,791,700	42,813,000	41,906,000	41,322,000	41,343,000	40,520,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$167,525,000	\$171,380,000	\$173,660,000	\$177,601,000	\$181,701,000
Passenger and Other Revenues	50,745,500	50,814,000	51,507,000	52,945,000	53,023,000	53,732,000
Required Operating Assistance	113,015,000	116,711,000	119,873,000	120,715,000	124,578,000	127,969,000
Farebox Recovery Rate	28.7%	28.1%	30.1%	30.5%	29.9%	29.6%
Sources of Operating Assistance						
Federal	\$25,266,500	\$25,169,700	\$18,869,700	\$13,769,700	\$18,969,700	\$15,569,700
State	65,577,000	68,200,100	70,928,100	73,765,200	76,715,800	79,784,500
County	22,171,500	23,341,200	30,075,200	33,180,100	28,892,500	32,614,800
Total	\$113,015,000	\$116,711,000	\$119,873,000	\$120,715,000	\$124,578,000	\$127,969,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 2 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$8 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 3 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$12.0 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 4 percent annually.

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 2 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.75 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 4 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-8

**ALTERNATIVE 3—MAINTAIN EXISTING SYSTEM UNDER AVERAGE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000
Revenue Passengers	41,714,900	41,715,000	40,786,000	40,254,000	40,254,000	39,409,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$145,068,000	\$149,423,000	\$153,899,000	\$158,522,000	\$163,279,000
Passenger and Other Revenues	47,258,900	47,259,000	47,881,000	48,955,000	48,955,000	49,582,000
Required Operating Assistance	93,540,100	97,809,000	101,542,000	104,944,000	109,567,000	113,697,000
Farebox Recovery Rate	33.6%	32.6%	32.0%	31.8%	30.9%	30.4%
Sources of Operating Assistance						
Federal	\$20,392,800	\$20,296,000	\$7,396,000	\$5,396,000	\$10,296,000	\$6,696,000
State	55,707,000	57,378,200	59,099,500	60,872,500	62,698,700	64,579,700
County	17,440,300	20,134,800	35,046,500	38,675,500	36,572,300	42,421,300
Total	\$93,540,100	\$97,809,000	\$101,542,000	\$104,944,000	\$109,567,000	\$113,697,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,097,000	\$25,340,000	\$24,914,000	\$26,151,000	\$27,500,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	20,542,000	21,714,000	20,924,000	22,083,000	23,350,000
Farebox Recovery Rate	15.2%	14.8%	14.3%	16.0%	15.6%	15.1%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700	\$4,873,700
State	9,870,000	10,166,100	10,471,100	10,785,200	11,108,800	11,442,100
County	4,731,200	5,502,200	6,369,200	5,265,100	6,100,500	7,034,200
Total	\$19,474,900	\$20,542,000	\$21,714,000	\$20,924,000	\$22,083,000	\$23,350,000

Table D-8 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,771,000	1,780,000	1,760,000	1,768,000	1,777,000
Revenue Passengers	42,791,700	42,813,000	41,906,000	41,322,000	41,343,000	40,520,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$169,165,000	\$174,763,000	\$178,813,000	\$184,673,000	\$190,779,000
Passenger and Other Revenues	50,745,500	50,814,000	51,507,000	52,945,000	53,023,000	53,732,000
Required Operating Assistance	113,015,000	118,351,000	123,256,000	125,868,000	131,650,000	137,047,000
Farebox Recovery Rate	28.7%	27.8%	29.5%	29.6%	28.7%	26.2%
Sources of Operating Assistance						
Federal	\$25,266,500	\$25,169,700	\$12,269,700	\$10,269,700	\$15,169,700	\$11,569,700
State	65,577,000	67,544,300	69,570,600	71,657,700	73,807,500	76,021,800
County	22,171,500	25,637,000	41,415,700	43,940,600	42,672,800	49,455,500
Total	\$113,015,000	\$118,351,000	\$123,256,000	\$125,868,000	\$131,650,000	\$137,047,000

^aBus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 3 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$5 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 2 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$8.4 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 3 percent annually.

^bTransit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 3 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.75 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 3 percent annually.

^cTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table D-9

**ALTERNATIVE 3—MAINTAIN EXISTING SYSTEM UNDER THE WORST-CASE SCENARIO:
ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE FOR MILWAUKEE
COUNTY TRANSIT SYSTEM BUS AND PARATRANSIT SERVICES FOR THE PERIOD 2009-2013**

Bus System ^a						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,339,600	1,340,000	1,340,000	1,340,000	1,340,000	1,340,000
Revenue Passengers	41,714,900	41,715,000	40,786,000	40,254,000	40,254,000	39,409,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$140,799,000	\$147,882,000	\$155,279,000	\$163,038,000	\$171,185,000	\$179,748,000
Passenger and Other Revenues	47,258,900	47,259,000	47,881,000	48,955,000	48,955,000	49,582,000
Required Operating Assistance	93,540,100	100,623,000	107,398,000	114,083,000	122,230,000	130,166,000
Farebox Recovery Rate	33.6%	32.0%	30.8%	30.0%	28.6%	27.6%
Sources of Operating Assistance						
Federal	\$20,392,800	\$20,296,000	\$1,596,000	\$1,796,000	\$6,496,000	\$2,696,000
State	55,707,000	56,821,100	57,957,500	59,116,700	60,299,000	61,505,000
County	17,440,300	23,505,900	47,844,500	53,170,300	55,435,000	65,965,000
Total	\$93,540,100	\$100,623,000	\$107,398,000	\$114,083,000	\$122,230,000	\$130,166,000

Paratransit System ^b						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	423,000	431,000	440,000	420,000	428,000	437,000
Revenue Passengers	1,076,800	1,098,000	1,120,000	1,068,000	1,089,000	1,111,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$22,961,500	\$24,567,000	\$26,334,000	\$26,393,000	\$28,239,000	\$29,699,000
Passenger and Other Revenues	3,486,600	3,555,000	3,626,000	3,990,000	4,068,000	4,150,000
Required Operating Assistance	19,474,900	21,012,000	22,708,000	22,403,000	24,171,000	25,549,000
Farebox Recovery Rate	15.2%	14.5%	13.8%	15.1%	14.4%	14.0%
Sources of Operating Assistance						
Federal	\$4,873,700	\$4,873,700	\$4,123,700	\$4,873,700	\$4,873,700	\$4,873,700
State	9,870,000	10,067,400	10,268,700	10,474,100	10,683,600	10,897,300
County	4,731,200	6,070,900	8,315,600	7,055,200	8,613,700	9,778,000
Total	\$19,474,900	\$21,012,000	\$22,708,000	\$22,403,000	\$24,171,000	\$25,549,000

Table D-9 (continued)

Total Transit System ^c						
Characteristic	2008 Budget	Forecast				
		2009	2010	2011	2012	2013
Service and Ridership						
Total Vehicle Hours	1,762,600	1,771,000	1,780,000	1,760,000	1,768,000	1,777,000
Revenue Passengers	42,791,700	42,813,000	41,906,000	41,322,000	41,343,000	40,520,000
Operating Costs, Revenues, and Assistance						
Total Operating Expenses	\$163,760,500	\$172,449,000	\$181,613,000	\$189,431,000	\$199,424,000	\$209,447,000
Passenger and Other Revenues	50,745,500	50,814,000	51,507,000	52,945,000	53,023,000	53,732,000
Required Operating Assistance	113,015,000	\$121,635,000	\$130,106,000	\$136,486,000	\$146,401,000	\$155,715,000
Farebox Recovery Rate	28.7%	27.3%	28.4%	27.9%	26.6%	23.9%
Sources of Operating Assistance						
Federal	\$25,266,500	\$25,169,700	\$5,719,700	\$6,669,700	\$11,369,700	\$7,569,700
State	65,577,000	66,888,500	68,226,200	69,590,800	70,982,600	72,402,300
County	22,171,500	29,576,800	56,160,100	60,225,500	64,048,700	75,743,000
Total	\$113,015,000	\$121,635,000	\$130,106,000	\$136,486,000	\$146,401,000	\$155,715,000

^a Bus system ridership and service data for 2008 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for the years 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 5 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The \$2.00 base adult cash fare for the bus system in 2008 will be increased to \$2.25 per trip in 2011 then remain constant through 2013. The cost of an adult weekly pass for the bus system, \$16 in 2008, will be increased to \$17 in 2010 and \$18 in 2013. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$2 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 1 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$5.0 million annually in Federal Section 5307 funds between 2009 and 2013 to support bus system operations which will be taken from the County's annual Section 5307/5340 allocation and the unspent balance of these funds accumulated from past annual allocations.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 2 percent annually.

^b Transit Plus paratransit ridership and service data for 2008 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for 2009 through 2013 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 5 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2008 levels through the year 2013. Cash fares for the paratransit service, \$3.25 per trip in 2008, will be increased to \$3.75 per trip in 2011 then remain constant through 2013.
3. Approximately \$1.6 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between 2009 and 2013.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 2 percent annually.

^c Total system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Appendix E

**FORECAST ANNUAL SERVICE LEVELS, RIDERSHIP, AND
OPERATING AND CAPITAL COSTS UNDER THE RECOMMENDED PLAN**

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Table E-1

**ANNUAL OPERATING EXPENSES, OPERATING REVENUES, AND OPERATING ASSISTANCE
FOR THE MILWAUKEE COUNTY TRANSIT SYSTEM UNDER THE RECOMMENDED PLAN**

Bus System ^a							
Characteristic	2010 Budget	Forecast ^b					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Service Provided							
Total Vehicle Miles	17,841,700	17,841,700	18,651,000	19,460,000	20,269,000	21,078,000	21,887,000
Total Vehicle Hours	1,327,500	1,327,500	1,387,700	1,447,900	1,508,100	1,568,300	1,628,500
Revenue Passengers	40,175,900	40,175,900	41,599,038	43,059,000	43,042,000	44,421,000	44,864,000
Per Vehicle Mile	2.3	2.3	2.2	2.2	2.1	2.1	2.0
Per Vehicle Hour	30.3	30.3	30.0	29.7	28.5	28.3	27.5
Costs, Revenues, and Assistance							
Operating Expenses	\$145,110,000	\$148,016,000	\$157,824,000	\$167,971,000	\$178,453,000	\$189,294,000	\$200,484,000
Revenues							
Passenger Revenues	\$47,293,300	\$47,293,000	\$48,968,000	\$52,446,000	\$54,190,000	\$55,926,000	\$58,323,000
Other	\$2,970,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000
Total	\$50,263,300	\$50,293,000	\$51,968,000	\$55,446,000	\$57,190,000	\$58,926,000	\$61,323,000
Required Operating Assistance	\$94,846,700	\$97,723,000	\$105,856,000	\$112,525,000	\$121,263,000	\$130,368,000	\$139,161,000
Percent of Expenses							
Recovered through Revenues	34.6	34.0	32.9	33.0	32.0	31.1	30.6
Sources of Operating Assistance							
Federal	\$21,064,200	\$16,010,000	\$13,426,000	\$14,242,000	\$10,058,000	\$13,174,000	\$6,190,000
State	\$57,921,300	\$59,948,500	\$62,046,700	\$64,218,300	\$66,465,900	\$68,792,200	\$71,199,900
County	\$15,861,200	\$21,764,500	\$30,383,300	\$34,064,700	\$44,739,100	\$48,401,800	\$61,771,100
Total	\$94,846,700	\$97,723,000	\$105,856,000	\$112,525,000	\$121,263,000	\$130,368,000	\$139,161,000
Per Trip Data							
Operating Cost	\$3.61	\$3.68	\$3.79	\$3.90	\$4.15	\$4.26	\$4.47
Revenue	1.25	1.25	1.25	1.29	1.33	1.33	1.37
Total Operating Assistance	2.36	2.43	2.54	2.61	2.82	2.93	3.10
Local Operating Assistance	0.39	0.54	0.73	0.79	1.04	1.09	1.38

Paratransit System ^c							
Characteristic	2010 Budget	Forecast ^b					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Service Provided							
Total Vehicle Miles	6,504,500	6,636,000	6,770,000	6,904,000	6,583,000	6,717,000	6,851,000
Total Vehicle Hours	477,800	487,500	497,300	507,100	483,500	493,300	503,100
Revenue Passengers	1,216,400	1,241,000	1,266,000	1,291,000	1,231,000	1,256,000	1,281,000
Costs, Revenues, and Assistance							
Operating Expenses	\$28,127,000	\$29,274,000	\$30,460,000	\$31,684,000	\$30,813,000	\$32,065,000	\$33,356,000
Revenues							
Passenger Revenues	\$3,637,200	\$3,711,000	\$3,786,000	\$3,861,000	\$4,248,000	\$4,334,000	\$4,420,000
Other	\$6,277,000	\$6,404,000	\$6,533,000	\$6,662,000	\$7,330,000	\$7,479,000	\$7,628,000
Total	\$9,914,200	\$10,115,000	\$10,319,000	\$10,523,000	\$11,578,000	\$11,813,000	\$12,048,000
Required Operating Assistance	\$18,212,800	\$19,159,000	\$20,141,000	\$21,161,000	\$19,235,000	\$20,252,000	\$21,308,000
Percent of Expenses							
Recovered through Revenues	12.9	12.7	12.4	12.2	13.8	13.5	13.3
Sources of Operating Assistance							
Federal	\$3,168,000	\$3,168,000	\$3,168,000	\$3,168,000	\$3,168,000	\$3,168,000	\$3,168,000
State	\$11,625,600	\$12,032,500	\$12,453,600	\$12,889,500	\$13,340,600	\$13,807,500	\$14,290,800
County	\$3,419,200	\$3,958,500	\$4,519,400	\$5,103,500	\$2,726,400	\$3,276,500	\$3,849,200
Total	\$18,212,800	\$19,159,000	\$20,141,000	\$21,161,000	\$19,235,000	\$20,252,000	\$21,308,000
Per Trip Data							
Operating Cost	\$23.12	\$23.59	\$24.06	\$24.54	\$25.03	\$25.53	\$26.04
Revenue	8.15	8.15	8.15	8.15	9.40	9.41	9.41
Total Operating Assistance	14.97	15.44	15.91	16.39	15.63	16.12	16.63
Local Operating Assistance	2.81	3.19	3.57	3.95	2.21	2.61	3.00

Table E-1 (continued)

Total Transit System ^d							
Characteristic	2010 Budget	Forecast ^b					
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Service Provided							
Total Vehicle Miles	24,346,200	24,477,700	25,421,000	26,364,000	26,852,000	27,795,000	28,738,000
Total Vehicle Hours	1,805,300	1,815,000	1,885,000	1,955,000	1,991,600	2,061,600	2,131,600
Revenue Passengers	41,392,300	41,416,900	42,865,038	44,350,000	44,273,000	45,677,000	46,145,000
Costs, Revenues, and Assistance							
Operating Expenses	\$173,237,000	\$177,290,000	\$188,284,000	\$199,655,000	\$209,266,000	\$221,359,000	\$233,840,000
Revenues							
Passenger Revenues	\$50,930,500	\$51,004,000	\$52,754,000	\$56,307,000	\$58,438,000	\$60,260,000	\$62,743,000
Other	\$9,247,000	\$9,404,000	\$9,533,000	\$9,662,000	\$10,330,000	\$10,479,000	\$10,628,000
Total	\$60,177,500	\$60,408,000	\$62,287,000	\$65,969,000	\$68,768,000	\$70,739,000	\$73,371,000
Required Operating Assistance	\$113,059,500	\$116,882,000	\$125,997,000	\$133,686,000	\$140,498,000	\$150,620,000	\$160,469,000
Percent of Expenses							
Recovered through Revenues	29.4	34.1	28.0	33.0	32.9	32.0	31.4
Sources of Operating Assistance							
Federal	\$24,232,200	\$19,178,000	\$16,594,000	\$17,410,000	\$13,226,000	\$16,342,000	\$9,358,000
State	69,546,900	71,981,000	74,500,300	77,107,800	79,806,500	82,599,700	85,490,700
County	19,280,400	25,723,000	34,902,700	39,168,200	47,465,500	51,678,300	65,620,300
Total	\$113,059,500	\$116,882,000	\$125,997,000	\$133,686,000	\$140,498,000	\$150,620,000	\$160,469,000
Per Trip Data							
Operating Cost	\$4.19	\$4.28	\$4.39	\$4.50	\$4.73	\$4.85	\$5.07
Revenue	1.46	1.46	1.45	1.49	1.56	1.55	1.59
Total Operating Assistance	2.73	2.82	2.94	3.01	3.17	3.30	3.48
Local Operating Assistance	0.47	0.62	0.81	0.88	1.07	1.13	1.42

^aBus system ridership and service data for 2010 reflect the adopted operating budget for the transit system. The forecasts of ridership, service levels, and financial data for the transit system for years 1 through 6 of the short-range planning period were prepared by Commission staff based on the following assumptions:

1. Systemwide average operating costs per total vehicle hour for the bus system were assumed to increase by about 2 percent annually.
2. No constraints were assumed for the total property tax levy for the bus and paratransit services provided by the Milwaukee County Transit System.
3. The base adult cash fare for the bus system, currently at \$2.25 per trip in 2010, will be increased to \$2.50 per trip in year 3 then remain constant through year 6. The cost of an adult weekly pass for the bus system, currently at \$17.50 in 2010, will be increased to \$18.50 in year 2 and \$19.50 in year 6. Increases in other pass and cash fare categories will occur as these fares are raised.
4. The County will obtain about \$8 million annually in Federal Section 5309 earmark funds to fund major capital purchases, including buses, and its annual allocation of Section 5307/5340 formula funds will increase by about 2.5 percent annually. The Section 5309 earmark funds will allow the County to use an average of about \$10.4 million annually in Federal Section 5307 funds between years 1 and 6 to support bus system operations, or about 43 percent less than the \$18.2 million used to support bus system operations under the 2010 budget.
5. The State 85.20 program transit operating assistance funds used for the bus system will increase by 3.5 percent annually.

^bYear 1 represents a year assumed necessary to maintain the current transit system, prior to system improvement and expansion. Years 2 through 6 represent the five year period of staged service improvement and expansion resulting in full implementation of the recommended plan.

^cTransit Plus paratransit ridership and service data for 2010 reflect the adopted operating budget for the paratransit system. The forecast ridership, service, and financial data for years 1 through 6 were prepared by Commission staff based on the following assumptions:

1. Operating costs per total vehicle hour of service will increase by about 2 percent annually.
2. The basic service characteristics for the Transit Plus paratransit service will remain at 2010 levels through year 6. Cash fares for the paratransit service, currently at \$3.25 per trip in 2010, will be increased to \$3.75 per trip in year 4 then remain constant through year 6.
3. Approximately \$1.85 million annually in Federal Section 5307 funds will be used for the Transit Plus Program between years 1 and 6.
4. The State 85.20 program transit operating assistance funds and State 85.21 program specialized transit assistance funds used for the paratransit system will increase by 3.5 percent annually.

^dTotal system ridership, service, and financial data exclude the vanpool program operated by the Milwaukee County Transit System.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.

Table E-2

**CAPITAL EXPENDITURES FOR OPERATING EQUIPMENT AND FACILITIES FOR
THE MILWAUKEE COUNTY TRANSIT SYSTEM UNDER THE RECOMMENDED PLAN**

Capital Equipment/Project	2009 Budget	2010 Budget	Forecast ^a							
			Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Six Year Total	Average Annual
Bus Fleet										
Replacement Buses	\$33,015,500	\$13,200,000	\$11,250,000	--	--	\$20,025,000	\$16,875,000	\$25,875,000	\$74,025,000	\$12,337,500
Buses for fleet expansion	--	--	--	\$14,763,000	\$14,375,000	--	--	--	\$29,138,000	\$4,856,300
Subtotal	\$33,015,500	\$13,200,000	\$11,250,000	\$14,763,000	\$14,375,000	\$20,025,000	\$16,875,000	\$25,875,000	\$103,163,000	\$17,193,800
Operating Equipment										
Fare box renovation/replacement	\$6,960,000	--	--	--	--	--	--	--	--	--
AVL/Radio system upgrade for vehicle annunciators	\$2,160,000	--	--	--	--	--	--	--	--	--
Bicycle racks for existing and expanded bus fleet.....	\$650,000	--	--	\$51,000	\$50,000	--	--	--	\$101,000	\$16,800
Subtotal	\$42,785,500	\$13,200,000	\$11,250,000	\$14,814,000	\$14,425,000	\$20,025,000	\$16,875,000	\$25,875,000	\$103,264,000	\$17,210,600
Facility Repair and Renovation										
Roof replacement (Administration Building, Fond du Lac Avenue Maintenance Building)	\$253,400	\$300,000	--	--	--	--	--	--	--	--
Heating/air conditioning system replacement (Administration Building and Fond du Lac Avenue Maintenance Building)	\$456,900	\$950,000	--	--	--	--	--	--	--	--
Bus vacuum replacement (Fond du Lac Avenue Garage).....	--	\$575,000	--	--	--	--	--	--	--	--
Upgrade/replace data processing equipment.....	--	\$965,000	--	--	--	--	--	--	--	--
Repair fueling system components (Kinnickinnic Avenue Garage).....	\$578,100	--	--	--	--	--	--	--	--	--
Other facility renovations and repairs at MCTS facilities system wide	--	--	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$9,000,000	\$1,500,000
Subtotal	\$1,288,400	\$2,790,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$9,000,000	\$1,500,000
Other										
Transit Enhancement (TE) Projects (to be identified)	--	--	--	\$204,000	\$210,000	\$265,000	\$270,000	\$276,000	\$1,225,000	\$204,200
Total	\$44,073,900	\$15,990,000	\$12,750,000	\$16,518,000	\$16,135,000	\$21,790,000	\$18,645,000	\$27,651,000	\$113,489,000	\$18,914,800
Federal Share of Costs ^b	\$37,823,700	\$4,832,000	\$10,537,500	\$13,665,000	\$13,346,800	\$18,032,800	\$15,422,300	\$22,897,100	\$93,901,500	\$15,650,200
Local Share of Costs	\$6,250,200	\$11,158,000	\$2,212,500	\$2,853,000	\$2,788,200	\$3,757,200	\$3,222,700	\$4,753,900	\$19,587,500	\$3,264,600

^aYear 1 represents a year assumed necessary to maintain the current transit system, prior to system improvement and expansion. Years 2 through 6 represent the five year period of staged service improvement and expansion resulting in full implementation of the recommended plan.

^bAssumes 100 percent Federal share for 45 buses purchased in 2009 with Federal ARRA funds. An additional 45 buses were purchase in 2009 using about \$10.5 million in Federal Section 5309 earmark funds from 2009 and prior years. Bus purchases in 2010 reflect approximately \$2.6 million in Federal Section 5309 earmark funds from 2009 and prior years. Bus purchases in years 1 through 6 assume 83 percent FTA funding to account for a 90 percent Federal share for ADA-related bus accessibility features and an 80 percent Federal share for the bus. An 80 percent Federal share was assumed for all other capital projects.

Source: Milwaukee County Department of Transportation and Public Works, Milwaukee County Transit System, and SEWRPC.