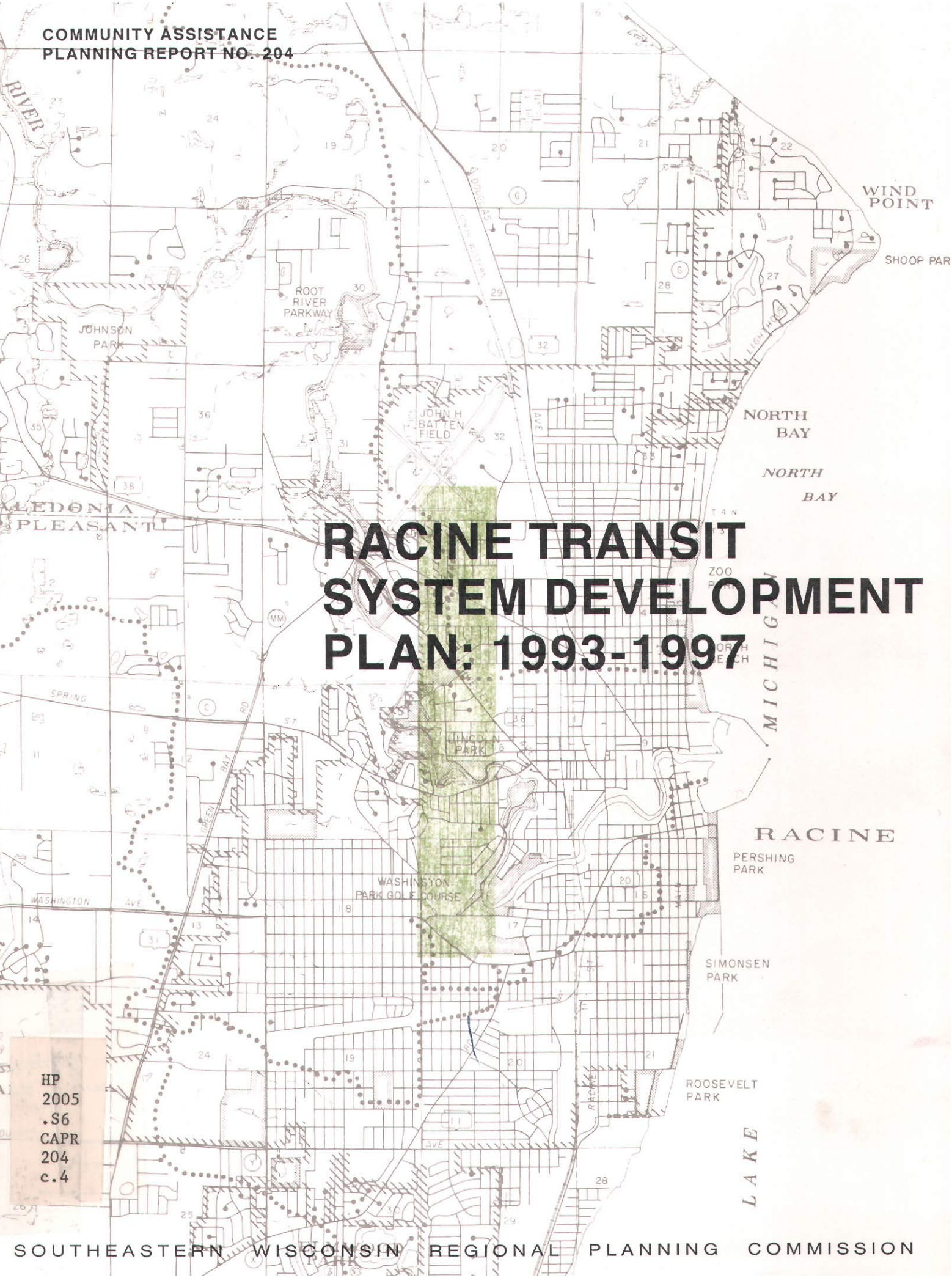
COMMUNITY ASSISTANCE
PLANNING REPORT NO. 204




# RACINE TRANSIT SYSTEM DEVELOPMENT PLAN: 1993-1997



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COMMUNITY ASSISTANCE PLANNING REPORT
NUMBER 204

# RACINE TRANSIT SYSTEM DEVELOPMENT PLAN: 1993-1997

## CITY OF RACINE, WISCONSIN

Prepared by the

Southeastern Wisconsin Regional Planning Commission
P. O. Box 1607
Old Courthouse
916 N. East Avenue
Waukesha, Wisconsin 53187-1607

The preparation of this report was financed in part through a planning grant from the U. S. Department of Transportation, Federal Transit Administration.

June 1993

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|---|---|
| Inside Region | $2.50 |
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# SOUTHEASTERN WISCONSIN REGIONAL PLANNING COMMISSION

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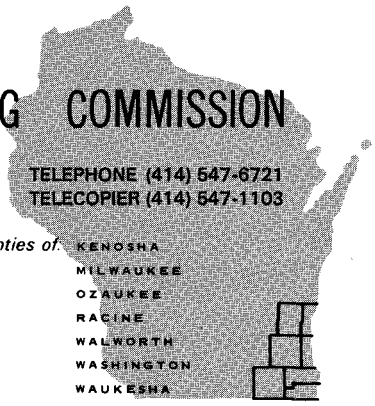

June 5, 1993

TO: The Honorable Mayor and Members of the City of Racine Common Council

Ladies and Gentlemen:

In February 1991, the City of Racine requested the assistance of the Southeastern Wisconsin Regional Planning Commission in the preparation of a new five-year development plan for the City's public transit system. The plan was to identify needed transit improvements for the period from 1993 through 1997 and was intended to replace the previous transit system development plan completed in May 1984. To advise and assist the Commission staff in the preparation of the plan, the City created the Racine Public Transit Planning Advisory Committee, composed of elected and appointed public officials, businessmen, and concerned citizens.

The Commission staff, working with the Advisory Committee, has now completed, and is pleased to provide to you herewith on behalf of the Committee, this report setting forth a new five-year transit system development plan for the City of Racine. The report presents transit service objectives and related performance measures as formulated under the study; the findings of inventories of pertinent demographic, economic, and land use characteristics of the City of Racine and environs and the travel characteristics of city residents; the results of an assessment of both systemwide and route-by-route transit system performance considering operating characteristics, ridership, and financial return; and recommended operational changes that would expand the transit services provided by, and improve the performance of, the city transit system.

The plan recommends a number of changes in the existing routes of the City of Racine Belle Urban System to eliminate or reduce service on existing route segments with low ridership, to serve existing travel demand better, and to increase service area coverage modestly. The plan proposes routing and service changes for seven of the 10 existing bus routes in the transit system for implementation in 1993. The plan also identifies additional routing adjustments and scheduling changes which may need to be implemented by 1997 if development in the study area continues to occur as envisioned at this time by City staff. The 1997 element of the recommended plan, however, recognizes that extensions of transit service to developing areas would be warranted only if recent development trends in the study area continue and the areas are found by local officials to warrant transit service.

The findings and recommendations of this report were carefully reviewed and approved by the Advisory Committee and are herewith submitted on behalf of that Committee for consideration and action by the City. If adopted, the recommended plan can provide valuable guidance to Racine officials concerned with transit system development in a period when the transit system will have to be responsive to changing development patterns and service needs in the City while also becoming more effective and efficient.

The Regional Planning Commission is appreciative of the assistance and support given to the plan preparation by the City of Racine Department of Transportation through the Transit Planner and by the Advisory Committee. The Commission staff stands ready to assist the City in presenting the recommended transit system development plan to the public for review and evaluation and in implementing the recommended service improvements and capital projects over time.

Sincerely,

Kurt W. Bauer
Executive Director

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# Chapter I

# INTRODUCTION

At the request of the City of Racine, the Regional Planning Commission assisted in the preparation of a new transit system development plan for the City's transit system. The previous transit system development plan prepared by the Commission for the transit system in 1984 was outdated, having set forth recommendations covering the period 1984 through 1988. The new plan was also needed in order for the transit system to respond properly to the major changes in industrial and commercial development which were occurring in the Racine area.

The requested transit system development plan is documented in this report. The plan is based on a thorough evaluation of the performance of the existing transit system operated by the City of Racine; analyses of the personal travel habits, patterns, and needs of the residents of the City and environs; analysis of the transportation needs of existing land use patterns and major land use developments which have been proposed or are occurring within the area; and a careful evaluation of alternative courses of action for providing the needed transit services. The plan also identifies the financial commitment and actions necessary by the various levels and units of government concerned to implement the plan.

## STUDY PURPOSE

The purpose of this transit system development plan is fourfold:

1. To evaluate the effectiveness of the existing route structure and schedules in serving the population concentrations, major trip generators, and travel habits and patterns of the greater Racine area.

2. To evaluate the financial performance of the current transit system with regard to operating costs, passenger revenues, operating deficits, and proportion of operating costs recovered by passenger revenues.

3. To recommend potential changes which should be considered in the operation of, and the area served by, the existing routes of the transit system including:

   a. The extension of transit service by the City of Racine to serve new areas of development occurring within the City of Racine and environs beyond the limits of the current transit system service area;

   b. Other changes needed to address routing and scheduling problems identified in the evaluation of the performance of the transit system.

4. To provide a sound basis for monitoring the implementation status of the plan and the updating required to maintain a valid plan throughout the five-year planning period.

## SCOPE OF WORK

Seven specific steps were involved in the preparation of this transit system development plan. The first step was the formation of appropriate transit service development objectives and supporting performance standards and design criteria. The second step was the collation and collection of the socioeconomic, land use, and travel habit and pattern data pertinent to the evaluation of the existing and proposed transit services. The third step was the analysis of the operation of the existing transit system, including the identification of any potential deficiencies in that system. The fourth step was the development and evaluation of alternative potential changes in transit service which could address the problems and deficiencies that were identified. The fifth step was the preparation of a program of recommended changes in the transit system. The sixth step was the preparation of a financial plan presenting data on the estimated capital and operating expenses, passenger revenues, and operating deficits for the modified system and on the portion of the associated capital costs and operating deficits which can be funded through federal and state transit assistance programs, and those which must be funded through local taxes. The seventh step was the identification of the actions needed to be taken by the City of Racine and by each of the other concerned levels and units of government to implement the recommended

changes in the transit system and thereby to achieve the recommended modified system and associated needed services.

## STUDY AREA

The study area considered in this report is bounded on the north by the Milwaukee-Racine County line, on the east by Lake Michigan, on the south by the Racine-Kenosha County line, and on the west by the section line two miles to the west of IH 94. As shown on Map 1, this area comprises the eastern portion of Racine County and includes all the City of Racine; the Villages of Elmwood Park, North Bay, Sturtevant, and Wind Point; the Towns of Caledonia and Mt. Pleasant and the eastern one-third of the Towns of Raymond and Yorkville. The study area includes the entire area served by the fixed-route bus system operated by the City of Racine in 1992, the Belle Urban System, and the entire urbanized area as defined by the U. S. Bureau of the Census. As deemed necessary, the inventory and analyses conducted under this study included certain major potential transit trip generators located outside the study area boundaries including, in particular, the University of Wisconsin-Parkside, in the Town of Somers, Kenosha County.

## STUDY ORGANIZATION

The preparation of this transit system development plan was a joint effort by the staffs of the City of Racine and the Southeastern Wisconsin Regional Planning Commission. Additional staff assistance was obtained as necessary from certain other agencies concerned with transit development in the Racine area, including the Wisconsin Department of Transportation.

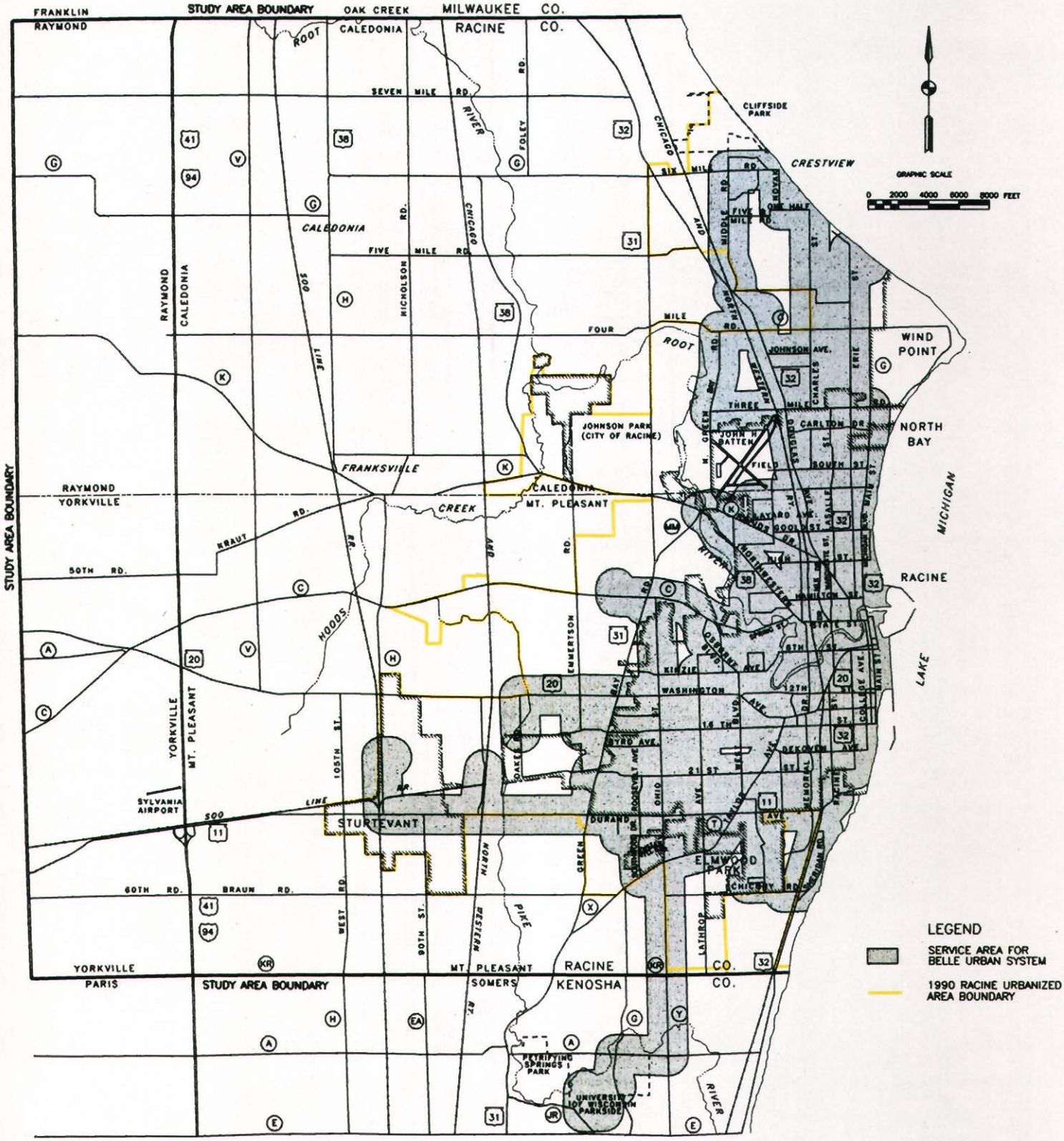
To provide guidance to the technical staffs in the preparation of this plan and to involve more directly and actively concerned and affected public officials and citizen leaders in the development of transit service policies and improvement proposals, the City of Racine acted in May 1991 to create a Racine Public Transit Planning Advisory Committee. The full membership of this Committee is listed on the inside front cover of this report.

## SCHEME OF PRESENTATION

This planning report consists of seven chapters. Following this introductory chapter, Chapter II, "Existing Transit System," presents a description of the public transit system serving the City of Racine and environs as that system existed in 1992, including descriptions of fixed-route bus service, specialized transportation service for the disabled, equipment, fares, ridership, administrative structure, costs, and financing. Chapter III, "Land Use and Travel Patterns," describes the pertinent land use, demographic, and economic characteristics and major potential transit trip generators in the study area as well as the travel habits and patterns of the resident population and the current transit system riders. Chapter IV, "Transit Service Objectives and Standards," presents a set of transit service objectives and supporting performance standards and design criteria used to identify existing problems and deficiencies in the service provided by the city transit system in 1992 and to design and evaluate alternative and recommended actions to alleviate such problems and deficiencies. Chapter V, "Transit System Performance Evaluation," presents an evaluation of the performance of the existing transit system, identifying service-related problems and deficiencies. Chapter VI, "Transit System Development Plan," describes the recommended transit system development plan for the City of Racine and environs, including recommendations pertaining to both fixed-route and specialized transit services, capital and operating costs, a financing plan identifying sources of funds for capital projects and operating deficits, and the actions required to be taken by each level and unit of government concerned to carry out the recommended plan in an orderly and timely manner. Chapter VII, "Summary and Conclusions," provides a summary of the significant findings and recommendations of the planning effort.

## Map 1

## STUDY AREA FOR THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN




*Source: SEWRPC.*

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## Chapter II

## EXISTING TRANSIT SYSTEM

### INTRODUCTION

An understanding of the public transit system existing in the study area is basic to the preparation of any sound transit system development plan. This understanding should be based upon a thorough inventory of current transit operations and appropriate survey data describing the travel habits and patterns and socioeconomic characteristics of the existing transit ridership.

This chapter documents the findings of an inventory of the public transit services serving the City of Racine and environs. The operations of the City of Racine's fixed-route transit system, the Belle Urban System, which is the main supplier of public transit service in the study area, and the operations of other major suppliers of public transit service serving the Racine area are described. A description of the travel habits and patterns and socioeconomic characteristics of the existing Belle Urban System ridership, based upon a survey conducted in April 1991, is provided in the next chapter.

### THE BELLE URBAN SYSTEM

Urban public transit service has been available in the City of Racine since 1883, when street railway operations were initiated. Public transit service in the Racine area was provided exclusively by streetcars until 1928, when the first feeder bus route was instituted. An extensive street paving program was undertaken by the City during the Depression and the decision was then made to convert to buses rather than replace track where the repaving program affected the streetcar routes. Continuous declines in ridership and profits during the postwar period resulted in several changes of private ownership until in July 1975, without any interruption of bus service, the City of Racine acquired the transit system from the last private transit operator, which it had subsidized for the previous year, and began public operation of the Racine transit system, renaming it the Belle Urban System.

Thus, the major supplier of local public transit service in the Racine area is the City of Racine. The following sections describe the existing operations of the transit system in terms of administration and management, fixed-route and specialized transit services, fare structure, facilities and equipment, ridership levels, and financial status.

#### Administrative Structure

The Belle Urban System is owned by the City of Racine and operated by a private contract management firm with private employees under the direct supervision of the City of Racine Department of Transportation. The policy making body of the transit system is the Racine Transit and Parking Commission, consisting of five members appointed by the mayor and confirmed by the common council. The powers of the Transit and Parking Commission are substantial, including essentially all the powers necessary to acquire, operate, and manage the transit system. However, the Racine Common Council has the ultimate responsibility for review and approval of certain important matters, including the annual budget of the public transit program. The management and policy making structure of the Belle Urban System is summarized on the organization chart shown in Figure 1.

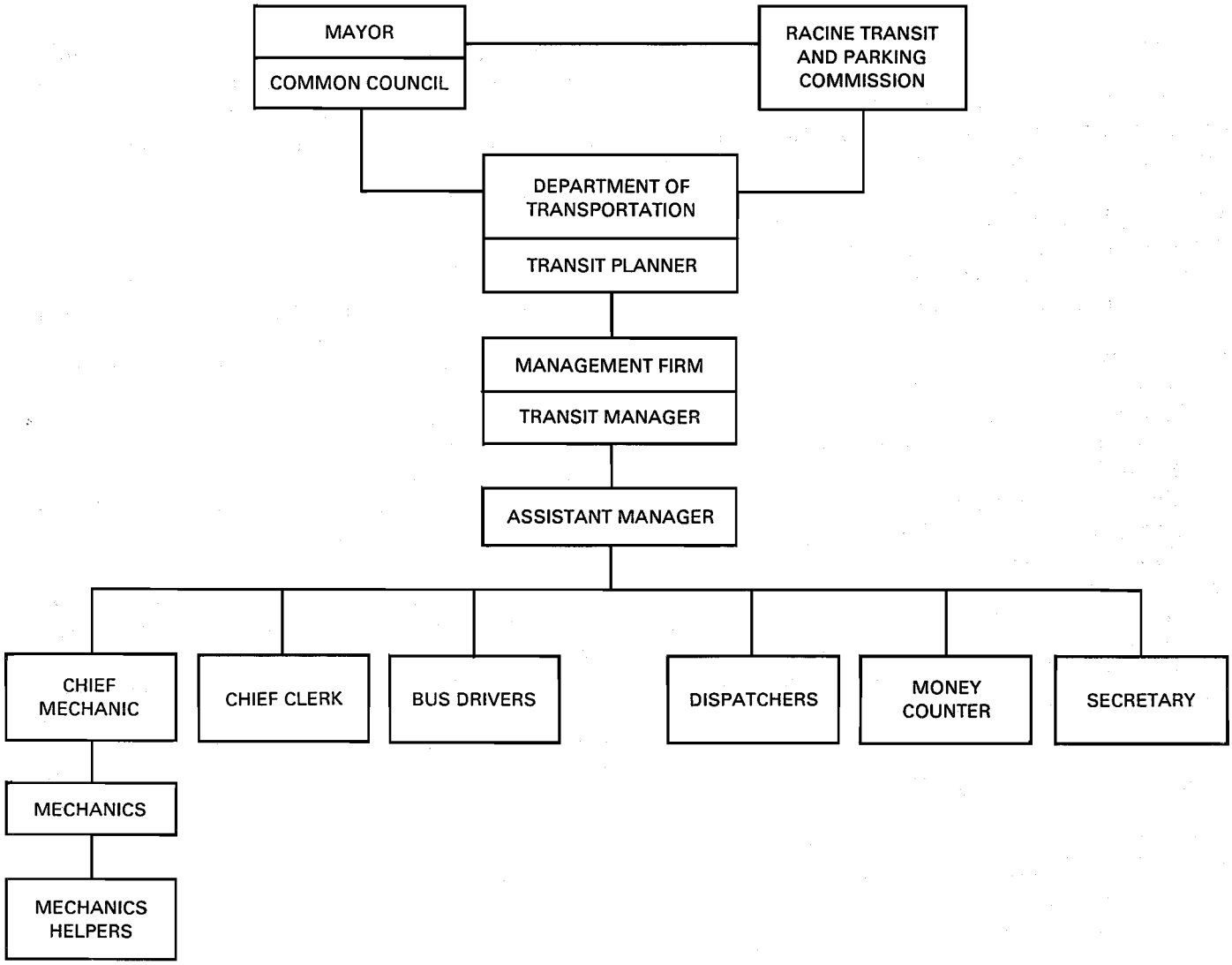
#### Fixed-Route Bus Service

During 1992 fixed-route bus service was provided by the Belle Urban System over 10 regular local bus routes, as shown on Map 2. The current operating and service characteristics of the routes operated by the Belle Urban System are summarized in Table 1.

Of the 10 existing fixed routes operating in the Belle Urban System, five are crosstown in nature; Routes No. 1 through 4 travel through the Racine central business district. Route No. 5, which is orientated in a general north-south direction, passes west of the central business district along Memorial Drive. This route intersects eight of the 10 routes in the system, thereby providing the opportunity for transfers between these routes. Four additional routes, Routes No. 6, 7, 8, and 9, are oriented toward the central part of Racine, connecting the outlying service area with the central business district. The schedules of all buses serving the central busi-

**Figure 1**

**ORGANIZATIONAL CHART FOR MANAGEMENT OF THE BELLE URBAN SYSTEM**




*Source: City of Racine Department of Transportation and SEWRPC.*

ness district are designed so that buses from all routes meet within approximately 10 minutes of one another, thereby providing for convenient transfers. The remaining route in the system, Route No. 10, operates as a one-way loop in the Town of Caledonia, connecting with Routes No. 2 and 4 at a transfer point in the Shorecrest Shopping Center in the northern part of the City of Racine.

Six of the routes comprising the Belle Urban System provide service both inside and outside the Racine corporate limits. Of the six routes, three serve the area to the west, two serve the area to the south, and one serves the area to the north. Routes No. 3 and 6, both orientated in an east-west direction, serve residential and commercial areas in the Town of Mt. Pleasant immediately west of the City along Spring Street and Washington Avenue (STH 20). Route No. 7 also serves the area to the west by providing transit service to the Town of Mt. Pleasant and the Village of Sturtevant via STH 11, where several major industries are located, and to the Racine Correctional Facility, located on CTH H. Route No. 1 runs generally north-south and

provides transit service to the area east of STH 32 just south of the Racine corporate limits in the Town of Mt. Pleasant. Route No. 9 provides transit from the central business district to the University of Wisconsin-Parkside, four miles south of Racine, in Kenosha County. Service in the Town of Caledonia, as described above, is provided by Route No. 10.

In addition to the standard bus routes of the Belle Urban System, a trolleybus shuttle service was initiated in 1991 to provide a unique form of transportation within the marina and central business district area. This service utilizes two trolleys and operates between Memorial Day and Labor Day from 10:00 a.m. to 5:30 p.m. Monday through Friday, and from 9:00 a.m. to 5:30 p.m. on Saturdays and Sundays. The trolleys operate on 20-minute headways on weekdays and 10-minute headways on weekends, stopping at all regularly marked bus stops. In addition to these hours of operation, the trolleys operate between nine restaurants on Thursday, Friday and Saturday nights from 5:30 p.m. to midnight. The trolley service is operated by a private company, Recreation Leisure Times, under a contract with the City separate from the City's contract for operation of the regular routes of the Belle Urban System.

Bus service is provided by the Belle Urban System for approximately 13.5 hours per day, from 5:30 a.m. to 7:00 p.m., Mondays through Fridays, and approximately 11 hours a day, from 7:00 a.m. to 6:00 p.m., Saturdays. No bus service is provided on Sundays or holidays. Eight of the 10 bus routes operate throughout the service day. Route No. 9 operates for approximately 11.5 hours per day, from 7:15 a.m. to 6:50 p.m., during the fall and spring sessions of the University of Wisconsin-Parkside, and for approximately 10.5 hours per day, from 7:20 a.m. to 5:50 p.m., during summer school. The route is operated only on days when classes are in session, generally Mondays through Fridays. No Saturday bus service is provided on Route No. 9. Route No. 10 operates for approximately 8.25 hours per day Mondays through Fridays, from 5:45 a.m. to 10:10 a.m. and from 2:30 p.m. to 6:10 p.m., and for about 7.5 hours per day on Saturdays, from 9:30 a.m. to 4:55 p.m.

Transportation Service for the Disabled

The City of Racine annually contributes funds to the specialized transportation program administered by the Racine County Human Services Department. This program includes projects which provide paratransit services to different segments of the disabled population within Racine County. The funds annually contributed to the program by the City of Racine are used primarily to support the operation of a paratransit service designed to provide mobility to all transportation-handicapped persons in the portion of Racine County east of IH 94 who are unable to use the City's public transit service. The current operating and service characteristics of this transportation service for the disabled are summarized in Table 2. The City of Racine is required by federal regulations to provide such a transportation service as a complement to its fixed-route transit service.

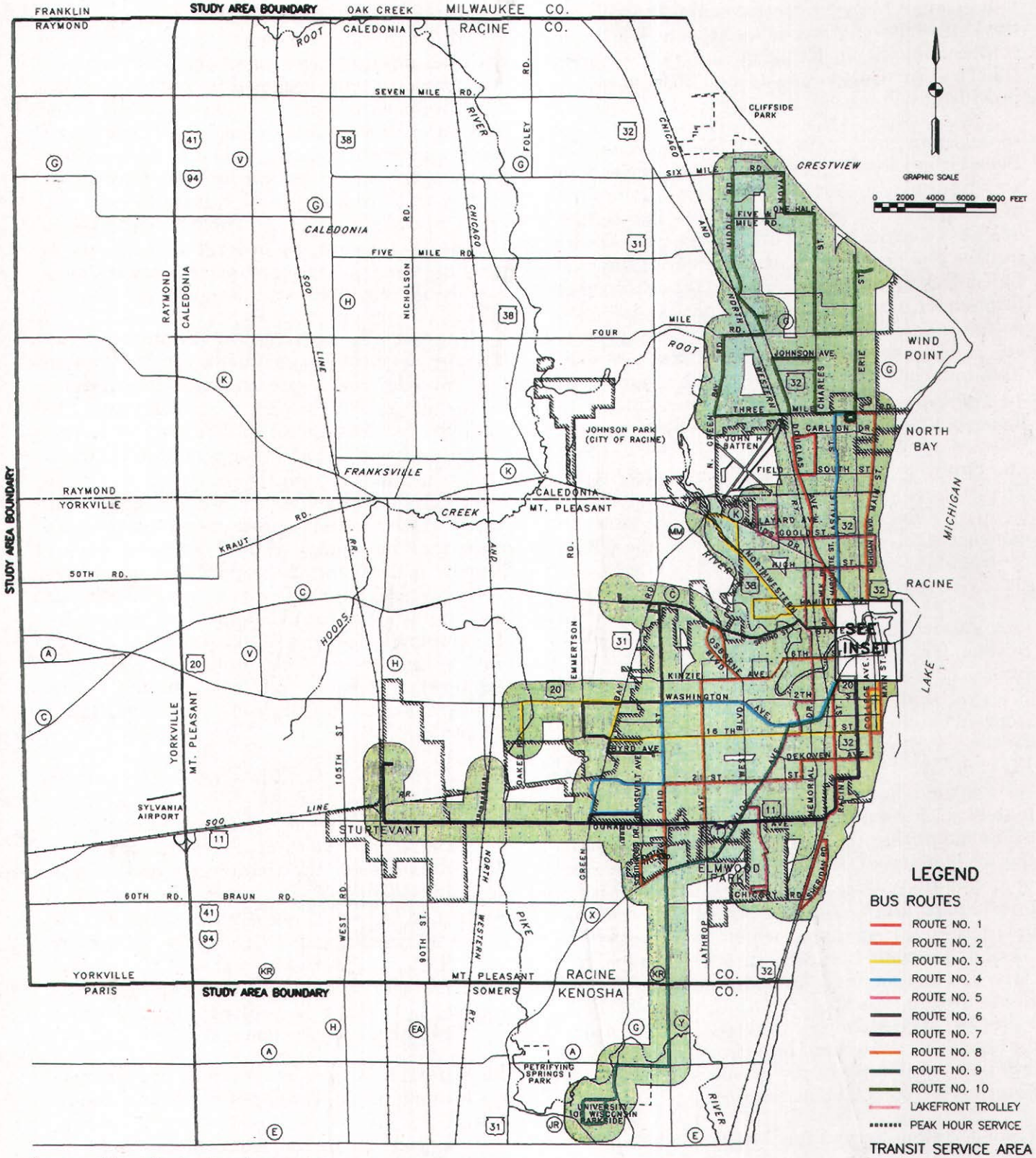
To provide the service, the Racine County Human Services Department contracts with Laidlaw-Jelco, Inc., a private school bus operator in the area. The company supplies the lift-equipped minibuses and drivers needed to provide the service under the terms of the contract. The company presently maintains up to 20 vehicles to provide the service under the transportation handicapped paratransit service project in both eastern and western Racine County. All drivers of the paratransit vehicles have been properly trained to operate wheelchair lifts and other special equipment on each vehicle. Laidlaw-Jelco, Inc., has also attempted to provide drivers with sensitivity training concerning the needs of disabled users. Supervision of the drivers for the service is the responsibility of the contract operator.

The service area for the City's paratransit service includes all Racine County east of IH 94 plus the University of Wisconsin-Parkside, in Kenosha County. No funds are provided by the City of Racine for the paratransit service provided in Racine County west of IH 94. The paratransit service area encompasses all the Racine urbanized area as currently defined by the U. S. Department of the Census and includes the entire service area of the City of Racine's federally subsidized general public transit system, the Belle Urban System.

The paratransit service provided within this area is available on a next-day reservation basis. That is, eligible users may make trip reservations any time during normal business hours on the day immediately preceding the desired service day and be assured of receiving service at any time on the desired day. Attempts are

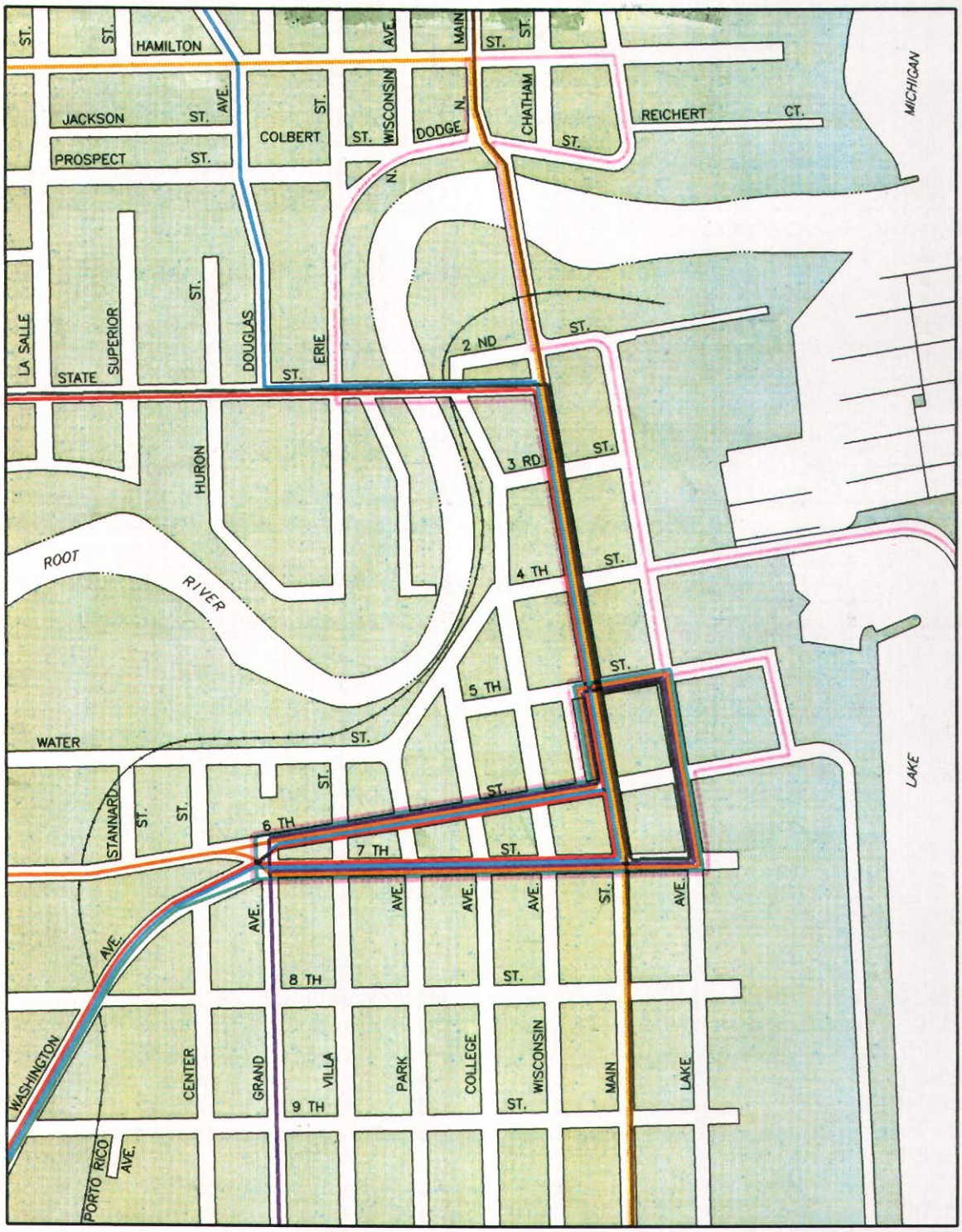
## Map 2

## FIXED-ROUTE PUBLIC TRANSIT SERVICE PROVIDED BY THE BELLE URBAN SYSTEM: 1992




*Source: City of Racine Department of Transportation and SEWRPC.*

**Inset to Map 2**




INSET GRAPHIC SCALE

0 400 800 FEET

Table 1

OPERATING AND SERVICE CHARACTERISTICS BY ROUTE FOR THE BELLE URBAN SYSTEM: 1992

| Labor Day to Memorial Day | | | | | |
|---|---|---|---|---|---|
| | | Service Availability | | | |
| | | Weekdays | | Saturdays | |
| Bus Route | Round-Trip Route Length (miles) | Start Time First Trip (a.m.) | Start Time Last Trip (p.m.) | Start Time First Trip (a.m.) | Start Time Last Trip (p.m.) |
| No. 1 | 14.35 | 5:30 | 6:30 | 7:00 | 5:30 |
| No. 2 | 18.30 | 5:32 | 6:35 | 7:02 | 5:32 |
| No. 3 | 20.95 | 5:30 | 6:35 | 7:00 | 5:30 |
| No. 4 | 17.85 | 5:33 | 6:36 | 7:03 | 5:33 |
| No. 5 | 16.10 | 5:29 | 6:29 | 6:59 | 5:29 |
| No. 6 | 17.55 | 5:24 | 6:24 | 6:54 | 5:24 |
| No. 7 | 22.05 | 5:31 | 6:31 | 7:01 | 5:31 |
| No. 8 | 12.95 | 5:29 | 6:29 | 6:59 | 5:29 |
| No. 9 | 17.00 | 7:15 | 6:25 | - - | - - |
| No. 10 | 14.10 | 5:45 | 5:30 | 9:30 | 4:15 |
| Total | 171.20 | - - | - - | - - | - - |

| | Service Frequency (minutes) | | | | Buses Required | | | |
|---|---|---|---|---|---|---|---|---|
| | Weekdays | | | Saturdays | Weekdays | | | Saturdays |
| Bus Route | A.M. Peak | Off-Peak | P.M. Peak | All Day | A.M. Peak | Off-Peak | P.M. Peak | All Day |
| No. 1 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 2 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 3 | 20 | 30 | 20 | 30 | 5 | 3 | 5 | 3 |
| No. 4 | 20 | 30 | 20 | 30 | 5 | 3 | 5 | 3 |
| No. 5 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 6 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 7 | 20 | 30 | 20 | 30 | 4 | 3 | 4 | 3 |
| No. 8 | 30 | 30 | 30 | 30 | 2 | 2 | 2 | 2 |
| No. 9 | 15 | 30 | 30 | - - | 2 | 2 | 2 | - - |
| No. 10 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | 1 |
| Total | - - | - - | - - | - - | 31 | 26 | 31 | 24 |

also made to schedule trip requests on the service day whenever capacity permits. The contract with the private company requires that the vehicles providing the service arrive within 20 minutes of the pick-up time requested by the user. This service is now available during the same period fixed-route service is provided, from 5:30 a.m. to 7:00 p.m., Mondays through Fridays, and from 7:00 a.m. to 6:00 p.m., Saturdays. No service is provided on Sundays or holidays.

Eligible users of the paratransit service include all disabled persons whose physical disability prevents them from using other modes of transportation, including public transit services or private automobiles. The criteria followed in determining eligibility for the specialized transportation services allows for nonambulatory disabled persons using wheelchairs, semi-ambulatory persons who may or may not need special mobility assistance devices or attendants to achieve mobility, and ambulatory disabled persons whose physical or mental impairment restricts their mobility for certain activities to become eligible for the paratransit service.

Fare Structure

The historic transit fares for the Belle Urban System since it began public operation in 1975 are shown in Figure 2. When the City assumed

**Table 1 (continued)**

| Memorial Day to Labor Day | | | | | |
|---|---|---|---|---|---|
| | | Service Availability | | | |
| | | Weekdays | | Saturdays | |
| Bus Route | Round Trip Route Length (miles) | Start Time First Trip (a.m.) | Start Time Last Trip (p.m.) | Start Time First Trip (a.m.) | Start Time Last Trip (p.m.) |
| No. 1 | 14.35 | 5:30 | 6.30 | 7:00 | 5:30 |
| No. 2 | 18.30 | 5:32 | 6:32 | 7:02 | 5:32 |
| No. 3 | 20.95 | 5:30 | 6:30 | 7:00 | 5:30 |
| No. 4 | 17.85 | 5:33 | 6:33 | 7:03 | 5:33 |
| No. 5 | 16.10 | 5:29 | 6:29 | 6:59 | 5:29 |
| No. 6 | 17.55 | 5:24 | 6:24 | 6:54 | 5:24 |
| No. 7 | 22.05 | 5:31 | 6:31 | 7:01 | 5:31 |
| No. 8 | 12.95 | 5:29 | 6:29 | 6:59 | 5:29 |
| No. 9 | 17.00 | 7:20 | 5:25 | - - | - - |
| No. 10 | 14.10 | 5:45 | 5:30 | 9:30 | 4:15 |
| Total | 171.20 | - - | - - | - - | - - |

| | Service Frequency (minutes) | | | | Buses Required | | | |
|---|---|---|---|---|---|---|---|---|
| | Weekdays | | | Saturdays | Weekdays | | | Saturdays |
| Bus Route | A.M. Peak | Off-Peak | P.M. Peak | All Day | A.M. Peak | Off-Peak | P.M. Peak | All Day |
| No. 1 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 2 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 3 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 4 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 5 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 6 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 7 | 30 | 30 | 30 | 30 | 3 | 3 | 3 | 3 |
| No. 8 | 30 | 30 | 30 | 30 | 2 | 2 | 2 | 2 |
| No. 9 | 60 | 60 | 60 | - - | 1 | 1 | 1 | - - |
| No. 10 | 45 | 45 | 45 | 45 | 1 | 1 | 1 | 1 |
| Total | - - | - - | - - | - - | 25 | 25 | 25 | 24 |

*Source: City of Racine Department of Transportation and SEWRPC.*

operation of the transit system in July 1975, the basic adult cash fare was $0.40 per trip plus $0.10 for a transfer. Children ages five through 18 and elderly or disabled persons were charged $0.20 per trip plus $0.05 for a transfer. With the implementation of new routes and schedules in May 1976, the City also implemented a new fare structure under which all fares were reduced. The City instituted modest fare increases in 1982 and again in 1991 to reach current fare levels.

The current one-way adult fare on the 10 local routes of the Belle Urban System is $0.60 per passenger trip. The "adult" category includes all persons five through 64 years of age. Children under five years of age ride free if accompanied by an adult. Fares for some eligible students are paid by the Racine Unified School District. Elderly and disabled persons are also offered special fares. Persons who use the bus system must pay the exact cash fare, because drivers are not allowed to make change; however, riders may purchase a monthly pass which is good for unlimited riding during all hours of system operation at $20 for adults and $13.50 for disabled persons. Free one-hour transfers are

Table 2

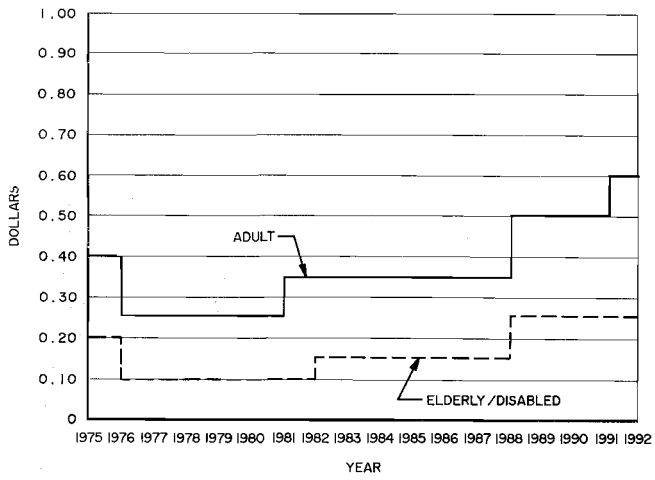
OPERATING AND SERVICE CHARACTERISTICS OF THE CITY OF RACINE'S COMPLEMENTARY PARATRANSIT SERVICE FOR DISABLED PERSONS: 1992

| Characteristics | Specialized Transportation Service Provided by the Racine County Human Services Department |
|---|---|
| Eligibility | Any disabled person whose physical or mental disability prevents him/her from using other modes of transportation, including public transportation or private automobile. Eligibility criteria include disabilities which would prohibit an individual from using a transit vehicle, or from traveling to or from a bus stop |
| Response Time | 1. Service generally provided on a next day reservation basis. Service also provided on a shorter notice whenever capacity permits<br><br>2. Reservation service for trip requests available Monday through Friday from 5:30 a.m. until 6:00 p.m. |
| Restrictions or Priorities Placed on Trips | None |
| Fares | $1.20 per one-way trip<br><br>Donated-fee-only basis to adult day care and approved nutritional sites |
| Hours and Days of Operation | Monday-Friday: 5:30 a.m. to 7:00 p.m.<br>Saturdays: 7:00 a.m. to 6:00 p.m.<br>Sundays and holidays: No service |
| Service Area | Service provided to all of eastern Racine County including the entire City of Racine and Racine transit system service area, which includes the University of Wisconsin-Parkside in Kenosha County |

*Source: City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

Figure 2

HISTORIC TREND OF TRANSIT FARES ON THE BELLE URBAN SYSTEM: 1975-1992




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

issued upon request at the time the fare is paid and may be used to transfer to a route different from the route originally boarded for continuation of travel in the same general direction.

As noted above, special programs are in effect for students and the elderly and the disabled. A limited number of students are eligible to ride buses of the Racine transit system free of charge on regular school days if they live within the City of Racine and within certain boundaries jointly agreed upon by the City of Racine and the Racine Unified School District, and if the school that they attend is farther than two miles from their home. Such students are issued a special bus pass for use only on regular school days. The School District is charged at a rate of $1.00 per pass per school day. Other students who attend schools different from those to which they would normally be assigned are provided with tokens by the School District at no charge. The School District is charged $0.50 per token.

**Table 3**

**BUS FLEET OF THE BELLE URBAN SYSTEM: 1992**

| Type of Bus | | Number of Buses | Seats per Bus | Year of Manufacture | Special Equipment | | | Original Age (years) |
|---|---|---|---|---|---|---|---|---|
| Make | Model | | | | Air Conditioning | Wheelchair Lift | Kneeling Feature | |
| GMC | 4523A | 25 | 41 | 1976 | Yes | No | No | 16 |
| GMC | T70-604 | 8 | 39 | 1982 | Yes | No | Yes | 10 |
| TMC | T70-606 | 9 | 39 | 1988 | Yes | No | Yes | 4 |
| Chance | Alamo City Streetcar | 2 | 24 | 1991 | No | No | No | 1 |
| Total | | 44 | -- | -- | -- | Average Age | | 12 |

*Source: City of Racine Department of Transportation and SEWRPC.*

A reduced-fare program is in effect for elderly and disabled patrons during all periods of transit system operation. Persons qualifying for this program are entitled to use the local bus services for a one-way fare of $0.25. To qualify for this program, a person must be at least 65 years of age and have a doctor's certification of disability or obtain a certification of disability from a local agency for disabled persons. A reduced-fare identification card with photograph is issued to persons qualifying for the program, to be shown to the bus driver upon request at the time the reduced fare is paid.

The fare for the trolley service is $1.00 for adults, and $0.50 for senior citizens and children under 12 years of age. A single fare qualifies the individual for unlimited rides for the entire trolley shift.

The fares currently charged for a one-way trip on the paratransit service vary with the type of trip. Users of the service and any companions who are not personal care attendants currently pay a base fare of $1.20 per one-way trip during all hours of operation. Personal care attendants who are necessary for the individual to complete the trip may accompany the eligible user free of charge. Service to adult day care centers and approved nutrition sites is provided in return for an unspecified donation.

Equipment and Facilities

The current active fleet of the Belle Urban System consists of 44 buses, as shown in Table 3. All are owned by the City, including 25 standard-design buses purchased new in 1976, eight advanced-design buses purchased new in 1982, nine advanced-design buses purchased new in 1988, and two trolleybuses purchased new in 1991.

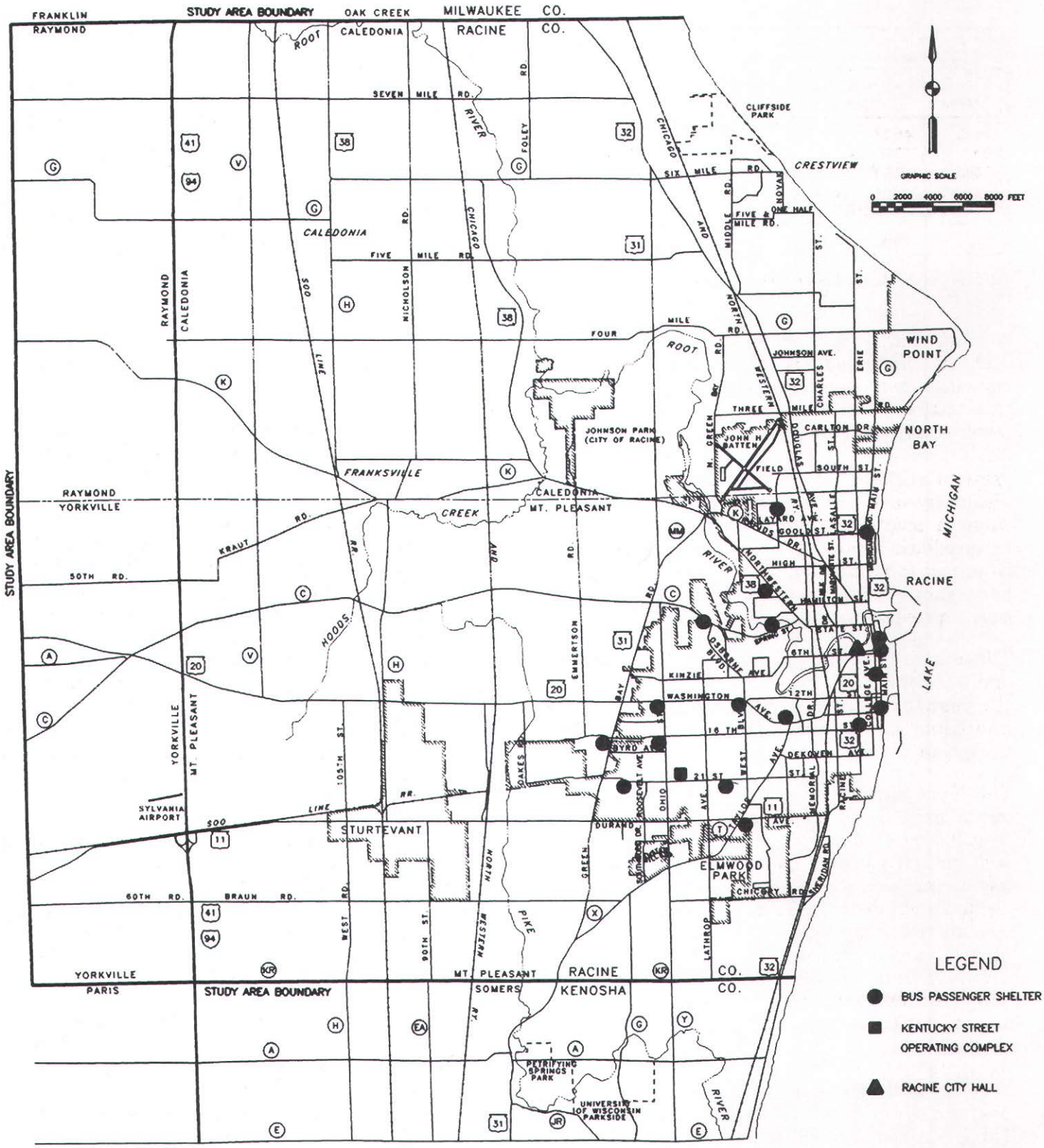
All buses in the regular fleet except the trolleybuses are equipped with air conditioning, special-assist grab rail at the front-entrance, and signs designating seats near the front entrance for use by elderly and/or disabled persons. The new advanced-design buses are also equipped with a special "kneeling" feature which reduces the height of the first step on the bus by lowering the front curbside corner of the bus. None of the buses are equipped with wheelchair lifts. However, in accordance with federal guidelines, the City will be adding wheelchair lifts to eight buses during 1993 as a part of a program to rehabilitate the 25 standard-design buses purchased in 1976 to extend their useful life by eight to 10 years.

A total of 20 bus passenger waiting shelters have been placed throughout the transit service area. Most of the shelters are of a modular design, the size of the shelter determined by the number of back and side wall panels used. All shelters include a bench for waiting transit patrons. The location of each existing bus passenger shelter is shown on Map 3.

Activities related to the management and operation of the Belle Urban System are conducted in two building complexes, owned by the City, in separate areas of the City of Racine. These facilities are: 1) the Kentucky Street storage, maintenance, and office complex and 2) the Racine City Hall. The locations of these facilities are also shown on Map 3.

Map 3

## LOCATION OF FIXED FACILITIES FOR THE BELLE URBAN SYSTEM: 1992




*Source: City of Racine Department of Transportation and SEWRPC.*

The Kentucky Street storage, maintenance, and office complex is located in the block bounded by Kentucky Street on the east, 20th Street on the south, Indiana Street on the west, and the former Chicago, Milwaukee, St. Paul & Pacific Railroad (Milwaukee Road) right-of-way on the north. It consists of two buildings used exclusively for transit program functions. One building is used exclusively for bus-related activities, including storage, cleaning, and servicing of vehicles, and was constructed by the City in 1977. The second building houses the bus maintenance and parts storage facilities, employee facilities (including locker and meeting rooms), and the general management offices of the public transit system, and was acquired by the City with the assets of the former private transit operator. Transit system services provided to the general public by the management offices located in this building complex include the sale of monthly bus passes, and the dissemination of transit system information through the distribution of route schedules and maps, and the operation of a telephone information service.

The Racine City Hall is located on the western edge of the Racine central business district, at 730 Washington Avenue. Transit program functions conducted here are carried out in the offices and public meeting rooms of the Mayor of the City of Racine, the members of the Racine Common Council, and the members of the Racine Transit and Parking Commission. Additional transit-related functions conducted in this building are carried out in the offices of the City of Racine Department of Transportation. Transit system services provided by the City Department of Transportation to the public consist of the sale of monthly bus passes and the distribution of transit system information, including route maps and schedules. Information related to the transit system can also be obtained from the staff of the City Department of Transportation. Another public service performed in this building is the issuing of photograph identification cards to qualified applicants who wish to participate in the transit system's half-fare program. The building also contains public meetings rooms used for transit-related meetings and public hearings.

Trends in Ridership and Service Levels

The historic trends in transit ridership and service levels for the Belle Urban System since it began public operation in 1975 are shown in Figures 3 through 5.

The City of Racine transit system experienced steadily increasing ridership each year for the years 1975 through 1981 and then declining transit ridership for the years 1982 through 1986, with the exception of 1984, when the transit system experienced a modest increase in transit ridership.

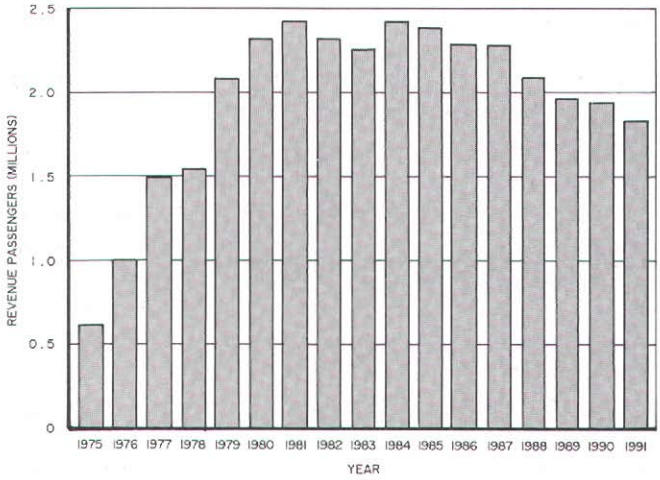
The transit ridership increases experienced during the years 1975 through 1981 occurred during a period of major transit service improvement and expansion following the beginning of public ownership and operation of the transit system in 1975. The City implemented in May 1976 an entirely new system of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

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

Recent trends in ridership and service levels on the transit system for the period 1987 through 1991 are shown in Table 4. A disaggregation of the total weekday and Saturday ridership on the routes of the transit system, based on passenger counts conducted by the transit system during the week of October 5 through 10, 1992, is presented in Table 5. As indicated in this table, weekday ridership is highest on Route No. 3, with about 1,600 passengers, and Route No. 4,

Figure 3

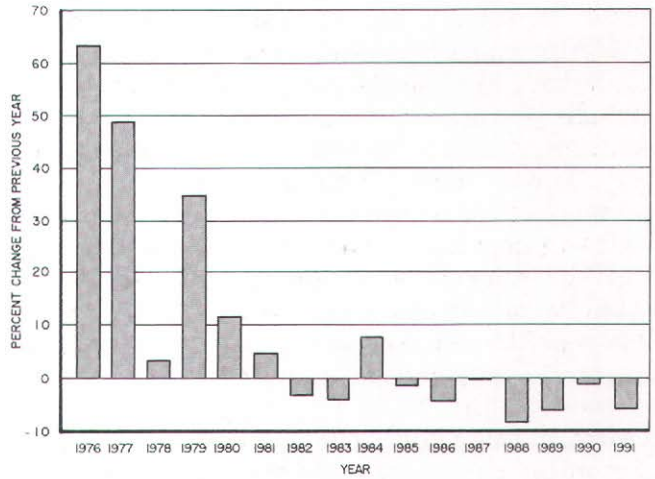
HISTORIC TREND OF TRANSIT RIDERSHIP ON FIXED-ROUTE TRANSIT SERVICE PROVIDED BY THE BELLE URBAN SYSTEM: 1975-1991




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

Figure 4

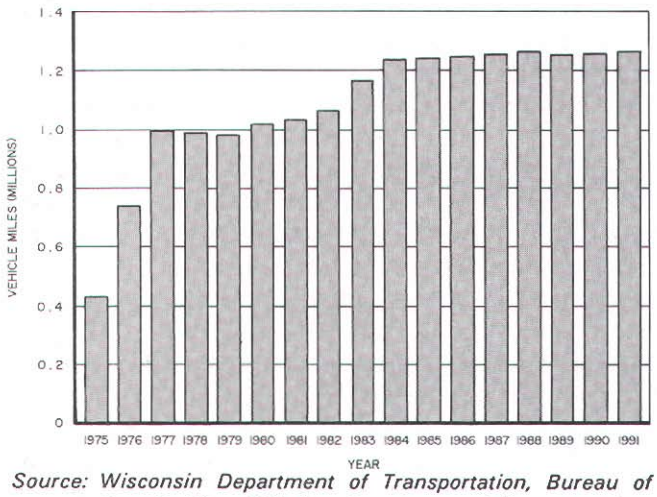
PERCENTAGE CHANGE IN ANNUAL RIDERSHIP ON FIXED-ROUTE TRANSIT SERVICE PROVIDED BY THE BELLE URBAN SYSTEM: 1976-1991




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

Figure 5

HISTORIC TRENDS IN REVENUE VEHICLE MILES ON THE BELLE URBAN SYSTEM: 1975-1991




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

with about 1,510 passengers, followed by Routes No. 7 and 1, with about 1,220 and about 940 passengers, respectively. On Saturdays, Route No. 4 carried about 1,290 passengers, Route No. 3 about 640 passengers, Route No. 7 about 800 passengers, and Route No. 1 about 490 passengers. Together, these four routes accounted for about 61 percent of the weekday ridership and about 68 percent of the Saturday ridership on the Belle Urban System during this period.

As previously noted, the City of Racine also participates in, and contributes funding for, the specialized transportation program for elderly and disabled individuals administered by the Racine County Human Services Department. The ridership on the specialized transportation program within its service area east of IH 94 in Racine County is presented in Table 6 for the most recent five-year period, 1987 through 1991. During 1991, the City estimated that about 19,000 one-way trips were made using the urban service offered under the program, subsidized with City funds, in the area east of IH 94.

### Trends in Operating Costs, Revenues, and Deficits

Experience indicates that at present it is not desirable or probably possible to recover the total cost of the public transit service from passenger revenues alone. To charge fares that would completely recover the cost of operating such a service would result in a diversion of choice riders to other modes of transportation, leaving the captive riders alone to bear the high cost of the service provided. If a reasonable level

Table 4

ANNUAL RIDERSHIP AND SERVICE LEVELS OF FIXED-ROUTE TRANSIT BUS SERVICE PROVIDED BY THE BELLE URBAN SYSTEM: 1987-1991

| Transit Service Characteristics | Year | | | | |
|---|---|---|---|---|---|
| | 1987 | 1988 | 1989 | 1990 | 1991 |
| Transit Service Area Population[a] | 81,600 | 81,500 | 81,600 | 84,300 | 84,700 |
| Transit Service Levels | | | | | |
| Annual Revenue Vehicle | | | | | |
| Miles Operated | 1,248,300 | 1,255,200 | 1,249,900 | 1,251,400 | 1,258,500 |
| Hours Operated | 104,400 | 105,100 | 104,600 | 104,400 | 104,400 |
| Transit Ridership and Service Utilization | | | | | |
| Annual Revenue Passengers | 2,280,300 | 2,089,000 | 1,962,700 | 1,941,000 | 1,827,800 |
| Revenue Passengers per Capita | 27.90 | 25.60 | 24.10 | 23.00 | 21.60 |
| Revenue Passengers per Revenue | | | | | |
| Vehicle Mile | 1.83 | 1.66 | 1.57 | 1.55 | 1.45 |
| Vehicle Hour | 21.80 | 19.90 | 18.80 | 18.59 | 17.51 |

[a] *Based upon the estimated resident population of the City of Racine.*

*Source: Wisconsin Department of Administration; Wisconsin Department of Transportation, Bureau of Transit; City of Racine Department of Transportation; and SEWRPC.*

Table 5

AVERAGE WEEKDAY AND SATURDAY RIDERSHIP ON THE BUS ROUTES OPERATED BY THE BELLE URBAN SYSTEM: OCTOBER 5 THROUGH 10, 1992

| | Weekday | | | | Saturday | | | |
|---|---|---|---|---|---|---|---|---|
| | Revenue Passengers | | Total Passengers | | Revenue Passengers | | Total Passengers | |
| Bus Route[a] | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total |
| No. 1 | 657 | 10.4 | 943 | 11.0 | 322 | 9.5 | 491 | 10.4 |
| No. 2 | 652 | 10.3 | 868 | 10.1 | 314 | 9.3 | 413 | 8.7 |
| No. 3 | 1,190 | 18.7 | 1,513 | 17.6 | 459 | 13.5 | 641 | 13.4 |
| No. 4 | 1,166 | 18.4 | 1,602 | 18.7 | 934 | 27.6 | 1,290 | 27.0 |
| No. 5 | 638 | 10.0 | 815 | 9.5 | 277 | 8.2 | 435 | 9.1 |
| No. 6 | 388 | 6.1 | 568 | 6.6 | 241 | 7.1 | 339 | 7.1 |
| No. 7 | 941 | 14.8 | 1,217 | 14.2 | 613 | 18.1 | 804 | 16.9 |
| No. 8 | 403 | 6.3 | 595 | 6.9 | 198 | 5.8 | 313 | 6.6 |
| No. 9 | 279 | 4.4 | 409 | 4.8 | 0 | 0.0 | 0 | 0.0 |
| No. 10 | 35 | 0.6 | 52 | 0.6 | 29 | 0.9 | 42 | 0.9 |
| Total | 6,349 | 100.0 | 8,582 | 100.0 | 3,387 | 100.0 | 4,768 | 100.0 |

[a] *The routes of the Belle Urban System are shown on Map 2.*

*Source: City of Racine Department of Transportation and SEWRPC.*

of transit service is to be provided at a reasonable cost to the user, such transportation must be publicly subsidized. The regular captive rider alone cannot sustain the cost of supplying the community with a public transportation system.

The financial condition of the Belle Urban System reflects the foregoing conclusion. The total operating expenses for the Racine transit system for calendar 1991 were approximately $3,623,000. The total operating revenue for the system for this period was about $956,000, or about 26 percent of the total system operating expenses, leaving an operating deficit of about $2,667,000. To cover this shortfall in operating revenues in 1991, the U. S. Department of Transportation, Urban Mass Transportation Administration, provided about $857,000, or about 24 percent of total operating expenses, and the Wisconsin Department of Transportation provided about $1,395,000, or about 38 percent. The remaining $415,000, or 12 percent, of operating expenses represented the total local share funded by the City of Racine, the Village of Sturtevant, the Towns of Caledonia and Mt. Pleasant, and the University of Wisconsin-Parkside.

The historic trend of the operating expenses, revenues, and deficits of the transit system since it began public operation in 1975 is shown in Figure 6 in actual year-of-expenditure dollars and in constant 1975 dollars. Operating expenses for the transit system rose dramatically in both actual and constant dollar terms between 1975 and 1980, the period of transit system improvement and expansion undertaken to spur increased transit ridership immediately after the City began operation of the transit system. Increases in diesel fuel costs and drivers' wages between 1977 and 1980 also contributed to escalating operating expenses. While the transit system did experience significant increases in transit ridership during the same period, attendant increases in operating revenues did not keep pace with increases in operating expenses. Consequently, the operating deficit for the transit system also increased substantially in both actual and constant dollars. Actual operating expenses and deficits have increased steadily since 1980. The operating expenses and operating deficits, in constant dollars, have fluctuated during this period.

**Table 6**

**ANNUAL RIDERSHIP ON THE SPECIALIZED TRANSPORTATION SERVICE PROVIDED BY THE RACINE COUNTY HUMAN SERVICES DEPARTMENT EAST OF IH 94: 1986-1991**

| Year | Number of One-Way Trips | |
|---|---|---|
| | Total Trips | Estimated Trips Subsidized by City of Racine[a] |
| 1987 | 26,100 | 22,900 |
| 1988 | 34,000 | 21,000 |
| 1989 | 37,300 | 18,900 |
| 1990 | 37,100 | 17,000 |
| 1991 | 32,900 | 19,000 |

[a] *Represents estimates of the number of trips made on the service which were subsidized with funds provided by the City of Racine. The estimates were prepared by the City by dividing the total ridership by the percent of service costs covered by City funds.*

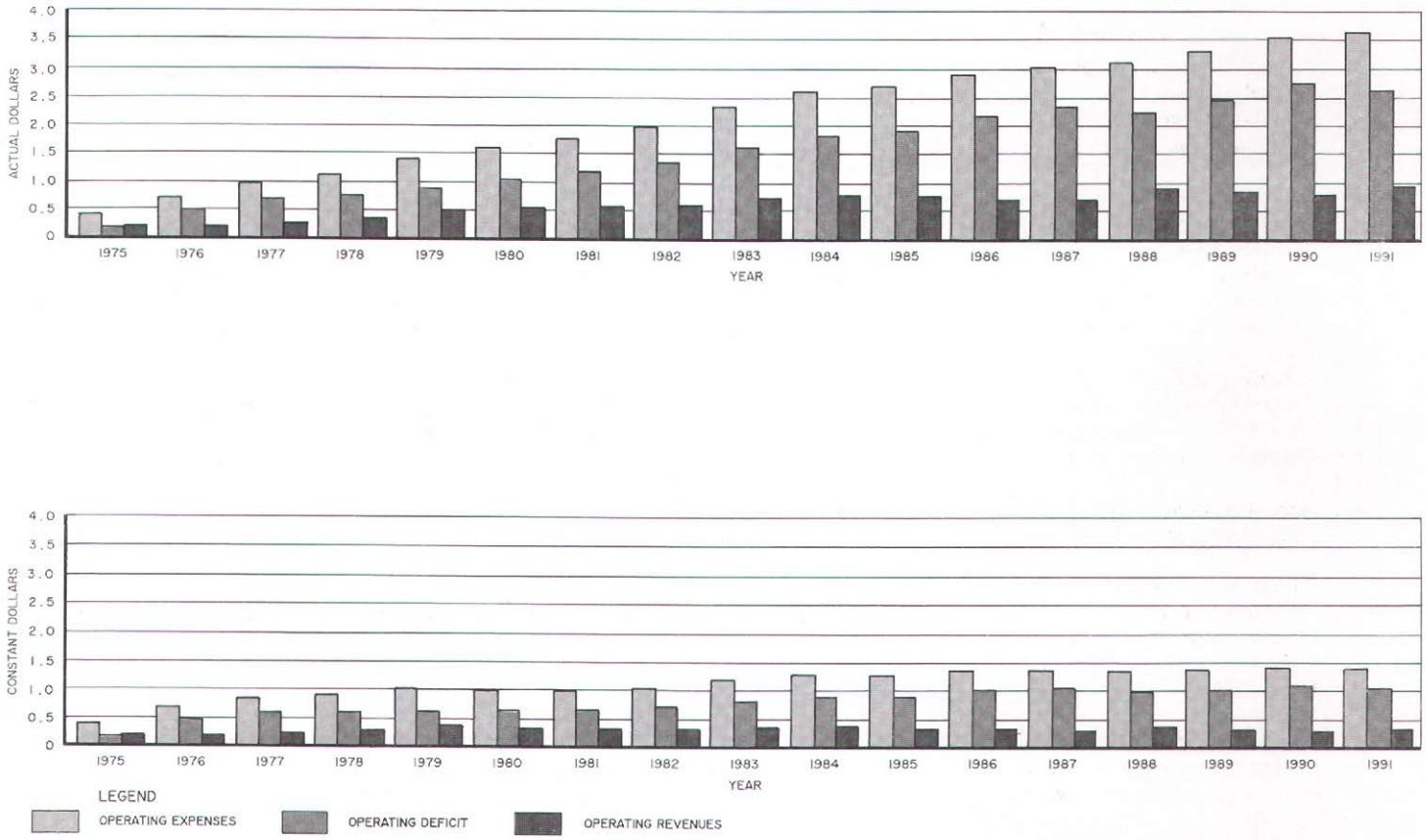
*Source: City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

A summary of the recent trends in operating expenses, revenues, and deficits of the transit system for the period 1987-1991 is shown in Table 7. The total actual operating expenses increased by about $579,000, or by about 19 percent, from $3,044,000 in 1987 to $3,623,000 in 1991. After accounting for the effects of general price inflation, however, operating expenses for the transit system during this period in constant 1975 dollars increased by less than 1 percent. As shown in Figure 7, the trend in the operating expense per vehicle mile for the transit system during this period is similar. While the actual operating expense per mile increased by $0.41 between 1987 and 1991, or by about 18 percent, the operating expense per mile in constant 1975 dollars stayed about the same.

Total actual operating revenues increased by about $253,000, or about 36 percent, from $703,000 in 1987 to approximately $956,000 in 1991. This increase in operating revenues reflects the increases in passenger fares implemented by the City of Racine in 1988 and 1991. Total operating revenues in constant 1975 dollars increased by about 15 percent over this period.

Figure 6

TOTAL ANNUAL OPERATING EXPENSES, REVENUES, AND DEFICITS FOR THE BELLE URBAN SYSTEM: 1975-1991




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

A comparison of costs and revenues indicates that the operating deficit has increased substantially since 1987 in terms of actual dollar expenditures. As shown in Table 7, the actual operating deficit for the system increased from about $2,342,000 in 1987 to about $2,667,000 in 1991, an increase of about $325,000, or 14 percent. In constant 1975 dollars, the operating deficit for the system over the period decreased by about 4 percent. However, because of ridership declines over the period, the operating deficit per passenger has followed a different trend. Overall, the actual operating deficit per revenue passenger has increased a total of $0.43, or about 42 percent, from $1.03 in 1987 to $1.46 in 1991. In constant 1975 dollars, the operating deficit per passenger has increased by about 20 percent from 1987 to 1991.

As with virtually all publicly operated transit systems in the United States, the City of Racine has depended heavily on federal transit operating assistance to help support the costs of operating its system. The City also benefits from the availability of financial operating assistance from the Wisconsin Department of Transportation. Together, funding from these two sources has served to greatly reduce the share of the transit system operating expenses which must be paid by the City of Racine. As shown in Figure 8, the portion of total operating expenses funded by local communities in 1987 varied significantly from that for 1991. In this respect, about 38 percent of transit system operating expenses in 1987 were paid using federal funds, about 38 percent were paid using state funds, about 22 percent were paid through operating

**Table 7**

**OPERATING EXPENSES, REVENUES, AND DEFICITS FOR THE BELLE URBAN SYSTEM: 1967-1991**

| Characteristics | Year | | | | |
|---|---|---|---|---|---|
| | 1987 | 1988 | 1989 | 1990 | 1991[a] |
| Transit Service Levels and Utilization | | | | | |
| Total Vehicles Hours | 114,300 | 114,600 | 114,700 | 114,400 | 114,400 |
| Total Vehicle Miles | 1,341,000 | 1,349,000 | 1,344,100 | 1,344,500 | 1,351,680 |
| Revenue Passengers | 2,280,300 | 2,089,000 | 1,962,700 | 1,941,000 | 1,827,800 |
| Service Costs and Revenue | | | | | |
| Operating Expenses | | | | | |
| Total Expenses | $3,044,200 | $3,116,200 | $3,301,700 | $3,515,500 | $3,622,700 |
| Cost per Vehicle Hour | $26.63 | $27.19 | $28.79 | $30.73 | $31.67 |
| Cost per Vehicle Mile | 2.27 | 2.31 | 2.46 | 2.61 | 2.68 |
| Expense per Passenger | 1.33 | 1.49 | 1.68 | 1.81 | 1.98 |
| Operating Revenue | | | | | |
| Total Revenue | $ 702,500 | $ 895,800 | $ 848,500 | $ 870,100 | $ 956,200 |
| Revenue per Passenger | $0.31 | $0.43 | $0.43 | $0.45 | $0.47 |
| Base Adult Cash Fare | 0.35 | 0.35 | 0.50 | 0.50 | 0.52 |
| Percent of Expenses Recovered through Revenues | 23.1 | 28.7 | 25.7 | 24.8 | 26.4 |
| Operating Deficit | | | | | |
| Total Deficit | $2,341,700 | $2,220,400 | $2,453,200 | $2,645,400 | $2,666,500 |
| Deficit per Passenger | $1.03 | $1.06 | $1.25 | $1.36 | $1.46 |
| Public Funding | | | | | |
| Sources of Required Public Funds | | | | | |
| Federal Operating Assistance | $1,121,600 | $1,149,600 | $ 967,700 | $ 868,700 | $ 857,100 |
| State Operating Assistance | 1,141,600 | 1,168,600 | 1,254,700 | 1,353,500 | 1,394,800 |
| Local Operating Assistance[b] | 78,500 | -97,800 | 230,800 | 423,200 | 414,700 |
| Percentage Change in Required Public Funds from Previous Year | | | | | |
| Federal Operating Assistance | -4.1 | 2.5 | -15.8 | -10.2 | -1.34 |
| State Operating Assistance | 4.0 | 2.4 | 7.4 | 8.9 | 2.05 |
| Local Operating Assistance | -202.8 | -231.1 | 336.0 | 83.4 | -2.0 |

[a] *Estimated.*

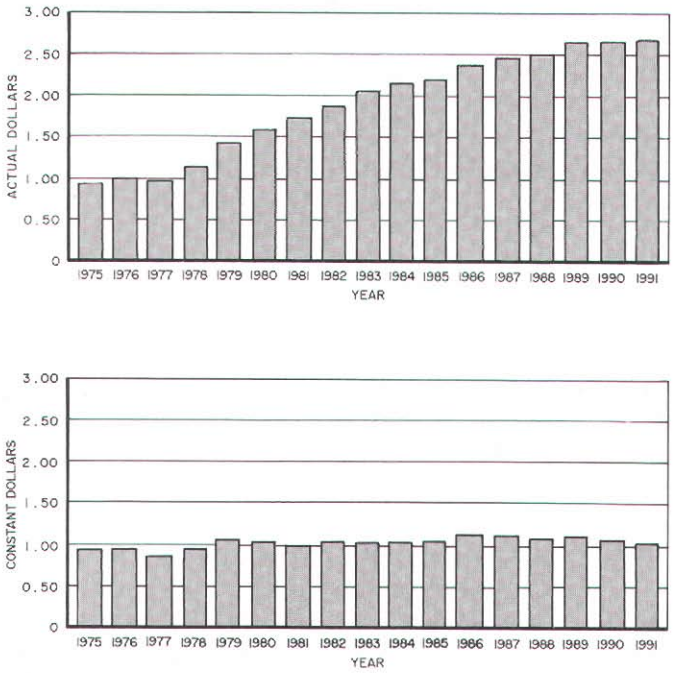
[b] *Includes public funds from the City of Racine and other public agencies contracting with the City for transit service, including the Village of Sturtevant, the Towns of Mt. Pleasant and Caledonia, and the University of Wisconsin-Parkside.*

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

revenues, and the remaining 3 percent came from local funds from the City of Racine, the Village of Sturtevant, the Towns of Mt. Pleasant and Caledonia, and the University of Wisconsin-Parkside. By 1991, however, federal funds covered only about 24 percent of system operating expenses, state funds about 38 percent of operating expenses, and operating revenues about 26 percent of operating expenses. Local funds were necessary to cover about 12 percent of total system operating expenses. The relative shares of the operating expenses contributed by the City of Racine and other local units of government, the State of Wisconsin, and the U. S. Department of Transportation have varied, depending upon the method of allocating transit operating assistance funds, as well as upon the availability of state and federal funds.

Figure 7

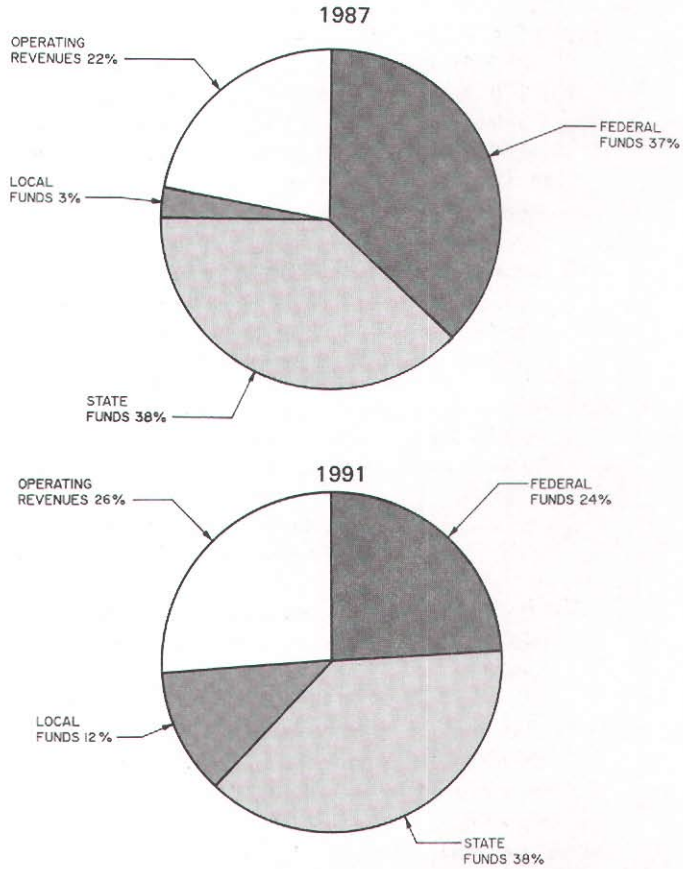
OPERATING EXPENSE PER TOTAL VEHICLE MILE FOR THE BELLE URBAN SYSTEM: 1975-1991




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

Figure 8

PERCENTILE DISTRIBUTION OF TOTAL OPERATING EXPENSES FOR THE BELLE URBAN SYSTEM BY FUNDING SOURCE: 1987 AND 1991




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

## Implementation Status of Previous Plan Recommendations

As previously noted, the Regional Planning Commission, in cooperation with the City of Racine, in May 1984 completed a transit system development plan for the Racine Urbanized Area.[1] This transit system development plan was intended to serve as a guide to actions by the City regarding the provision of public transit service for the Racine area over the period 1984 through 1988. As such, the study addressed not only the continued need for public transit service in the area, but also needed operating and capital improvements required to maintain and improve transit service in the area over the period. The specific plan recommendations and their implementation status as of 1992 are summarized in Table 8.

As noted within this table, the vast majority of the routing and service changes recommended under the previous transit system development plan have been implemented, although some with slight modifications. The only major recommended routing change which has not been implemented to date is the restructuring of Route No. 10 to eliminate unproductive route segments. Additional local costs to the Town of Caledonia, which contracts for the route from the City of Racine and subsidizes the route operating costs, have been cited as the major reason why this routing change has not been implemented. Other recommended changes to Route Nos. 2, 3, 6, and 8 were modified following comments received from the public during a public hearing held on June 11, 1986, by the City on the plan recommendations.

[1] *See SEWRPC Community Assistance Planning Report No. 79, Racine Area Transit System Plan and Program: 1984-1988, May 1984.*

Table 8

IMPLEMENTATION STATUS OF RECOMMENDATIONS OF PREVIOUS TRANSIT SYSTEM DEVELOPMENT PLAN

| Recommendations under Previous Transit System Development Plan[a] | Implementation Status of Plan Recommendation |
|---|---|
| Routing and Service Changes | |
| 1. Eliminate Route No. 11; extend Route No. 7 into the Village of Sturtevant to replace Route No. 11 | Implemented April 1985 |
| 2. Eliminate Route No. 12; restructure Route No. 3 and extend Route No. 6 into the Town of Mt. Pleasant to replace Route No. 12 | Implemented September 1986 |
| 3. Modify Routes No. 2, 4, and 8 to maintain service to areas served by Routes No. 3 and 6 | Implemented September 1986 |
| 4. Restructure Route No. 10 to eliminate unproductive segments in the Town of Caledonia; extend Route No. 1 into the Town of Caledonia to replace some service provided by Route No. 10 | Not implemented |
| Capital Improvements | |
| 1. Acquire four new buses in 1986 to replace four leased buses and expand total bus fleet from 38 to 42 buses | Implemented 1988 |
| 2. Acquire five new buses in 1986 to enable City to initiate major rehabilitation for 24 buses acquired in 1976 | Implemented 1988 |
| 3. Rehabilitate five buses in 1986, five buses in 1987, and five buses in 1988 from bus fleet acquired in 1976 | Under way. Rehabilitation of first eight buses to be undertaken in 1993; rehabilitation or replacement of remaining 1976 model buses programmed for 1993 through 1995 |
| 4. Purchase and installation of 15 bus passenger shelters at various location in service area | Not implemented |
| 5. Purchase of a new car for transit system route supervisor | Implemented 1987 |
| 6. Expansion of bus garage to allow for eight additional bus storage berths | Under way. Federal funds for project approved in 1989; work underway |

[a]*See SEWRPC Community Assistance Planning Report No. 79, Racine Area Transit System Plan and Program: 1984-1988.*

*Source: City of Racine Department of Transportation and SEWRPC.*

With respect to the recommended capital improvements, the City has also made significant progress in implementing the specific plan recommendations, albeit over a longer timetable than that envisioned in the previous transit system development plan. In this respect, the bus fleet for the Belle Urban System was expanded from 38 to 42 vehicles with the purchase of nine new advanced-design buses in 1988. The City is currently determining whether to proceed with the recommended rehabilitation of the 25 new-look buses acquired in 1976, or to purchase new vehicles as replacements for these buses. The City is also in the process of expanding the existing bus garage to accommodate eight additional bus berths. The only capital project which has seen no implementation activity is the purchase and installation of additional bus passenger shelters for the transit system.

From the information presented above, it is apparent that the City of Racine has implemented the vast majority of the recommendations in the previous transit system development plan, completed in 1984.

## OTHER PUBLIC TRANSIT SERVICES

The City of Racine is the principal provider of public transit service within the greater Racine area. However, a number of other public transit services are also available to area residents, including local and intercity bus service, railway

passenger train service, taxicab service, and specialized transportation services for the elderly and disabled population.

Additional Local and Intercity Bus Services

Additional local fixed-route bus service which connects with the Belle Urban System outside the study area is provided by the City of Kenosha, which operates one route between the Kenosha central business district and the University of Wisconsin-Parkside. The Kenosha bus route serving the University is one of seven local bus routes operated by the City of Kenosha's transit system to serve the greater Kenosha area. Transit patrons who desire to travel between points served by the Racine and Kenosha transit systems can do so by transferring between the Racine and Kenosha bus routes at the Parkside campus. Passengers transferring between the two transit systems are required to pay the appropriate fare for the bus service to which they are transferring. The local bus route operated by the City of Kenosha is shown on Map 4.

Map 4 also identifies the location of commuter and intercity bus routes operated through the study area by two private transit operators: Wisconsin Coach Lines, Inc., and Greyhound Lines, Inc. These operators provide commuter bus service between downtown Milwaukee and the Cities of Racine and Kenosha, with several intermediate stops within the study area. Wisconsin Coach Lines operates a total of eight bus runs in each direction each weekday, with four bus runs in each direction on Saturdays, Sundays, and holidays. Prior to 1985 the route was operated without public subsidy, since the passenger and freight revenues were sufficient to offset the operating costs. Since 1985 the City of Racine, the City of Kenosha, Racine County, and Kenosha County have together agreed to help provide Wisconsin Coach Lines, Inc., with the financial assistance necessary to operate the bus service. The City of Racine has assumed responsibility as the lead agency for the commuter bus project by acting as the applicant/grantee for the State of Wisconsin urban transit assistance funds needed to subsidize the operation of the service.

Greyhound Lines, Inc., operates two local runs southbound and one local run northbound daily between Milwaukee and Chicago over STH 32 within the study area, making an intermediate stop in the City of Racine. The company also operates 22 daily runs both southbound and northbound between Milwaukee and Chicago over IH 94. Seven of these southbound runs and 10 of these northbound runs stop for Racine passengers within the study area at IH 94 and STH 20. Certain runs operating over IH 94 also stop at General Mitchell International Airport in Milwaukee County and O'Hare International Airport in Chicago. Greyhound Lines, Inc., currently does not receive public financial assistance for the bus services they provide through the study area.

Railway Passenger Service

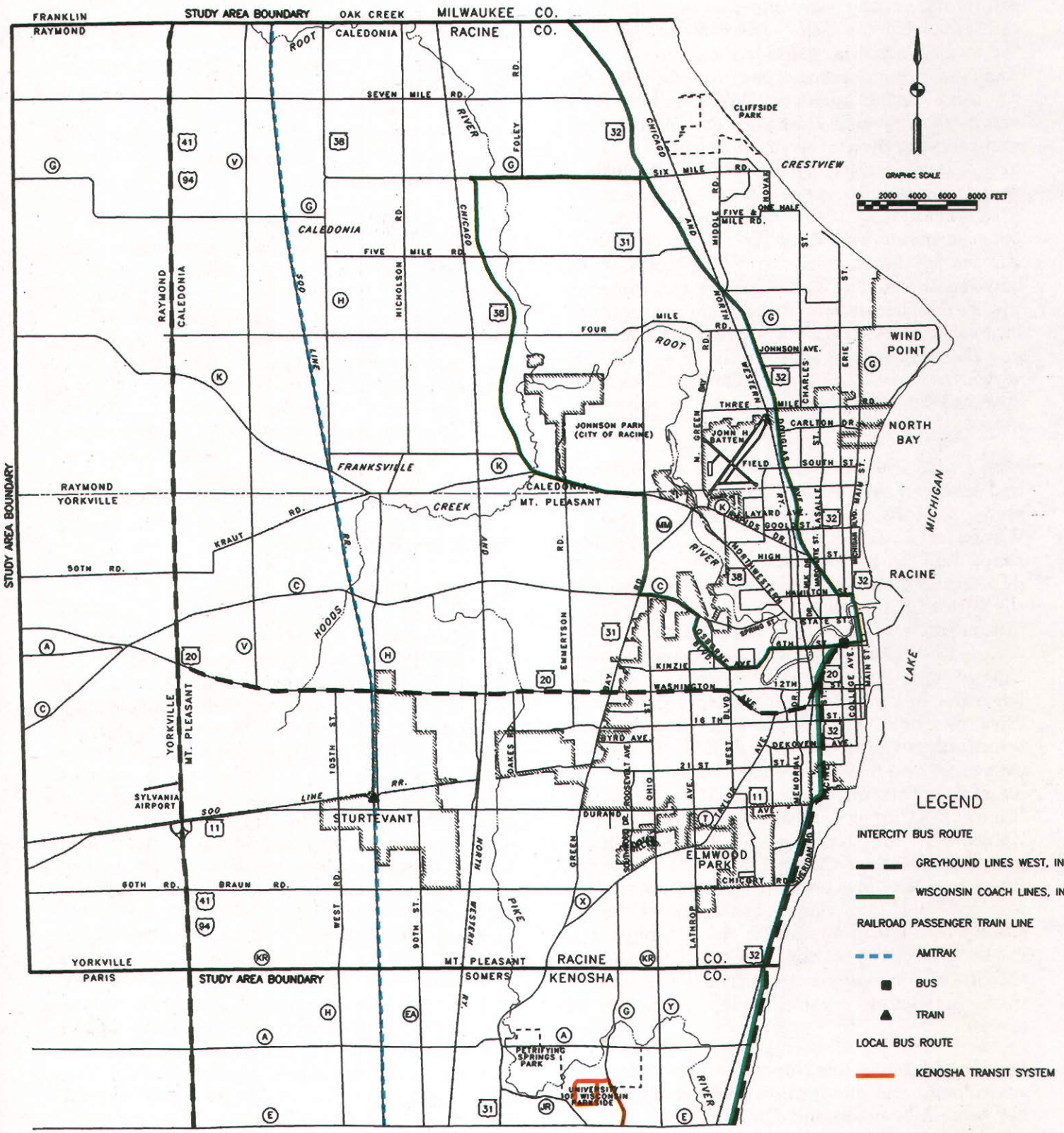
Publicly subsidized railway passenger train service is provided by the National Railway Passenger Corporation, commonly called Amtrak, which operates eight passenger trains daily in each direction Mondays through Saturdays and seven passenger trains daily in each direction Sundays between Milwaukee and Chicago over Soo Line Railroad Company trackage through the center of the study area. All these trains, except one in each direction, stop in the Village of Sturtevant in Racine County. In June 1983 transit service was extended by the Belle Urban System to the Sturtevant Amtrak station.

School Bus Service

The Racine Unified School District provides transportation to and from public, private, and parochial schools for all pupils who reside in the School District two or more miles from the nearest public, private, or parochial school they are entitled to attend. In addition, the School Board provides transportation for students living less than two miles from the nearest public school they are entitled to attend who would otherwise face hazardous walking conditions on their journey to and from school. The School District currently contracts for yellow school bus service from a private bus company, School Services and Leasing, Inc., for about 14,400 students residing within the District. In addition, some students eligible for transportation within the School District and residing within the service area of the Belle Urban System are provided with special student passes or tokens, at no cost to the student, that can be used to obtain a bus ride to and from school. The School District reimburses the Belle Urban System for each trip made with a student pass. About 80 students within the School District

## Map 4

## ADDITIONAL BUS AND RAILWAY PASSENGER SERVICE IN THE RACINE TRANSIT DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

were eligible for student passes issued by the School District during the 1991-1992 school year.

Taxicab Service

Taxicab service was provided in the Racine transit system development plan study area during 1992 by one private taxicab company, Ace & Aero Taxicab Company of Racine. This company recently began operation, taking the place of Lighthouse Transportation, which had previously provided taxicab service in the Racine transit system development plan study area. In addition to providing taxicab service to the entire study area, Ace & Aero Taxicab Company also provides service to General Mitchell International Airport in Milwaukee County. This service is operated on an exclusive-ride basis, with shared-ride service provided only with the permission of the first patron. Fares for the service depend upon the distance traveled, with a base fare of $2.50 plus $1.75 per each additional mile. Currently, Ace & Aero Taxicab Company service is available seven days per week, from 6:00 a.m. to 12:00 a.m.

Specialized Transportation Services

In addition to the above transportation services available to the general public and area students, specialized transportation services are also provided to the elderly and disabled population within the study area. In general, the services do not use fixed routes or regular schedules but, instead, provide service on demand so long as trips to be made: are by eligible clientele, are requested in advance, are to be made within the hours of operation of the particular service, and have origins and destinations within the area served by each service. Table 9 describes the service characteristics, including the sponsor, service provider, service area, service hours, response time, eligible users, fares, type of vehicle used, and monthly ridership, for each of the major specialized transportation services available to elderly and/or disabled study area residents.

The Racine County Human Services Department administers two major programs providing for specialized transportation services for elderly and disabled persons residing within the study area. The first program provides door-to-door transportation services to transportation-handicapped persons in Racine County and, as previously noted, is used by the City to provide its federally required paratransit service complementary to its fixed-route bus service. Under this program, Racine County contracts for the actual provision of transportation services from a private bus company, Laidlaw-Jelco, Inc. Contracts for bus service from this company are for a specified number of vehicle hours per week rather than for a certain number of vehicles. The bus company must have accessible vehicles at all times.

The second major program administered by the Racine County Human Services Department is a countywide specialized transportation program for developmentally disabled individuals. Under this program, the Human Services Department contracts with private bus companies for the provision of regular transportation service for the clients of agencies providing training, sheltered employment, or other services to developmentally disabled persons within Racine County. The Human Services Department contracted with the Laidlaw-Jelco, Inc., during 1992 to provide fixed-route transportation services to clients participating in the programs offered by two agencies within the study area, Careers Industries of Racine, Inc. and the Racine County Opportunity Center. About 5,000 one-way trips per month are currently provided with this special transportation service countywide. The fare charged for this service is $0.50 per one-way trip.

The Lakeshore Counties Chapter of the American Red Cross provides specialized transportation in the areas of Racine and Kenosha Counties, including the Cities of Racine and Kenosha. The Chapter provides service to Racine and Kenosha County residents primarily for medical-purpose trips to destinations inside and outside the County, using volunteer drivers and vehicles owned by the Society. The door-to-door specialized transportation service offered by the American Red Cross is available at no charge to the user upon advance reservation between 9:00 a.m. and 3:00 p.m. on weekdays. Service during other times is provided as needed and if a driver is available. The Lakeshore Counties Chapter has four vans available for this service. It is estimated that an average of about 270 trips per month are made using this service.

The Racine County Ridgewood Care Center and Lincoln Lutheran of Racine provide specialized transportation services for their respective

## Table 9

## SUMMARY OF MAJOR SPECIALIZED TRANSPORTATION SERVICES FOR ELDERLY AND DISABLED PERSONS PROVIDED WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Name of Service Provider | Type of Provider | Type of Service | Eligible Users | Days and Hours of Operation | Service Area | Fare per Trip | Vehicles Used | Ridership (one-way trips per month) |
|---|---|---|---|---|---|---|---|---|
| Racine County Human Services Department Transportation Handicapped | Public[a] | Advance reservation, door-to-door | Persons certified as transportation handicapped | Monday-Friday 5:30 a.m. to 7:00 p.m. Saturday 7:00 a.m. to 6:00 p.m. | Racine County and University of Wisconsin-Parkside, in Kenosha County | $1.20 per one-way trip for regular trips and donated fee basis for service to and from adult day care and nutrition sites | Mini-buses and regular-size buses | 3,850[b] |
| Developmentally Disabled | Public[a] | Fixed-route, door-to-door | Developmentally disabled clients of Racine County Opportunity Center and Careers for Retarded Adults | Weekdays 7:00 a.m. to 5:30 p.m. | Racine County | $0.50 | Mini-buses and school buses | 5,000[b] |
| American Red Cross | Private, nonprofit | Advance reservation, door-to-door | Ambulatory persons unable to arrange or afford other transportation | Weekdays 9:00 a.m. to 3:00 p.m. | Racine and Kenosha Counties | Free | Vans | 270 |
| Racine County Ridgewood Care Center | Public | Door-to-door | Residents | As required | Racine County | No charge | Van and bus | 150 |
| Lincoln Lutheran Specialized Transportation | Private, nonprofit | Door-to-door scheduled service for residents | Residents | As required | Eastern Racine County | No charge | Wheelchair accessible and non-accessible vans and buses | 350 |
| J. M. Mathews Transportation, Inc. | Private, for-profit | Advance reservation, door-to-door | General public | Weekdays, 24 hours a day | Southeastern Wisconsin | $13.00 plus mileage charges | Vans | 150 |
| Kimberly Transport, Inc. | Private, for-profit | Advance reservation, door-to-door | General public | Seven days a week, 24 hours a day | Racine County and surrounding counties | Base far plus mileage charges | Vans | 1,500 |
| LP&P Nichols, Ltd. | Private, for-profit | Door-to-door | General public | As required | Southeastern Wisconsin | Distance related | Wheelchair accessible vans and ambulances | N/A[c] |
| Med-Tech Ambulance, Inc. | Private, for-profit | Door-to-door | General public | As required | Racine County and surrounding area | Distance related | Wheelchair accessible vans | 600 |

[a] *Service provided by Laidlaw-Jelco, Inc.*

[b] *Countywide.*

[c] *Data not available or would not be disclosed.*

*Source: SEWRPC.*

residents. For such services, the Ridgewood Care Center, a county-operated facility, operates one van and one bus; Lincoln Lutheran of Racine, a private nonprofit agency, operates both wheelchair-accessible and nonaccessible vans and buses. No special fares are charged, with service areas and hours dictated by the needs of the residents. It is estimated that the Ridgewood Care Center provides an average of 150 trips and Lincoln Lutheran an average of 350 trips per month to their respective residents.

Private specialized transportation providers also operate in the Racine area. The four major providers include J. M. Mathews Transportation, Inc., Kimberly Transport, Inc., Med-Tech Ambulance, Inc., and LP&P Nichols, Inc. These operators provide transit services primarily for elderly and disabled individuals on a nonemergency basis. Most trips tend to be medical- or health-related, such as trips to and from hospitals, nursing homes, and physicians. Service is door to door and there are no strict service area boundaries. While service is available on any day needed, advance reservations are normally required. J.M. Mathews Transportation Inc., based in Racine, operates three wheelchair-equipped vans. Kimberly Transport, Inc., operates out of Kenosha and provides between five and eight vans for service to Racine County. Med-Tech Ambulance, Inc. is based in Racine and typically operates five wheelchair-equipped vans. LP&P Nichols, based in Milwaukee, typically assigns one or two vehicles for service in the Racine area.

## SUMMARY

Currently, the major supplier of local public transit service in the Racine area is the City of Racine, which has operated the Belle Urban System since July 1975. The City owns the facilities and equipment for its fixed-route transit system and operates it with municipal employees under the direction of its Department of Transportation. The policy-making body of the transit system is the Racine Transit and Parking Commission. However, the Racine Common Council has the ultimate responsibility for review and approval of certain important matters, including the annual program budget.

During 1992, the fixed-route transit system consisted of 10 regular bus routes. Nine are radial in design, and eight of the 10 regular bus routes provide direct, no-transfer bus service to the Racine central business district. Headways on the regular routes are 20 to 45 minutes during weekday peak periods and 30 to 45 minutes during weekday middays and all day Saturday. Four of the regular bus routes primarily serve the City of Racine, while six others extend into the Town of Mt. Pleasant, the Village of Sturtevant, the Town of Caledonia, and the Town of Somers to serve the University of Wisconsin-Parkside. In addition to the 10 regular bus routes, the transit system also operates a shuttle route serving the central business district and marina area, using trolleybuses.

In addition to fixed-route transit service, the transit system also provides a specialized transportation service, operating during the same hours as the fixed-route service, which is designed to serve any disabled person who is unable to use the City's regular bus service because of the nature of his or her physical disability. The City of Racine provides funds for the service, which is administered by the Racine County Human Services Department.

The City of Racine transit system experienced steadily increasing transit ridership each year from 1976 through 1981. These increases may be attributed to new and expanded transit services, new operating equipment, stable passenger fares, and substantial increases in gasoline prices which occurred during this period. The transit system generally experienced steadily declining transit ridership between 1982 and 1983. These declines may be attributed to increases in passenger fares and a severe economic recession which resulted in high unemployment levels within the Racine area. Since 1984 ridership on the transit system has continued to decline, so that during 1991 the transit system carried about 1,828,000 revenue passengers, about 590,800 less than the 2,418,500 revenue passengers carried in 1981, the year in which system utilization peaked. Currently, Routes No. 1, 3, 4, and 7 are the most heavily used of the 10 regular routes in the transit system. The transit system operated about 1,352,400 revenue vehicle miles of service during 1991.

Over the past five years, the total annual operating expenses for the transit system have increased by about 19 percent, from about 3,044,000 in 1987 to about 3,623,000 in 1991. Operating revenues have increased by about 36 percent, from $703,000 in 1987 to approxi-

mately $956,000 in 1991. The operating deficit has increased substantially since 1987, from about $2,342,000 in 1987 to about $2,667,000 in 1991, an increase of about 14 percent. Although the local bus system is not financially self-sufficient, the Racine Transit and Parking Commission has managed to minimize the public funding requirement for the City of Racine by using available federal and state transit assistance funds. During 1991, about 26 percent of the transit system operating expenses were obtained from operating revenues, about 24 percent were obtained from the federal transit operating assistance program, about 38 percent were obtained from the state transit assistance program, and the remaining 12 percent were obtained from local units of government served by the transit system, including the City of Racine, the Village of Sturtevant, the Towns of Caledonia and Mt. Pleasant, and the University of Wisconsin-Parkside. The availability of federal, state, and local funds from other public agencies has enabled the City to implement substantially the recommendations of the previous transit system development plan, completed in 1984.

In addition to the public transit services provided by the City of Racine, there are also other transit services provided within the study area or connecting with the Belle Urban System outside the study area. Local bus service connecting with the Belle Urban System outside the study area is provided by the City of Kenosha, which extends one route of its transit system to serve the University of Wisconsin-Parkside, where transfers can be made to Route No. 9 of the Belle Urban System. Intercity bus service is provided through the study area by two private carriers, Wisconsin Coach Lines, Inc., and Greyhound Lines, Inc., which operate routes connecting Racine with Milwaukee, Kenosha, and Chicago. Through railway passenger service between Milwaukee and Chicago is also provided by the National Railway Passenger Corporation, Amtrak, with a stop in the Village of Sturtevant. The Racine Unified School District provides special school transportation for regular education within the study area to pupils who either reside within the School District two miles or more from the school they are entitled to attend or who would otherwise face hazardous walking conditions on their journey to and from school. Also, several specialized transportation services intended to serve the needs of elderly and/or disabled individuals are provided within the study area, the principal sponsor of which is the Racine County Human Services Department, which contracts with Laidlaw-Jelco, Inc., to provide the specialized transportation services.

## Chapter III

## LAND USE AND TRAVEL PATTERNS

### INTRODUCTION

In order to evaluate the transit services currently provided by the Belle Urban System, the City of Racine transit system, properly and to consider the need for transit service improvements, it is necessary to consider those factors which affect, or are affected by, the provision of transit service. Those factors include the land use pattern and the size and distribution of both the resident population and the employment in the study area. Those factors also include the travel habits and patterns of the population of the study area, including, particularly, the existing transit system riders. This chapter presents the results of an inventory of those important determinants of the need for transit service in the Racine area.

### LAND USE

#### Historic Urban Growth

The pattern of urban growth in the greater Racine area from 1850 through 1990 is depicted on Map 5. Over this period, urban development within the study area occurred in relatively tight, concentric rings outward from the central portion of the City. After 1950 urban development became discontinuous and diffuse, occurring in scattered enclaves throughout much of the remaining rural areas of the Towns of Mt. Pleasant, Caledonia, Raymond, and Yorkville. Urban land uses within the study area increased from a total of about 18,000 acres in 1963 to about 25,000 acres in 1990, or by about 39 percent. During this same period, the resident population of the study area increased from about 121,000 persons in 1963 to about 134,000 persons in 1990, or by only about 11 percent. This urbanization has been marked by lower overall population densities and a diffusion of both commercial and residential development.

An important conclusion with respect to the potential for transit service within the study area can be drawn from Map 5, which portrays the extent of urban development within the study area. As indicated on the map, the only sizeable areas that are currently fully developed for urban use and may, therefore, support efficient local transit service are in the City of Racine, the Village of Sturtevant, and the portions of the Towns of Mt. Pleasant and Caledonia immediately adjacent to the City and the Village.

#### Land Use

Table 10 provides data on the amount of land devoted to the various uses in the study area in 1990; Map 6 shows the geographic distribution of those land uses within the study area. As indicated in the table, single- and two-family residential development were the predominant types of land use within the developed urban portion of the study area in 1990. It is important to note that much of the land within the study area is still in open, rural uses.

The overall pattern of the intensity, or density, of urban land use in the study area in 1990 is shown on Map 7, which reflects the density of residential and other urban land uses, including commercial and industrial land uses, in the study area. Substantial areas of high- and medium-density land uses currently exist primarily in the City of Racine and in the Village of Sturtevant. Such densities are necessary to support the efficient and effective provision of traditional forms of local transit service.

### POPULATION

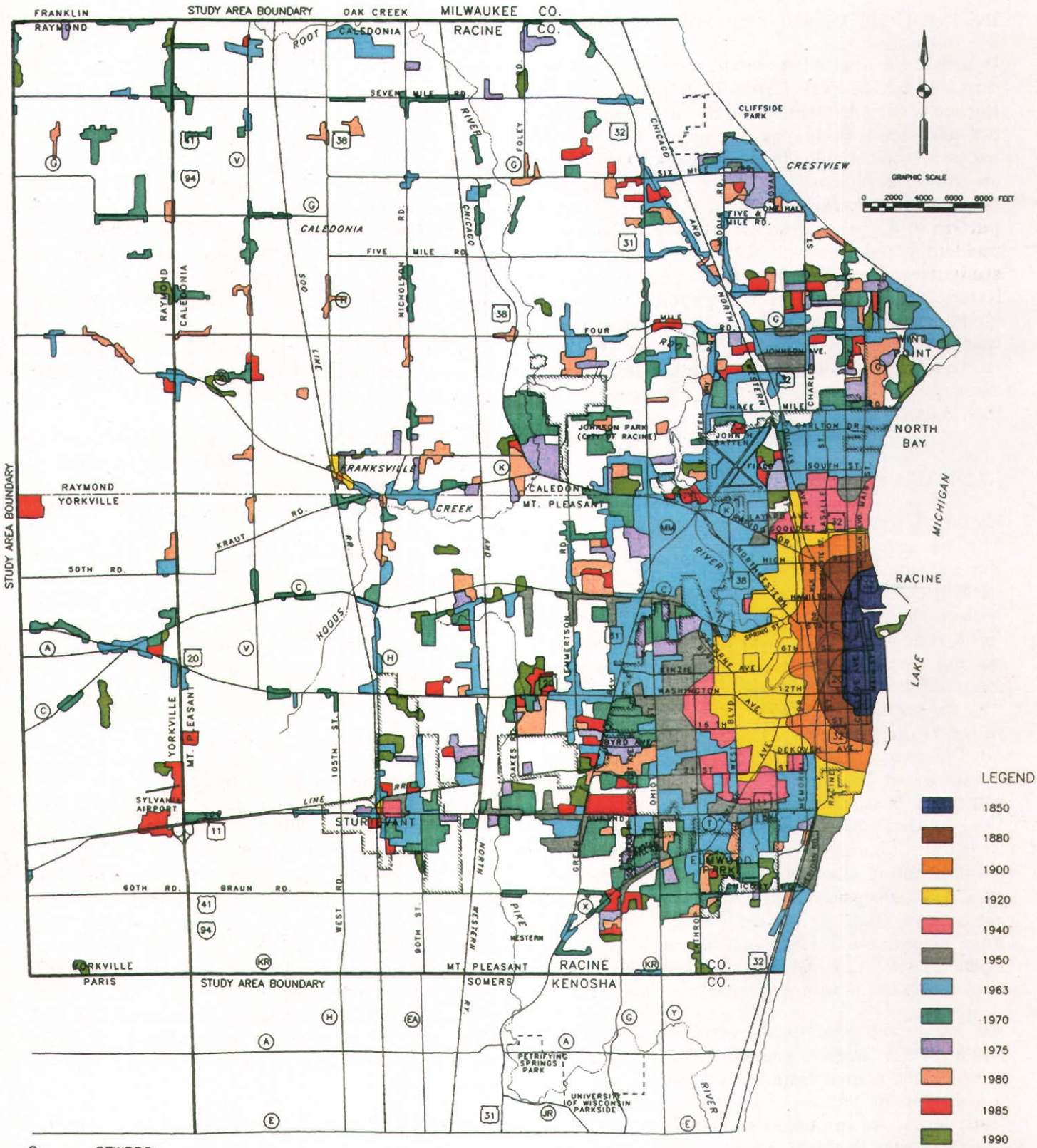
#### General Population Characteristics

The resident population of the study area in 1985 was estimated at 130,800 persons, of which about 81,500, or 62 percent, resided within the City of Racine. As shown in Table 11, the populations of the City of Racine and of the study area declined between 1970 and 1985. The results of the 1990 Federal Census of Population indicate that the resident population of the City and study area began to increase again after 1985. By 1990, the resident populations of the City and study area were estimated to have increased to 84,300 persons and 133,800 persons, respectively.

Table 12 indicates the historic change in the number of households in the study area over the period from 1960 to 1990. Between 1960 and

## Map 5

## HISTORIC URBAN GROWTH IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1850-1990




*Source: SEWRPC.*

Table 10

LAND USE IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990

| Land Use Category | Area (acres) | Percent of Developed Urban Area or of Rural Area | Percent of Total Study Area |
|---|---|---|---|
| Urban | | | |
| Single- and Two-Family Residential | 12,111 | 47.7 | 15.1 |
| Multi-Family Residential | 501 | 2.0 | 0.6 |
| Commercial | 1,226 | 4.8 | 1.5 |
| Manufacturing and Wholesale Industrial | 1,472 | 5.8 | 1.8 |
| Transportation, Communication, and Utilities | 6,723 | 26.5 | 8.4 |
| Governmental and Institutional | 1,456 | 5.7 | 1.8 |
| Recreational | 1,904 | 7.5 | 2.4 |
| Subtotal | 25,393 | 100.0 | 31.7 |
| Rural | | | |
| Agricultural and Other Open Lands | 48,335 | 88.5 | 60.4 |
| Woodlands and Wetlands | 5,422 | 9.9 | 6.8 |
| Extractive Industrial | 264 | 0.5 | 0.3 |
| Surface Water | 618 | 1.1 | 0.8 |
| Subtotal | 54,639 | 100.0 | 68.3 |
| Total | 80,032 | - - | 100.0 |

*Source: SEWRPC.*

Table 11

POPULATION IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1960-1990

| Area | Population | | | | | Change in Population | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | 1960-1970 | | 1970-1980 | | 1980-1985 | | 1985-1990 | |
| | 1960 | 1970 | 1980 | 1985 | 1990 | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| City of Racine | 89,100 | 95,200 | 85,700 | 81,500 | 84,300 | 6,100 | 6.8 | -9,500 | -10.0 | -4,200 | -4.9 | 2,800 | 3.4 |
| Total Study Area | 114,800 | 136,200 | 134,900 | 130,800 | 133,800 | 21,400 | 18.6 | -1,300 | -1.0 | -4,100 | -3.0 | 3,000 | 2.3 |

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

Table 12

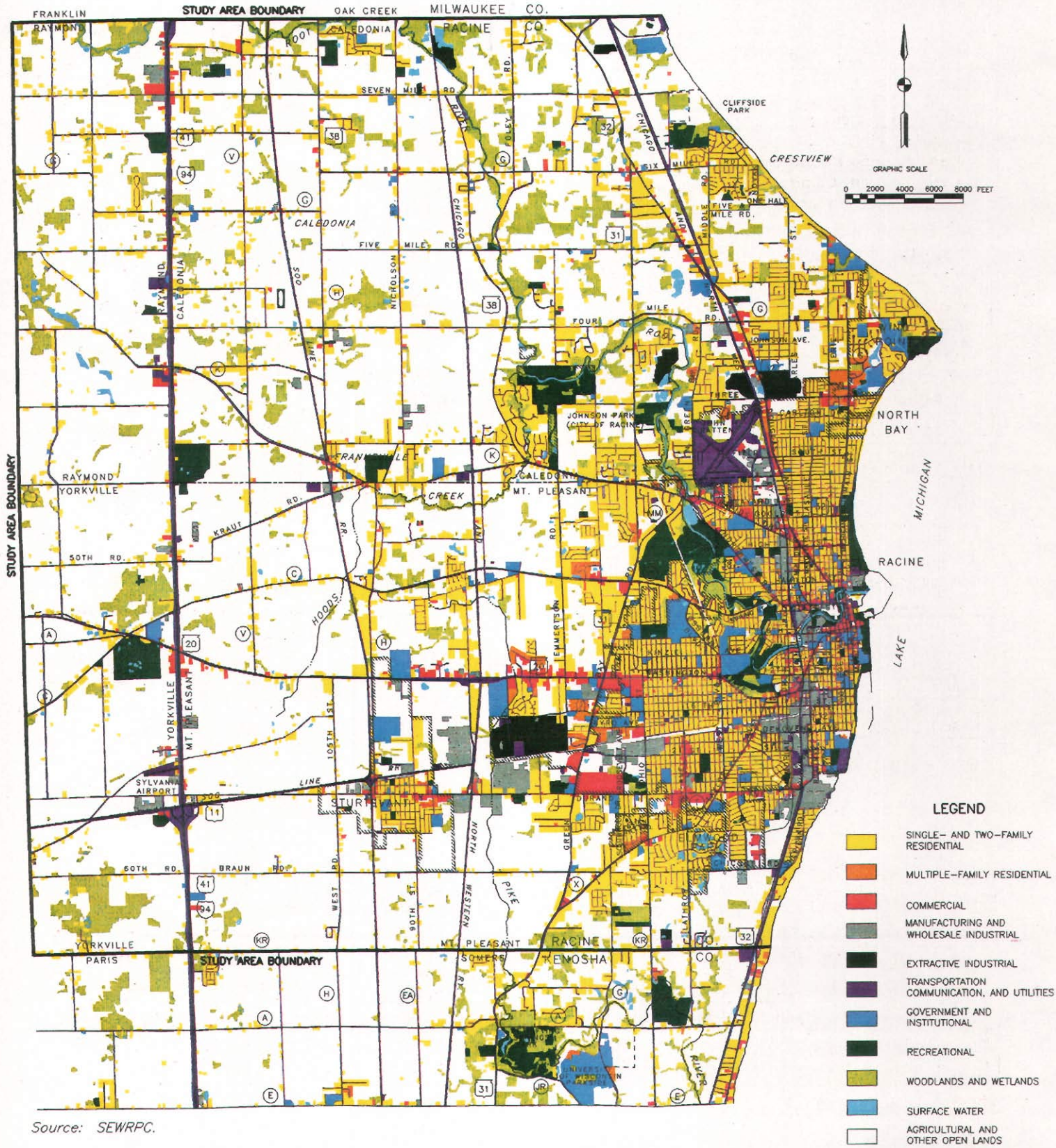
NUMBER OF HOUSEHOLDS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1960-1990

| Area | Number of Households by Year | | | | Change in Households | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1960-1970 | | 1970-1980 | | 1980-1990 | |
| | 1960 | 1970 | 1980 | 1990 | Number | Percent | Number | Percent | Number | Percent |
| City of Racine | 27,100 | 29,900 | 31,700 | 31,800 | 2,800 | 10.3 | 1,800 | 6.0 | 100 | 0.3 |
| Total Study Area | 37,700 | 40,500 | 47,300 | 49,500 | 6,800 | 20.2 | 6,800 | 16.8 | 2,200 | 4.7 |

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

## Map 6

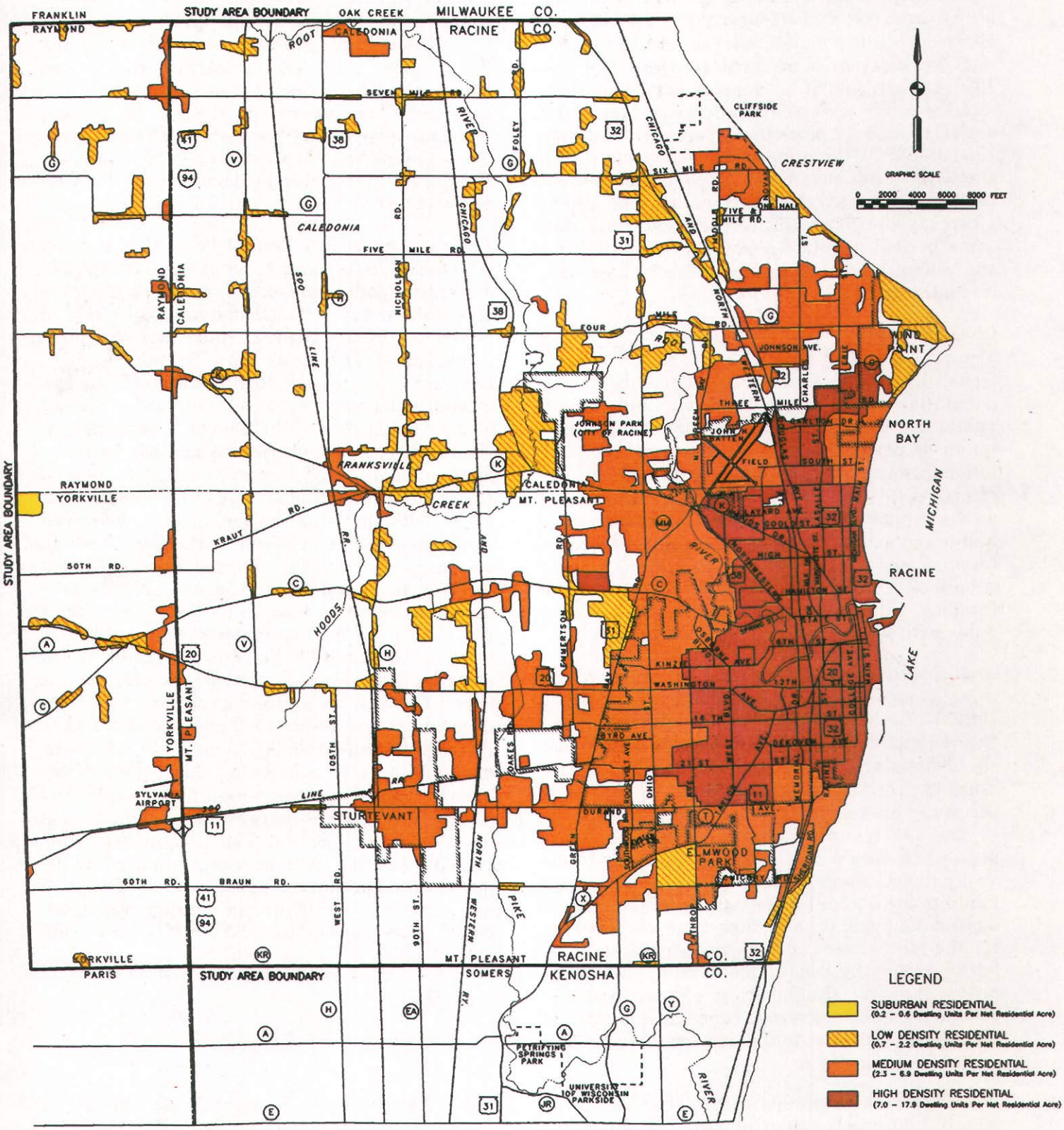
## LAND USE WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990




*Source: SEWRPC.*

## Map 7

## GENERALIZED LAND USE DENSITY WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990




*Source: SEWRPC.*

1970, the percentage increase in the number of households was 10 percent for the City of Racine and 20 percent for the entire study area, similar to the percentage increases in population over the same period for the City of Racine and the study area: 7 and 19 percent, respectively. However, while population levels within the City and the study area declined between 1970 and 1980, the number of households within the City and the study area actually increased by about 6 percent and 17 percent, respectively. Between 1980 and 1990, the number of households within the City and the study area continued to increase, but at the slower rates of about 1 percent and 5 percent, respectively. Over that same period, population levels in the City and study area increased by about 3 and 2 percent, respectively.

Characteristics of the Transit-Dependent Population

Generally, there are certain segments of the population whose dependence on, and use of, public transit is greater than that of the population as a whole. These segments of the population historically have not had the same level of access to the automobile as a mode of travel as the population in general and, therefore, have had to rely more heavily on alternative transportation modes for mobility. These groups include school-age children, the elderly, low-income families, minorities, the disabled, and households with limited automobile availability.

One source used to obtain information about these groups in the Racine study area was the 1990 U. S. census data. Selected population characteristics for the census tracts within the study area are set forth in Tables 13 and 14. Since the census tracts within a large portion of the study area encompass areas too large to be of use for transit planning purposes, tract population data were also examined at the block-group level. Some census block groups were found to have a higher percentage of the transit-dependent population groups than the average for the study area. Information on these population groups by census block group, including maps showing the location of census block groups with above-average concentrations of the transit-dependent populations groups, is presented in Appendix A.

The census block groups within the study area which display residential concentrations of those population groups most heavily dependent on transit service were identified as potential high-priority areas for the provision of transit service. The high-priority areas are shown graphically on Map 8. These census block groups exhibited above-average residential concentrations of at least three of the five transit-dependent population groups, including the elderly, school-age children, racial and ethnic minorities, persons residing in low-income households, and persons residing in households with no automobile available. These census block groups were located primarily within the older, intensively developed areas of the City of Racine.

Federal Census data cannot be used to identify the residential concentration of the sixth transit-dependent population group: disabled individuals. While many disabled individuals in need of public transit service are clients of the Wisconsin Department of Health and Social Services, Division of Vocational Rehabilitation, State law prohibits the release of the names and addresses of disabled clients of the agency. Consequently, the residential concentrations of such individuals cannot be readily ascertained. Estimates of the size of the disabled population within the greater Racine area, however, were developed under a paratransit service plan completed in January 1992 for the City of Racine Transit System to comply with Federal regulations implementing the Americans with Disabilities Act of 1990.[1] It was estimated that in 1990 there were 4,700 disabled persons residing within eastern Racine County, the service area for the City's existing paratransit program, who were transportation-handicapped and would meet the Federally mandated ADA eligibility requirements for paratransit service. This estimate was based upon the total population within the service area for the paratransit program from the 1990 U. S. Census. The proportion of the total population which was estimated to be transportation-handicapped in the urbanized and rural portions of Racine County was determined under a separate SEWRPC study com-

[1] *See SEWRPC Memorandum Report No. 60, A Paratransit Service Plan for Disabled Persons—City of Racine Transit System, January 1992.*

## Table 13

## SELECTED POPULATION CHARACTERISTICS OF THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA AS APPROXIMATED BY CENSUS TRACT: 1990

| Census Tract Number | Total Tract Population | Transit-Dependent Population[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | School-Age Children[b] | | Elderly[c] | | Minorities | | | | Persons in Low-Income Households[f] | |
| | | | | | | Nonwhite[d] | | Hispanic[e] | | | |
| | | Number | Percent of Tract Population | Number | Percent of Tract Population | Number | Percent of Tract Population | Number | Percent of Tract Population | Number | Percent of Tract Population |
| 1 | 475 | 36 | 7.6 | 167 | 35.2 | 113 | 23.8 | 19 | 4.0 | 174 | 36.6 |
| 2 | 6,042 | 1,235 | 20.4 | 396 | 6.6 | 2,542 | 42.1 | 557 | 9.2 | 1,638 | 27.1 |
| 3 | 3,974 | 1,085 | 27.3 | 268 | 6.7 | 3,393 | 85.4 | 596 | 15.0 | 1,775 | 44.7 |
| 4 | 4,961 | 1,369 | 27.6 | 347 | 7.0 | 2,740 | 55.2 | 1,164 | 23.5 | 1,829 | 36.9 |
| 5 | 6,376 | 1,701 | 26.7 | 397 | 6.2 | 4,419 | 69.3 | 1,031 | 16.2 | 2,227 | 34.9 |
| 6 | 5,968 | 1,182 | 19.8 | 639 | 10.7 | 402 | 6.7 | 299 | 5.0 | 474 | 7.9 |
| 7 | 5,810 | 963 | 16.6 | 977 | 16.8 | 526 | 9.1 | 240 | 4.1 | 367 | 6.3 |
| 8 | 4,653 | 877 | 18.8 | 641 | 13.8 | 1,105 | 23.7 | 626 | 13.5 | 466 | 10.0 |
| 9.01 | 4,024 | 848 | 21.1 | 496 | 12.3 | 385 | 9.6 | 235 | 5.8 | 192 | 4.8 |
| 9.03 | 4,064 | 806 | 19.8 | 540 | 13.3 | 513 | 12.6 | 144 | 3.5 | 293 | 7.2 |
| 9.04 | 4,175 | 770 | 18.4 | 524 | 12.6 | 583 | 14.0 | 73 | 1.7 | 156 | 3.7 |
| 10.01 | 2,875 | 526 | 18.3 | 692 | 24.1 | 623 | 21.7 | 40 | 1.4 | 440 | 15.3 |
| 10.02 | 2,951 | 465 | 15.8 | 416 | 14.1 | 304 | 10.3 | 193 | 6.5 | 252 | 8.5 |
| 10.03 | 3,994 | 787 | 19.7 | 527 | 13.2 | 166 | 4.2 | 140 | 3.5 | 256 | 6.4 |
| 11 | 6,965 | 1,219 | 17.5 | 1,172 | 16.8 | 348 | 5.0 | 197 | 2.8 | 150 | 2.2 |
| 12.01 | 3,831 | 632 | 16.5 | 448 | 11.7 | 541 | 14.1 | 191 | 5.0 | 651 | 17.0 |
| 12.02 | 6,322 | 1,245 | 19.7 | 1,066 | 16.9 | 635 | 10.0 | 459 | 7.3 | 573 | 9.1 |
| 13.01 | 3,765 | 618 | 16.4 | 651 | 17.3 | 84 | 2.2 | 85 | 2.3 | 163 | 4.3 |
| 13.02 | 4,548 | 901 | 19.8 | 545 | 12.0 | 687 | 15.1 | 368 | 8.1 | 667 | 14.7 |
| 14 | 7,206 | 1,277 | 17.7 | 1,426 | 19.8 | 357 | 5.0 | 145 | 2.0 | 403 | 5.6 |
| 15.01 | 3,831 | 1,005 | 26.2 | 113 | 2.9 | 66 | 1.7 | 710 | 1.8 | 58 | 1.5 |
| 15.02 | 5,284 | 1,024 | 19.4 | 564 | 10.7 | 193 | 3.7 | 163 | 3.1 | 250 | 4.7 |
| 15.03 | 6,965 | 1,425 | 20.5 | 896 | 12.9 | 769 | 11.0 | 219 | 3.1 | 723 | 10.4 |
| 16.01 | 5,104 | 900 | 17.6 | 468 | 9.2 | 86 | 1.7 | 83 | 1.6 | 214 | 4.2 |
| 16.02 | 2,503 | 562 | 22.5 | 178 | 7.1 | 71 | 2.8 | 3 | 0.1 | 21 | 0.8 |
| 17.02 | 3,986 | 880 | 22.1 | 278 | 7.0 | 113 | 2.8 | 133 | 3.3 | 184 | 4.6 |
| 17.03 | 2,971 | 591 | 19.9 | 327 | 11.0 | 17 | 0.6 | 16 | 0.5 | 72 | 2.4 |
| 17.04 | 8,297 | 1,384 | 16.7 | 1,381 | 16.6 | 440 | 5.3 | 125 | 1.5 | 310 | 3.7 |
| 18[g] | 1,050 | 211 | 20.1 | 81 | 7.7 | 21 | 2.0 | 5 | 0.5 | 40 | 3.8 |
| 19[g] | 1,441 | 497 | 34.5 | 146 | 10.1 | 38 | 2.6 | 21 | 1.5 | 58 | 4.0 |
| Total | 134,411 | 27,021 | 20.1 | 16,767 | 12.5 | 22,280 | 16.6 | 7,640 | 5.7 | 15,076 | 11.2 |

*[a]All population figures are based upon census information derived from sample data. Similar information is presented by census block group in Appendix A.*

*[b]Ages five through 17 inclusive.*

*[c]Ages 65 and older.*

*[d]Includes persons of Hispanic ethnic origin.*

*[e]Includes persons of all races.*

*[f]Represents persons residing in households with a total 1989 family income below Federal poverty thresholds. Poverty thresholds for families in 1989, as defined by the U. S. Bureau of the Census, are shown in Table A-2 in Appendix A.*

*[g]Figures shown represent estimates for only that portion of the census tract within the study area.*

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

Table 14

DISTRIBUTION OF HOUSEHOLDS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA AS APPROXIMATED BY CENSUS TRACT: 1990

| Census Tract Number | Households[a] | | |
|---|---|---|---|
| | Tract Total | With No Automobile Available | |
| | | Number | Percent of Tract Households |
| 1 | 337 | 211 | 62.6 |
| 2 | 2,260 | 361 | 16.0 |
| 3 | 1,208 | 413 | 34.2 |
| 4 | 1,579 | 443 | 28.1 |
| 5 | 2,016 | 638 | 31.6 |
| 6 | 2,279 | 258 | 11.3 |
| 7 | 2,401 | 169 | 7.0 |
| 8 | 1,709 | 152 | 8.9 |
| 9.01 | 1,533 | 90 | 5.9 |
| 9.03 | 1,499 | 183 | 12.2 |
| 9.04 | 1,377 | 42 | 3.1 |
| 10.01 | 1,123 | 282 | 25.1 |
| 10.02 | 1,133 | 72 | 6.4 |
| 10.03 | 1,556 | 129 | 8.3 |
| 11 | 2,733 | 129 | 4.7 |
| 12.01 | 1,693 | 276 | 16.3 |
| 12.02 | 2,326 | 174 | 7.5 |
| 13.01 | 1,560 | 94 | 6.0 |
| 13.02 | 1,762 | 259 | 14.7 |
| 14 | 2,981 | 237 | 8.0 |
| 15.01 | 1,089 | 18 | 1.7 |
| 15.02 | 1,793 | 41 | 2.3 |
| 15.03 | 2,477 | 152 | 6.1 |
| 16.01 | 1,742 | 12 | 0.7 |
| 16.02 | 800 | 10 | 1.3 |
| 17.02 | 1,381 | 54 | 3.9 |
| 17.03 | 1,056 | 27 | 2.6 |
| 17.04 | 3,459 | 203 | 5.9 |
| 18[b] | 357 | - - | - - |
| 19[b] | 481 | 5 | 1.0 |
| Total | 49,700 | 5,134 | 10.3 |

[a] *All household figures are based upon census information derived from sample data. Similar information is presented by census block group in Appendix A.*

[b] *Figures shown represent estimates for only that portion of the census tract within the study area.*

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

Table 15

ESTIMATED PARATRANSIT-SERVICE-ELIGIBLE DISABLED POPULATION WITHIN EASTERN RACINE COUNTY: 1990

| Civil Division | Total Population | Estimated Paratransit-Service-Eligible Disabled Population |
|---|---|---|
| City of Racine/Village of Elmwood Park/Village of North Bay . . . . . | 85,100 | 3,400 |
| Village of Sturtevant . . . . | 3,800 | 150 |
| Village of Wind Point . . . | 1,900 | 75 |
| Town of Caledonia . . . . . | 21,000 | 550 |
| Town of Mt. Pleasant . . . | 20,100 | 525 |
| Total | 131,900 | 4,700 |

*Source: SEWRPC.*

pleted in 1978.[2] The transportation-handicapped population identified under the study included virtually the same population addressed by the new Federal paratransit eligibility requirements. The study findings indicated that about 3.6 percent of the resident population of eastern Racine County was transportation-handicapped. A breakdown of the estimated potential paratransit-service-eligible population by civil division is presented in Table 15.

The locations of facilities frequently used by disabled individuals for housing or residential care, for rehabilitation or training, and for educational purposes have also been identified and are described under the section of this chapter documenting potential transit-dependent-population trip generators.

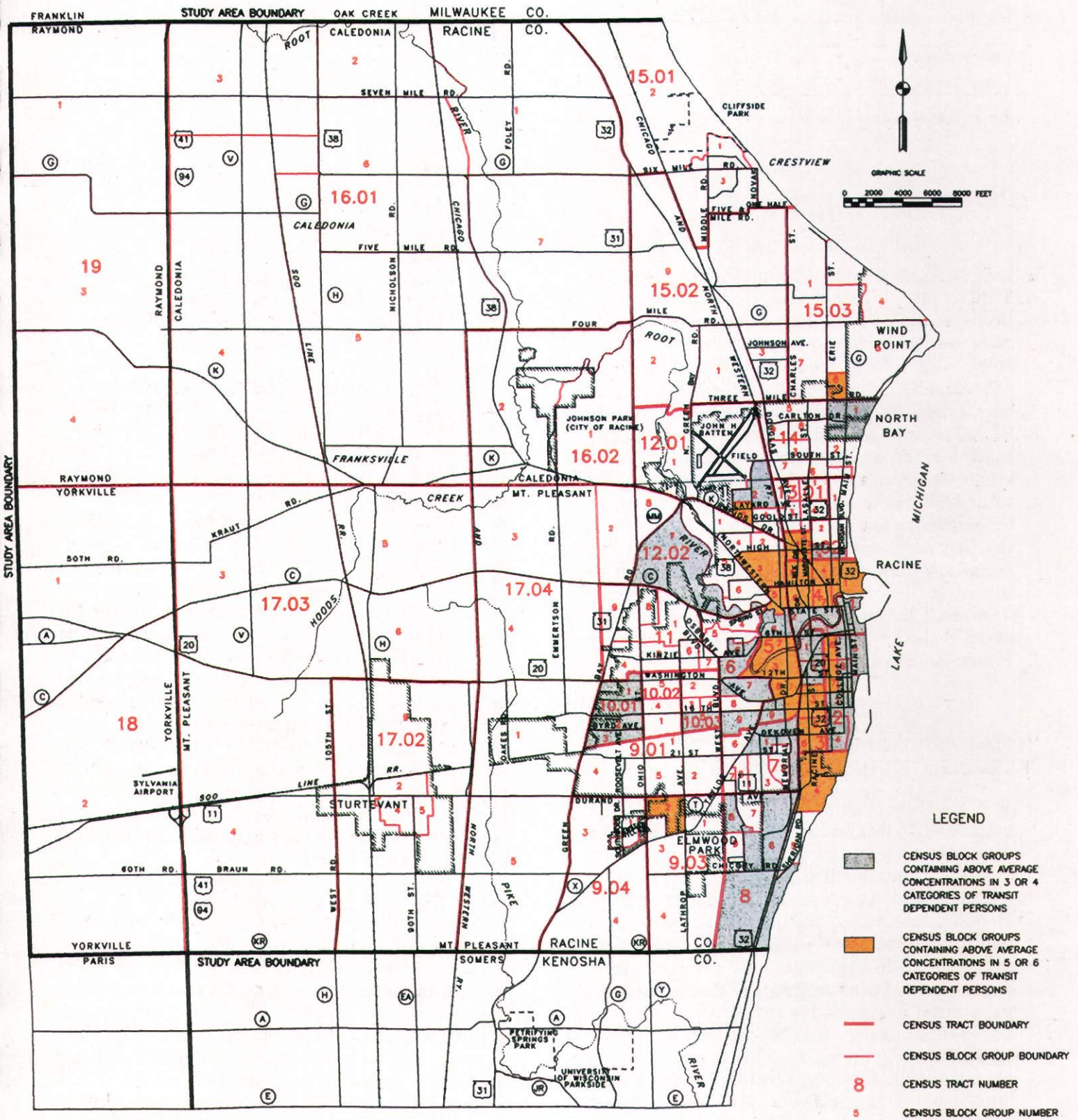
## EMPLOYMENT CHARACTERISTICS

Table 16 presents information on employment levels within the study area from 1970 to 1990. As shown on this table, employment in the study

[2] *See SEWRPC Planning Report No. 31, A Regional Transportation Plan for the Transportation Handicapped in Southeastern Wisconsin: 1978-1982, April 1978.*

Map 8

## HIGH-PRIORITY AREAS FOR TRANSIT SERVICE WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990




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

Table 16

TOTAL EMPLOYMENT IN THE RACINE TRANSIT DEVELOPMENT PLAN STUDY AREA: 1970-1990

| Area | Employment by Year | | | | Change in Employment | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 1970-1980 | | 1980-1985 | | 1985-1990 | |
| | 1970 | 1980 | 1985 | 1990 | Number | Percent | Number | Percent | Number | Percent |
| City of Racine | 40,600 | 39,100 | 32,900 | 39,100 | -1,500 | -3.7 | -6,200 | -15.9 | 6,200 | 18.8 |
| Total Study Area | 56,300 | 64,000 | 62,100 | 69,700 | 7,000 | 13.7 | -1,900 | -3.0 | 7,600 | 12.2 |

*Source: Wisconsin Department of Industry, Labor and Human Relations and SEWRPC.*

area increased from 1970 to 1980, decreased from 1980 to 1985, and increased again after 1985. The decrease may be attributed in part to the nationwide recession which began in about 1979 and from which local recovery did not begin until 1984. In 1985, employment within the study area was estimated to total 62,100 jobs, with about 32,900 jobs, or about 53 percent of the study area total, located within the City of Racine. In 1990, employment in the study area was estimated to total 69,700 jobs, with about 39,100 jobs, or about 56 percent of the study area total, located within the City of Racine. The employment total within the study area and the City of Racine increased by about 12 and 19 percent, respectively, between 1985 and 1990. The density of employment in the study area in 1990 is shown, by U. S. Public Land Survey quarter-section, on Map 9.

## MAJOR POTENTIAL TRANSIT TRIP GENERATORS

The need to serve the local travel demand generated by major potential transit trip generators should also be considered in any transit system development plan study effort. For transit planning purposes, two basic categories of potential transit trip generators were identified. The first category includes facilities serving the elderly, low-income, and disabled transit-dependent population groups. The nature of the population using the identified types of facilities under this category could be expected to generate significant transit usage. The second category of potential transit trip generators includes specific land uses or concentrations of such land uses which attract a large number of person trips and thus have the potential to attract a relatively large number of transit trips. The major transit trip generators identified within each category are described in the following sections.

### Transit-Dependent-Population Trip Generators

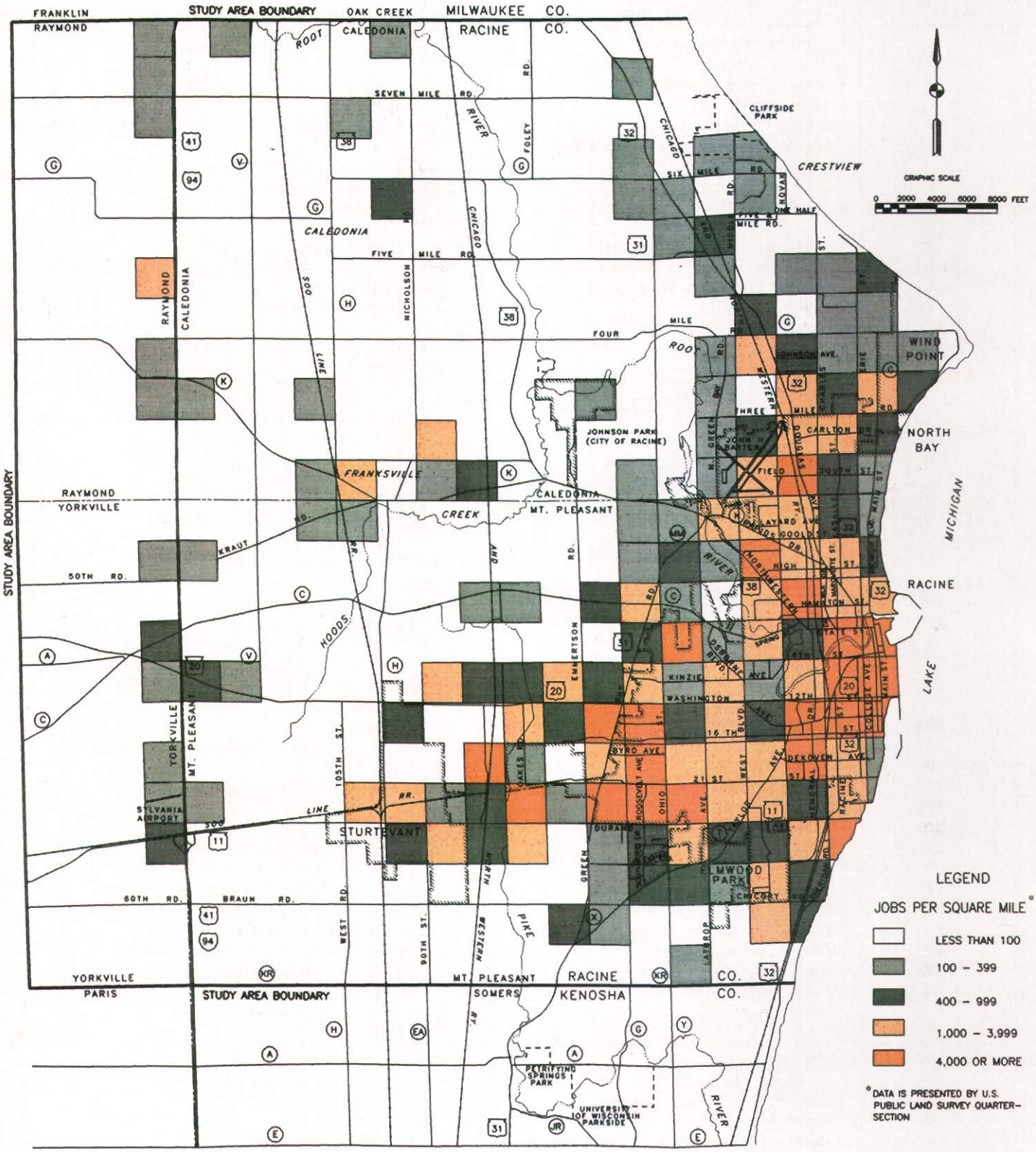
Although census information can be used to provide a general indication of the residential location of transit-dependent persons, it was considered important also to identify specific locations of facilities used by, or serving, transit-dependent groups. Facilities serving the elderly, the disabled, and the low-income transit-dependent population groups were subsequently identified within the study area for the year 1992. Places frequently used by the elderly for care and recreation purposes and the locations of retirement homes, elderly housing complexes, and meal sites are listed in Table 17 and located on Map 10. The sites frequently used by disabled individuals for housing or residential care, rehabilitation or training, or educational purposes are listed in Table 18 and located on Map 11. Finally, the locations of special Federally subsidized rental housing for low-income families and individuals are listed in Table 19 and located on Map 12.

### Major Land Use Trip Generators

For public transit planning purposes, the following types of land uses were identified as major potential transit trip generators within the study area: 1) major commercial centers, 2) educational institutions, 3) hospitals and medical centers, 4) governmental and public institutional centers, 5) major employment centers, and 6) recreational areas. The specific trip generators identified under each type of land use are discussed below, along with the identification criteria.

## Map 9

## EMPLOYMENT DENSITY IN JOBS PER SQUARE MILE WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990




*Source: SEWRPC.*

Table 17

FACILITIES FOR THE ELDERLY IN THE RACINE TRANSIT DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 10 | Facility | Address[a] |
|---|---|---|
| | Nursing Homes/Group Homes/ Day Care Centers | |
| 1 | Becker-Shoop Center | 6101 16th Street, Town of Mt. Pleasant |
| 2 | Halpin Manor | 2048 Douglas Avenue |
| 3 | Lincoln Lutheran Home | 2015 Prospect Avenue |
| 4 | Lincoln Village Convalescent Center | 1700 C.A. Becker Drive |
| 5 | Loving Care Home | 329 S. Newman Road, Town of Mt. Pleasant |
| 6 | Loving Care Home | 7404 Durand Avenue, Town of Mt. Pleasant |
| 7 | Loving Care Home | 10912 Washington Avenue, Town of Mt. Pleasant |
| 8 | New Beginnings Group Home | 5535 16th Street |
| 9 | New Beginnings Group Home | 3509 S. Green Bay Road, Town of Mt. Pleasant |
| 10 | Racine Community Care Center | 1600 Ohio Street |
| 11 | Rannd House | 1117 Reschke Avenue |
| 12 | Ridgewood Care Center of Racine County | 5455 Durand Avenue, Town of Mt. Pleasant |
| 13 | St. Catherine's Infirmary | 5635 Erie Street, Town of Caledonia |
| | Retirement Homes/Housing Complexes | |
| 14 | Albert House | 4000 Maryland Avenue |
| 15 | Atrium of Racine | 3900 N. Main Street |
| 16 | Chateau I and II Apartments | 4901 and 5001 Byrd Avenue |
| 17 | Danish Home of Racine | 1014 Dr. Martin Luther King Drive |
| 18 | Durand Plaza Apartments | 3003 Durand Avenue |
| 19 | Fountain Hills | 1100 Fountain Hills Drive, Town of Mt. Pleasant |
| 20 | Imperial Apartments | 5000 Graceland Boulevard, Town of Mt. Pleasant |
| 21 | Lake Oaks at DeKoven | 1916 Wisconsin Avenue |
| 22 | Lincoln Center | 3710 Douglas Avenue |
| 23 | Lincoln Manor | 5801 16th Street, Town of Mt. Pleasant |
| 24 | Lincoln Manor South | 5143 Biscayne Avenue |
| 25 | Lincoln Villas[b] | 5810-5820 Lincoln Village Drive, Town of Mt. Pleasant |
| 26 | Lincoln Villas North[b] | 3919 Ruby Avenue |
| 27 | Marion Housing | 4105 Spring Street, Town of Mt. Pleasant |
| 28 | McMynn Tower | 110 7th Street |
| 29 | Mt. Pleasant Manor | 2250 Layard Avenue |
| 30 | Oakview Manor | 4720 Byrd Avenue |
| 31 | Palmeter Home | 1547 College Avenue |
| 32 | Racine Residential Care | 1719 Washington Avenue |
| 33 | Regency Apartments | 4111 Erie Street, Town of Caledonia |
| 34 | Rupe Homes | 7931 Daniel Court, Town of Mt. Pleasant |
| 35 | St. Monica's Senior Citizens Home | 3920 N. Green Bay Road, Town of Caledonia |
| 36 | Sunset Terrace Apartments | 5539-5655 Byrd Avenue |
| 37 | Villa St. Anna | 5737 Erie Street, Town of Caledonia |
| 38 | Washington Apartments | 2000 W. Washington Avenue |
| 39 | Washington Court | 5101 Wright Street |
| 40 | Westridge Manor | 3101-3133 86th Street, Village of Sturtevant |
| | Senior Centers[c] | |
| 41 | Dr. Martin Luther King Center[b] | 1134 Dr. Martin Luther King Drive |
| 42 | Lakeview Community Center | 201 Goold Street |
| 43 | Racine Memorial Hall | 72 7th Street |
| 44 | Salvation Army Senior Citizen Drop-In Center | 1901 Washington Avenue |

Table 17 (continued)

| Number on Map 10 | Facility | Address[a] |
|---|---|---|
| | Nutrition Meal Sites | |
| 45 | Atonement Lutheran Church | 2915 Wright Avenue |
| 46 | Douglas Park Community Center | 2221 Douglas Avenue |
| 47 | Washington Park Community Center | 2301 12th Street |
| | Employment/Training/Volunteer Service/Referral Facility | |
| 48 | Career Industries of Racine, Inc. | 1413 13th Street |
| 49 | Center for Community Concerns, Inc. | 1501 Villa Street |
| 50 | Community Action Agency, Inc.[d] | 72 7th Street |
| 51 | Opportunities Industrialization Center of Racine County | 1020 Washington Avenue |
| 52 | Respite Ministry Program | 2000 W. 6th Street |
| 53 | Southeastern Wisconsin Private Industry Council, Inc. | 440 Main Street |
| 54 | Urban League | 718 N. Memorial Drive |

[a] *Except where noted, all addresses refer to the City of Racine.*

[b] *Facility also serves as a congregate nutrition meal site.*

[c] *Activities for the elderly are provided once a week at Dr. John Bryant Neighborhood Center, East Side Community Hall, George Bray Community Center, Mt. Pleasant Club, Sturtevant Senior Citizen Center, and drop-in centers sponsored by Lincoln Lutheran Homes of Racine at various area churches.*

[d] *Offers assistance to older adults with Social Security, Medicare, Medicaid, discrimination, home services, and other legal issues.*

*Source: City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

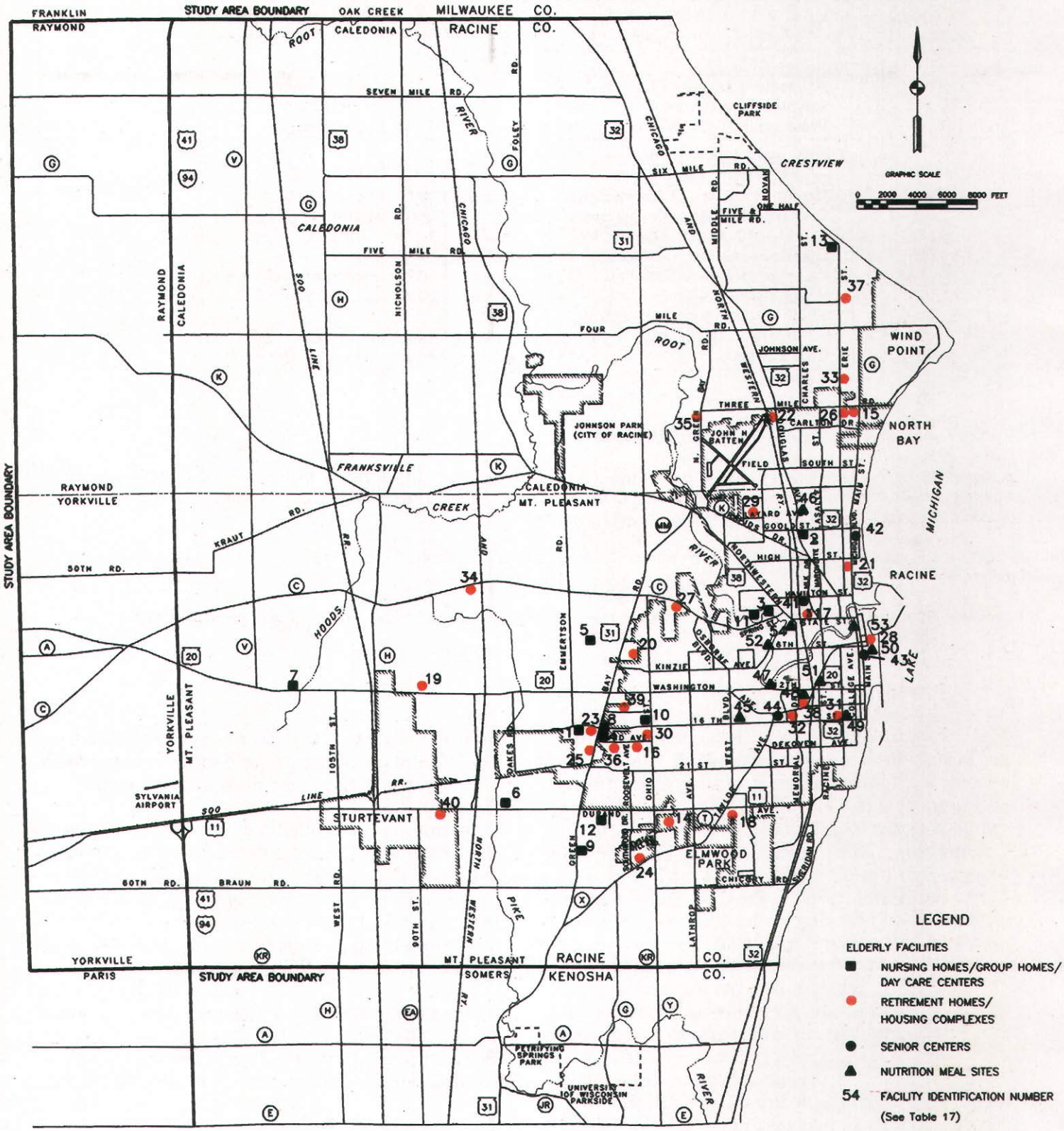
Major Commercial Centers: For transit planning purposes, four classifications of commercial centers were identified as potential major transit trip generators. The first consists of major regional commercial centers as defined by the Commission. Two types of such centers were recognized: retail centers and office centers. Major retail centers are defined as concentrations of employment having at least 2,000 jobs in the retail trade sector. Major office centers are defined as concentrations of employment having at least 3,500 jobs in the "office and service" sectors, encompassing the finance, insurance and real estate, and service industries, except government service. Under the Commission definition, special account is taken of jobs in the government and utilities sectors only in the older central business districts, such as the central business district of the City of Racine, given their unique historic character. The Commission definition recognizes that a single center may be classified as both a retail and office center if both employment criteria described above are met.

One major retail commercial center and one major office commercial center were identified as existing within the study area in 1992. The major retail center, Racine-West, includes the major retail and service establishments located immediately to the north of the intersection of Green Bay Road (STH 31) and Durand Avenue (STH 11) in the City of Racine. Included with this retail center are the Regency Mall shopping center, the Highridge Mall, and the Regency Point shopping center. The major office center identified is the Racine central business district.

The second, third, and fourth classifications of commercial centers were defined by using criteria developed by the City of Racine. The second

## Map 10

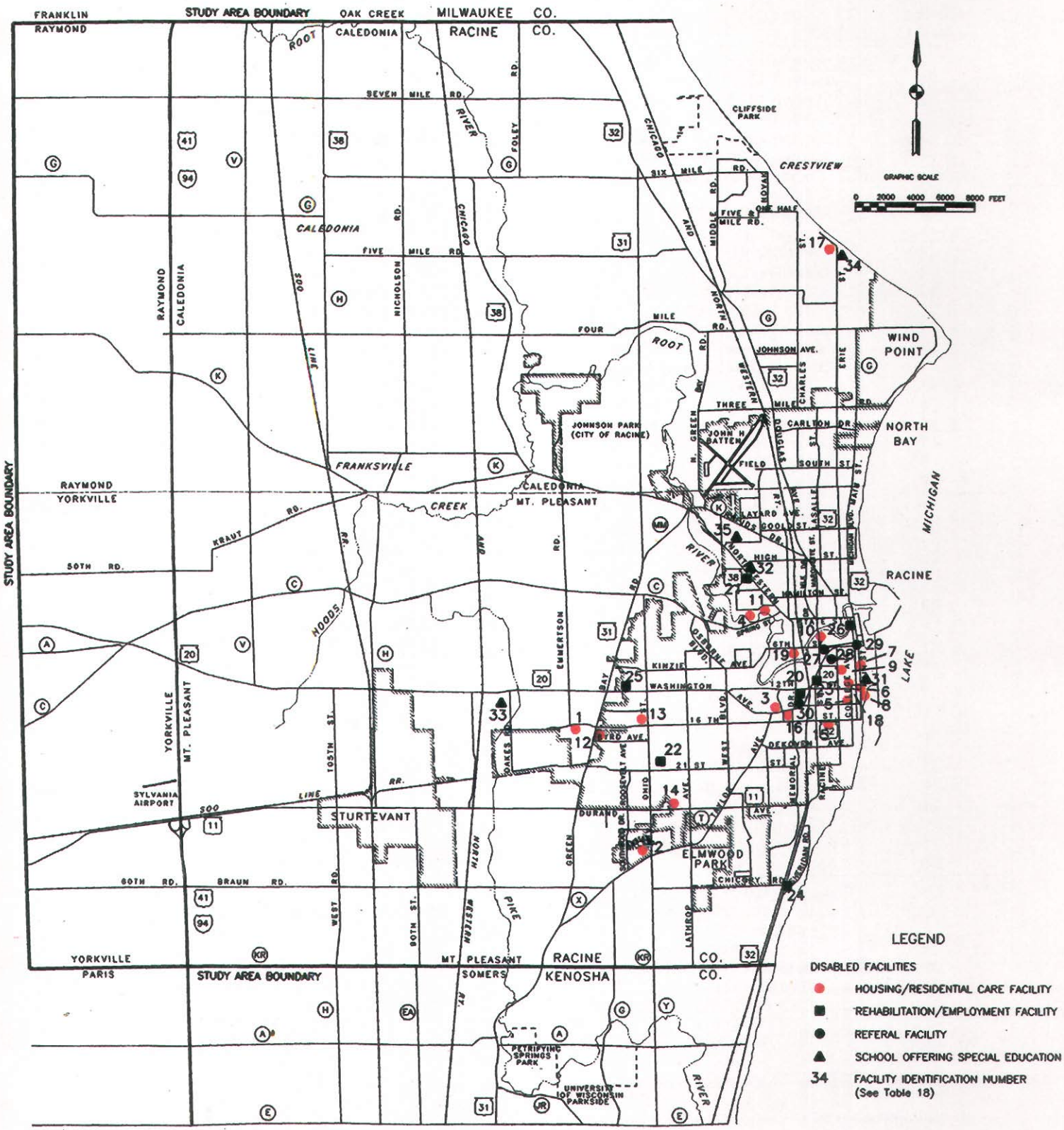
## FACILITIES FOR THE ELDERLY IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

Map 11

## FACILITIES FOR THE DISABLED IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

Table 18

FACILITIES FOR THE DISABLED IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 11 | Facility | Address[a] |
|---|---|---|
| | Housing/Residential Care Facility | |
| 1 | Becker-Shoop Center | 6101 16th Street, Town of Mt. Pleasant |
| 2 | Biscayne Gardens | 5110 Biscayne Avenue |
| 3 | Cornerstone | 2016 Washington Avenue |
| 4 | Cornerstone II | 1747 Domanik Drive |
| | Goodwill Industries of Southeastern Wisconsin, Inc. | |
| 5 | Facility 1 | 1125 College Avenue |
| 6 | Facility 2 | 732 Park Avenue |
| 7 | Facility 3 | 810 Main Street |
| 8 | Facility 4 | 800 Park Avenue |
| 9 | Facility 5 | 905 Wisconsin Avenue |
| 10 | Facility 6 | 614 6th Street |
| 11 | Lincoln Lutheran Home | 2015 Prospect Avenue |
| 12 | Lincoln Village Convalescent Center | 1700 C.A. Becker Drive |
| 13 | Racine Community Care Center | 1600 Ohio Street |
| | Racine County Housing Authority Facilities | |
| 14 | Facility 1 | 2900 Russet Street |
| 15 | Facility 2 | 1621 Franklin Street |
| 16 | Racine County Residential Care[b] | 1719 Washington Avenue |
| 17 | St. Catherine's Infirmary | 5635 Erie Street, Town of Caledonia |
| 18 | Satellite House | 820 College Avenue |
| 19 | Shoreline Manor | 1403 6th Street |
| | Rehabilitation/Employment Facility | |
| 20 | Career Industries of Racine, Inc. | 1413 13th Street |
| 21 | Curative Workshop of Racine | 2335 Northwestern Avenue |
| 22 | Goodwill Industries of Southeastern Wisconsin, Inc. | 5420 21st Street |
| 23 | Opportunities Industrialization Center of Racine County | 1020 Washington Avenue |
| 24 | Racine County Opportunity Center, Inc. | 4214 Sheridan Road, Town of Mt. Pleasant |
| 25 | Racine Division of Vocational Rehabilitation | 5200 Washington Avenue |
| 26 | Southeastern Wisconsin Private Industry Council, Inc. | 440 Main Street |
| | Referral Facility | |
| 27 | Association for Retarded Citizens of Racine County | 818 6th Street |
| 28 | Developmental Disabilities Information Service | 800 Center Street |
| 29 | Racine County Human Services Department | 207 7th Street |
| 30 | Society's Assets, Inc. | 1511 Washington Avenue |
| | Special Education Facility with Special Programs | |
| 31 | Gateway Technical College | 1001 S. Main Street |
| | Racine Unified School District | |
| 32 | Gilmore Middle High School | 2201 High Street |
| 33 | J. I. Case High School | 7345 Washington Avenue, Town of Mt. Pleasant |
| 34 | Olympia Brown School | 5915 Erie Street, Town of Caledonia |
| 35 | Wadewitz School | 2700 Yout Street |

[a] *Except where noted, all addresses refer to the City of Racine.*

[b] *Facility also provides some rehabilitation services.*

*Source: City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

Table 19

FEDERALLY SUBSIDIZED RENTAL HOUSING IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 12 | Project Name | Number of Units[a] | Address[b] |
|---|---|---|---|
| 1 | Albert House | 107 | 400 Maryland Avenue |
| 2 | Chateau I and II Apartments | 85 | 4901 and 5001 Byrd Avenue |
| 3 | Durand Plaza Apartments | 71 | 3003 Durand Avenue |
| 4 | Lincoln Manor | 119 | 5801 16th Street, Town of Mt. Pleasant |
| 5 | Lincoln Villas | 100 | 5810-5820 Lincoln Village Drive, Town of Mt. Pleasant |
| 6 | Lincoln Villas North | 75 | 3919 Ruby Avenue |
| 7 | Marion Housing | 39 | 4105 Spring Street, Town of Mt. Pleasant |
| 8 | McMynn Tower | 123 | 110 7th Street |
| 9 | Mt. Pleasant Manor | 78 | 2250 Layard Avenue |
| 10 | Oaks Village | 60 | 1311-1345 Oakes Road, Town of Mt. Pleasant |
| 11 | Oakview Manor | 78 | 4720 Byrd Avenue |
| 12 | Oakwood Terrace | 24 | 1802-1812 Oakdale Avenue |
| 13 | Regency Apartments | 38 | 4111 Erie Street, Town of Mt. Pleasant |
| 14 | Shorehaven Apartments | 119 | 541 Shelbourne Court |
| 15 | Sunset Terrace Apartments | 120 | 5501-5535, 5539-5655 Byrd Avenue |
| 16 | Washington Apartments | 40 | 2000 W. Washington Avenue |
| 17 | Washington Court | 90 | 5101 Wright Street |
| 18 | Westridge Manor | 24 | 3101-3133 86th Street, Village of Sturtevant |
| 19 | Woodside Village | 50 | 4200 Northwestern Avenue |

[a] *Excludes units known to be used as offices or as resident manager or caretaker units.*

[b] *Except where noted, all addresses refer to the City of Racine.*

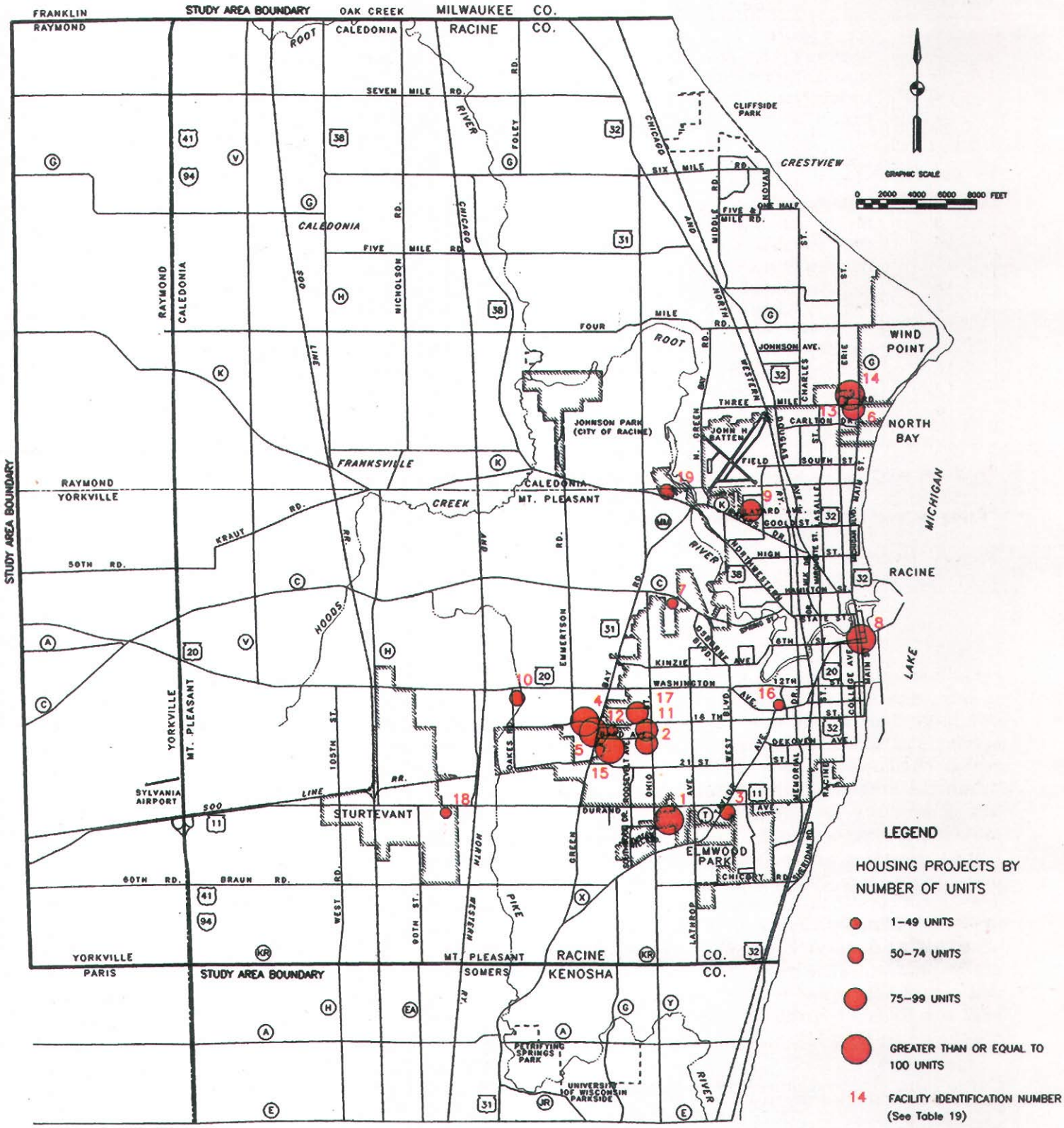
*Source: SEWRPC.*

classification, major community shopping areas, is defined as a concentration of stores, including one large department store and several smaller service and specialty shops, with a service area which encompasses most or all of the Racine urbanized area. The third classification, secondary community shopping areas, is defined as major shopping centers having a large concentration of stores and services, without a major department store, but with a large service area. The fourth classification, major strip commercial areas, is defined as concentrations of a mixture of retail and service establishments located along a major traffic artery. The major commercial centers identified within the study area in 1992 are listed in Table 20 and their locations are shown on Map 13.

Educational Institutions: Middle schools, high schools, technical schools, colleges, and universities located within the study area are identified as potential major transit trip generators. The University of Wisconsin-Parkside, which is located just outside the study area, in the Town of Somers in Kenosha County, is a major educational center that draws much of its enrollment from within the study area. For this reason, the University of Wisconsin-Parkside was included as a major potential transit trip generator for the study area. Public elementary schools were not considered major potential transit trip generators because students for these schools generally live in the surrounding neighborhood and are able to walk to school. Parochial and private elementary schools, however, attract students from a larger area than the surrounding neighborhoods and were, consequently, considered to represent potential transit trip generators. The educational institutions identified as major potential transit trip generators in 1992 are listed in Table 21 and are shown on Map 14.

Map 12

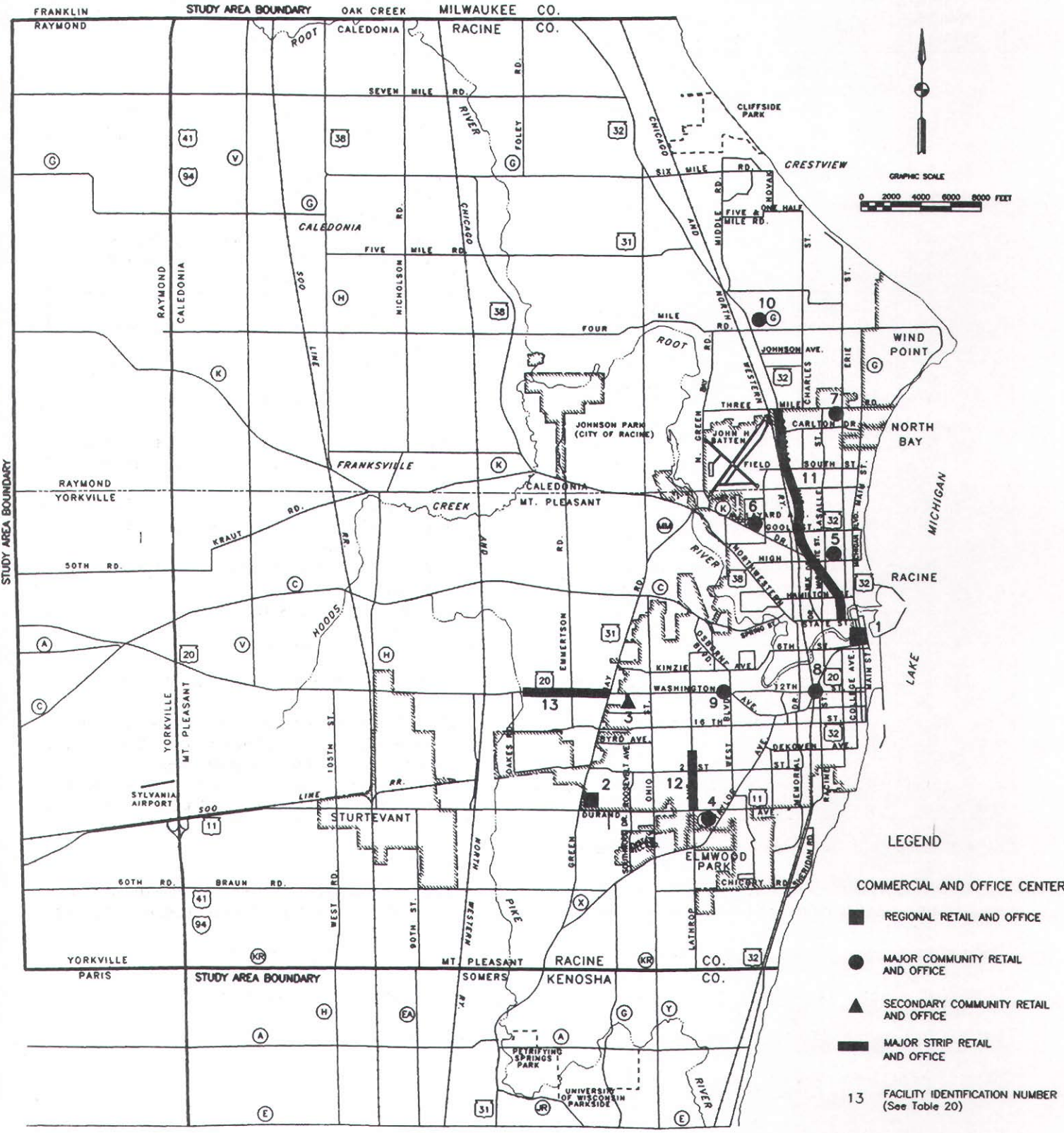
## FEDERALLY SUBSIDIZED RENTAL HOUSING IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

Map 13

## MAJOR COMMERCIAL AND OFFICE CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




Source: SEWRPC.

Table 20

MAJOR COMMERCIAL CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 13 | Commercial Center | Location[a] |
|---|---|---|
| | Major Regional Retail and Office Commercial Centers[b] | |
| 1 | Racine central business district | On Main Street between State Street and 7th Street, and on 6th Street between Lake Street and Grand Avenue |
| 2 | Racine-West | Includes retail office and service establishments located north and east of the intersection of Green Bay Road and Durand Avenue, including the Regency Mall Shopping Center, the High Ridge Mall, and the Regency Point Shopping Center |
| | Major Community Shopping Center[c] | |
| 3 | Westgate Mall Shopping Center | On Washington Avenue between Green Bay Road and Ohio Street |
| | Secondary Community Shopping Center[d] | |
| 4 | Elmwood Plaza Shopping Center | On Durand Avenue between Kentucky Street and Taylor Avenue |
| 5 | Flat Iron Village Mall | Intersection of Douglas Avenue and High Street |
| 6 | Rapids Plaza Shopping Center | On Rapids Drive between Mt. Pleasant Street and Loraine Avenue |
| 7 | Shorecrest Shopping Center | Intersection of Three Mile Road and Erie Street |
| 8 | Uptown shopping area | On Washington Avenue between Racine Street and Phillips Street |
| 9 | West Racine shopping area | On Washington Avenue between West Boulevard and Blaine Avenue |
| 10 | Green Tree Centre | Intersection of Douglas Avenue and Four Mile Road |
| | Strip Commercial Areas[e] | |
| 11 | Douglas Avenue strip development | On Douglas Avenue between Three Mile Road and State Street |
| 12 | Lathrop Avenue strip development | On Lathrop Avenue between the former Chicago, Milwaukee, St. Paul & Pacific (Milwaukee Road) Railroad tracks and Durand Avenue |
| 13 | Washington Avenue strip development | On Washington Avenue between Green Bay Road and Oaks Road, Town of Mt. Pleasant |

[a] *Except where noted, all addresses refer to the City of Racine.*

[b] *Major retail centers are defined as concentrations of employment having at least 2,000 jobs in the retail trade sector. Major office centers are defined as concentrations of employment having at least 3,500 jobs in the "office and service" sectors.*

[c] *Defined as including at least one large department store and any associated shops and services.*

[d] *Defined as a large concentration of stores and services, usually lacking a major department store.*

[e] *Defined as a mixture of retail and service establishments located along a major traffic arterial.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Table 21

## EDUCATIONAL INSTITUTIONS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 14 | Educational Institutions | Address[a] | Approximate Enrollment[b] |
|---|---|---|---|
| | University and Technical Schools | | |
| 1 | Gateway Technical Institute | 1001 S. Main Street | 19,000[c] |
| 2 | University of Wisconsin-Parkside | Wood Road, Town of Somers | 5,100[d] |
| | Public Middle and High Schools | | |
| 3 | Gilmore Middle School | 2330 Northwestern Avenue | 1,100 |
| 4 | J. I. Case High School | 7345 Washington Avenue, Town of Mt. Pleasant | 1,800 |
| 5 | Jerstad-Agerholm Middle School | 3601 LaSalle Street | 800 |
| 6 | McKinley Middle School | 2326 Mohr Avenue | 1,000 |
| 7 | Mitchell Middle School | 2701 Drexel Avenue | 1,000 |
| 8 | Starbuck Middle School | 1516 Ohio Street | 900 |
| 9 | Walden III Middle and High School | 1012 Center Street | 350 |
| 10 | Washington Middle School Academy | 914 St. Patrick Street | 50 |
| 11 | Washington Park High School | 1901 12th Street | 1,900 |
| 12 | William Horlick High School | 2119 Rapids Drive | 1,850 |
| | Additional Parochial and Private Schools | | |
| 13 | Concordia Lutheran School | 3350 Lathrop Avenue, Village of Elmwood Park | 100 |
| 14 | Holy Name School | 1510 Villa Street | 250 |
| 15 | Lutheran High School | 251 Luedtke Avenue | 200 |
| 16 | Prairie School | 4050 Lighthouse Drive, Village of Wind Point | 450 |
| 17 | Racine Baptist School | 4835 Taylor Avenue, Town of Mt. Pleasant | 50 |
| 18 | Racine Christian School | 912 Virginia Street | 150 |
| 19 | Racine Montessori School | 520 21st Street | 100 |
| 20 | Sacred Heart Catholic Church School | 2023 Northwestern Avenue | 200 |
| 21 | St. Catherine's High School | 1200 Park Avenue | 500 |
| 22 | St. Edward's Elementary School | 1430 Grove Avenue | 350 |
| 23 | St. Louis Elementary School | CTH G, Town of Caledonia | 100 |
| 24 | St. Sebastian's Elementary School | 3030 95th Street, Village of Sturtevant | 150 |
| 25 | St. John Nepomuk Elementary School | 1923 Green Street | 150 |
| 26 | St. John's Lutheran School | 510 Kewaunee Street | 250 |
| 27 | St. Joseph Elementary School | 1525 Erie Street | 250 |
| 28 | St. Lucy's Elementary School | 3035 Drexel Avenue | 200 |
| 29 | St. Rita's Elementary School | 4433 Douglas Avenue, Town of Caledonia | 300 |
| 30 | Trinity Evangelical Lutheran School-Wisconsin Synod | 7900 Nicholson Road, Town of Caledonia | 100 |
| 31 | Trinity Lutheran School-Missouri Synod | 2065 Geneva Street | 200 |

[a] *Except where noted, all addresses refer to the City of Racine.*

[b] *College and technical school enrollments are indicated for fall 1991, while the high school, junior high school and major parochial school enrollments are indicated for school year 1991-1992.*

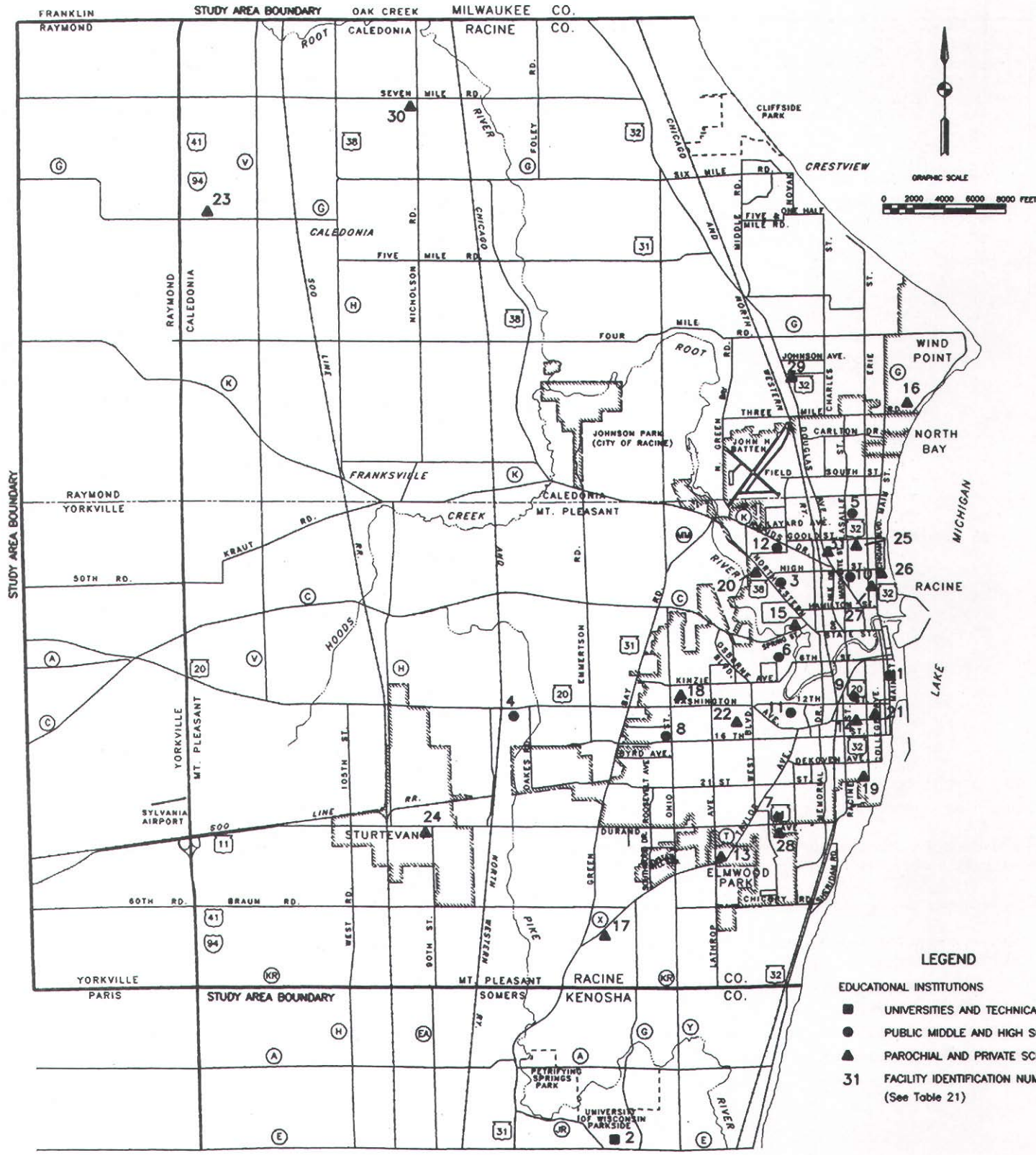
[c] *The enrollment of students from Racine County at Gateway Technical College is about 8,000.*

[d] *The enrollment of students from Racine County at the University of Wisconsin-Parkside is about 2,200.*

*Source: Racine Unified School District and SEWRPC.*

Map 14

## EDUCATIONAL INSTITUTIONS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

Medical Centers: For transit planning purposes, community and special medical centers were identified as potential major transit trip generators. A community medical center is defined as a hospital having at least 100 beds providing in- and out-patient facilities and laboratory and clinical services. Included in this category are the Racine County Ridgewood Care Center, St. Luke's Hospital, and St. Mary's Medical Center. The special medical center category was defined to include all other major medical centers and special clinics offering multi-specialty medical services. The major medical facilities identified in the study area in 1992 are listed in Table 22 and their locations are shown on Map 15.

Governmental and Public Institutional Centers: Governmental and public institutional centers were considered potential major transit trip generators because they provide services to which every citizen should have ready access. Included under this category are such regional and county governmental and public institutional centers as the Racine County Courthouse and the Racine Public Library, such community governmental centers as the Racine City Hall and the various village and town halls in the area, and such special and other governmental and public institutional centers as the U. S. Post Office. The governmental and public institutional centers are listed in Table 23 and their locations are shown on Map 16.

Employment Centers: The trips from home to work and back constitute a significant portion of all person trips within the Racine Urban Planning District. It is, therefore, important for transit planning purposes to identify the major employment centers within the District as major potential transit trip generators. Employment centers thus identified were limited to public and private establishments employing 100 or more people. Table 24 lists by type of employer the major employers identified within the study area: industrial or manufacturing, retail or service, and governmental or institutional, along with their approximate 1992 employment. Maps 17 and 18 indicate the location of the major employers within the study area.

Recreational Areas: Recreational areas were also considered to be potential transit trip generators. Recreational areas were grouped into three categories. The first consists of major regional recreational areas, defined as public recreation sites of at least 250 acres offering multiple recreational opportunities. Two major regional recreational areas, Johnson Park and Cliffside County Park, are located within the study area. A third major regional recreational area located just outside the study area in Kenosha County, Petrifying Springs County Park in the Town of Somers, has been included because of its proximity to the study area and its potential to attract large numbers of recreational trips from the study area. The second category is comprised of community recreational areas, defined as multiple-use public recreation sites whose service areas are community-oriented and which contain community recreation facilities such as baseball or softball diamonds, swimming pools, or tennis courts. The third category is comprised of recreational areas used primarily for special purposes. The recreational areas identified in 1992 are listed in Table 25 and their locations are shown on Map 19.

## TRAVEL HABITS AND PATTERNS

This section of the chapter presents information on the travel habits and patterns of residents of the study area relevant to the provision and use of public transit services. Presented first is an estimate of the amount and pattern of the total travel generated by households and by certain land use activities in the study area, including travel generated within the study area and travel generated between the study area and the remainder of Southeastern Wisconsin. Following this is an analysis of a survey of the users of the Belle Urban System conducted by the Regional Planning Commission in April 1991. This survey gathered data on the socio-economic characteristics and travel patterns of those users, as well as comments on, and suggestions by, the users for perceived needed transit service improvements.

### Total Person Travel Characteristics

Information on the quantity and characteristics of total person travel within the Racine study area was based upon the findings of a household travel survey conducted by the Commission in the fall of 1991. This survey was a part of a new regional inventory of travel conducted in the fall of 1991 and the spring of 1992 which included a household travel survey, a public transit user survey, a truck and taxi survey, and an external cordon survey. The sample for the 1991 house-

Table 22

COMMUNITY AND SPECIAL MEDICAL CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 15 | Hospital and Medical Center | Address[a] |
|---|---|---|
| | Community Medical Centers[b] | |
| 1 | Racine County Ridgewood Care Center | 5455 Durand Avenue |
| 2 | St. Luke's Hospital | 1320 Wisconsin Avenue |
| 3 | St. Mary's Medical Center | 3801 Spring Street |
| | Special Medical Centers[c] | |
| 4 | Kurten Medical Group | 2405 Northwestern Avenue |
| 5 | Racine Medical Group | 3807 Spring Street |
| 6 | St. Catherine's Family Practice Center, UW-Parkside | 900 Wood Road, Town of Somers |
| 7 | Westwind Treatment Center | 5625 Washington Avenue |

[a] *All addresses refer to the City of Racine, except where noted.*

[b] *Defined as a hospital having at least 100 beds and providing in- and out-patient facilities and laboratory and clinical services.*

[c] *Defined as all other major medical facilities and special clinics offering multi-specialty medical services.*

*Source: City of Racine Department of Transportation and SEWRPC.*

hold home interview survey was about 17,500 households, or about 2.5 percent of the total number of households in the Region. Based upon the 1991 household travel survey, about 514,500 trips with one or both ends in the Racine study area occurred on an average weekday in 1991. The generalized pattern of those trips, including origin and destination, is provided in Table 26.

Internal Person Travel: Of the 514,500 person trips made within the study area on an average weekday in 1991, approximately 399,500 trips, or 78 percent, were made to destinations internal to the study area. About 6,400 of these person trips, or about 1.6 percent, were made on the City transit system in 1991. To facilitate additional analyses of internal person trip characteristics, the density of tripmaking was calculated for the traffic analysis zones delineated within the study area. Map 20 illustrates graphically total person trip density within each traffic analysis zone, as expressed in total trip origins and destinations, or total trip ends, per square mile. As would be expected, the map shows that total person tripmaking activity within the study area in 1991 was heavily concentrated in the densely developed urban areas within and surrounding the City of Racine. The zones constituting the Racine central business district and the Racine-West shopping area contained the highest concentrations of trip ends.

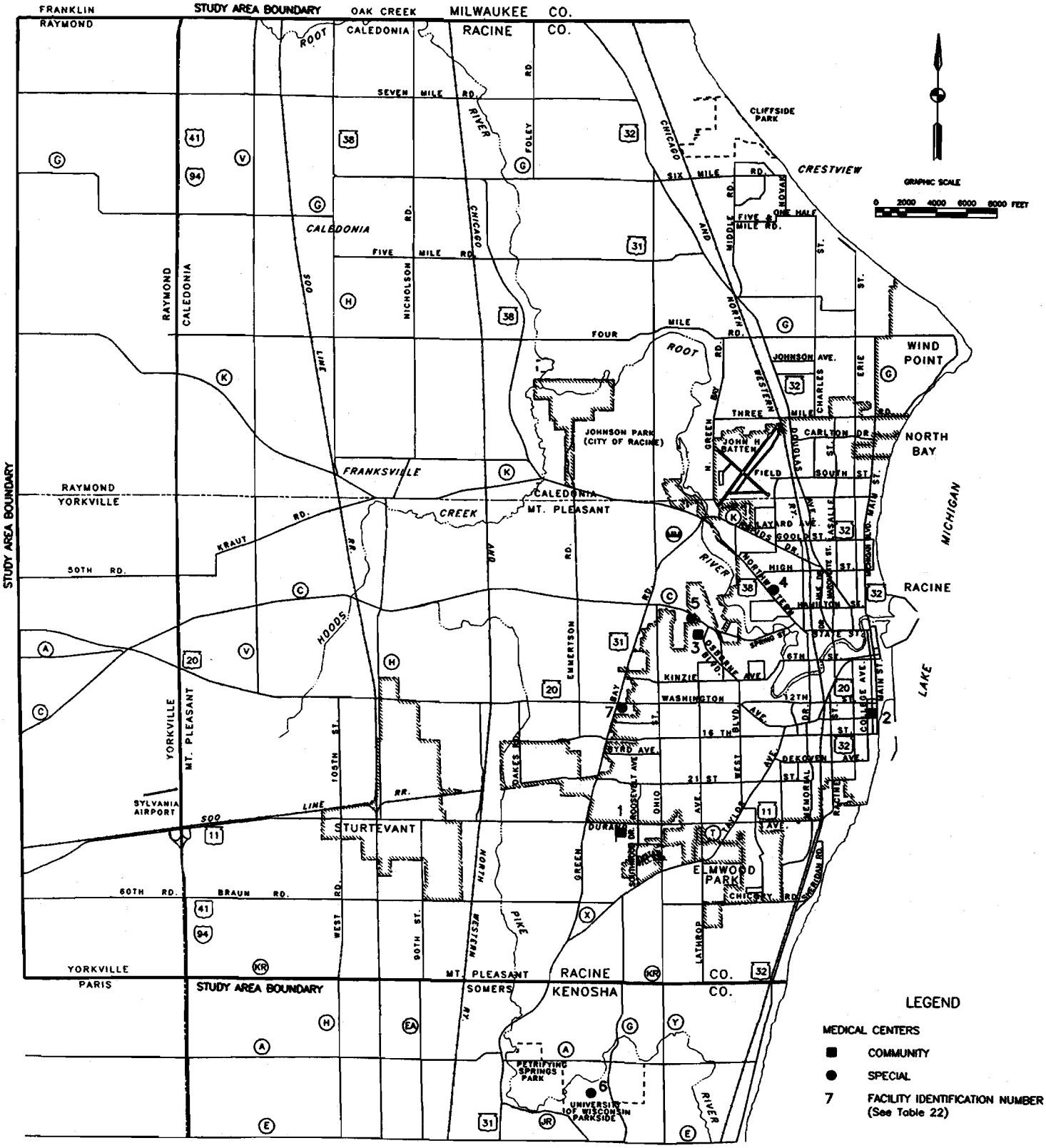
External Person Travel: Of the approximately 514,500 total person trips made within the study area on an average weekday in 1991, about 115,000 trips, or 22 percent, were made to areas within the Southeastern Wisconsin Region external to the study area. The locations of these external person trip destinations within the Southeastern Wisconsin Region are shown on Map 21. As indicated on this map, the largest concentrations of external total person trip destinations were located in the City of Kenosha, which attracted about 30,200 trips; in southern Milwaukee County, which attracted about 28,700 trips; in western Racine County, which attracted about 15,700 trips; and in the Town of Somers, Kenosha County, which attracted about 11,500 trips.

City of Racine Transit User Survey

An on-board bus survey was conducted on the regular bus routes of the Belle Urban System by the Regional Planning Commission on April 16-18, 1991, to ascertain the current socio-economic characteristics and travel habits and

## Map 15

## COMMUNITY AND SPECIAL MEDICAL CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




Source: SEWRPC.

Table 23

GOVERNMENT AND PUBLIC INSTITUTIONAL CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 16 | Institutional Center | Address[a] |
|---|---|---|
| | Regional and County | |
| 1 | Racine County Courthouse | 730 Wisconsin Avenue |
| 2 | Racine County Highway and Office Building | 14200 Washington Avenue |
| 3 | Racine County Historical Society and Museum, Inc. | 701 Main Street |
| 4 | Racine County Human Service Department | 207 7th Street |
| 5 | Racine County Law Enforcement Center | 717 Wisconsin Avenue |
| 6 | Racine Public Library | 75 7th Street |
| 7 | Social Security Administration | 4020 Durand Avenue |
| 8 | Wisconsin Department of Health and Social Services, Division of Vocational Rehabilitation | 5200 Washington Street |
| | Wisconsin Department of Industry, Labor and Human Relations | |
| 9 | Job Service Division | 411 7th Street |
| 10 | Unemployment Compensation Division | 618 6th Street |
| | Community and Other | |
| 11 | Caledonia Town Hall | 6922 Nicholson Road, Town of Caledonia |
| 12 | Mt. Pleasant Town Hall | 6126 Durand Avenue, Town of Mt. Pleasant |
| 13 | Racine City Hall | 730 Washington Avenue |
| 14 | Racine Memorial Hall | 72 7th Street |
| 15 | Racine Police Department | 730 Center Street |
| 16 | Racine Unified School District | 2220 Northwestern Avenue |
| 17 | Sturtevant Village Hall | 2801 89th Street, Village of Sturtevant |
| 18 | Wind Point Village Hall | 215 E. Four Mile Road, Village of Wind Point |
| | U. S. Post Office | |
| 19 | Caledonia | 11510 CTH G, Town of Caledonia |
| 20 | Franksville | 3319 Roberts Street, Town of Caledonia |
| 21 | Racine Main | 603 Main Street |
| 22 | Sturtevant | 2849 Wisconsin Street, Village of Sturtevant |
| 23 | Western Racine | 1300 Perry Avenue |

[a] *Except where noted, all addresses refer to the City of Racine.*

*Source: City of Racine Department of Transportation and SEWRPC.*

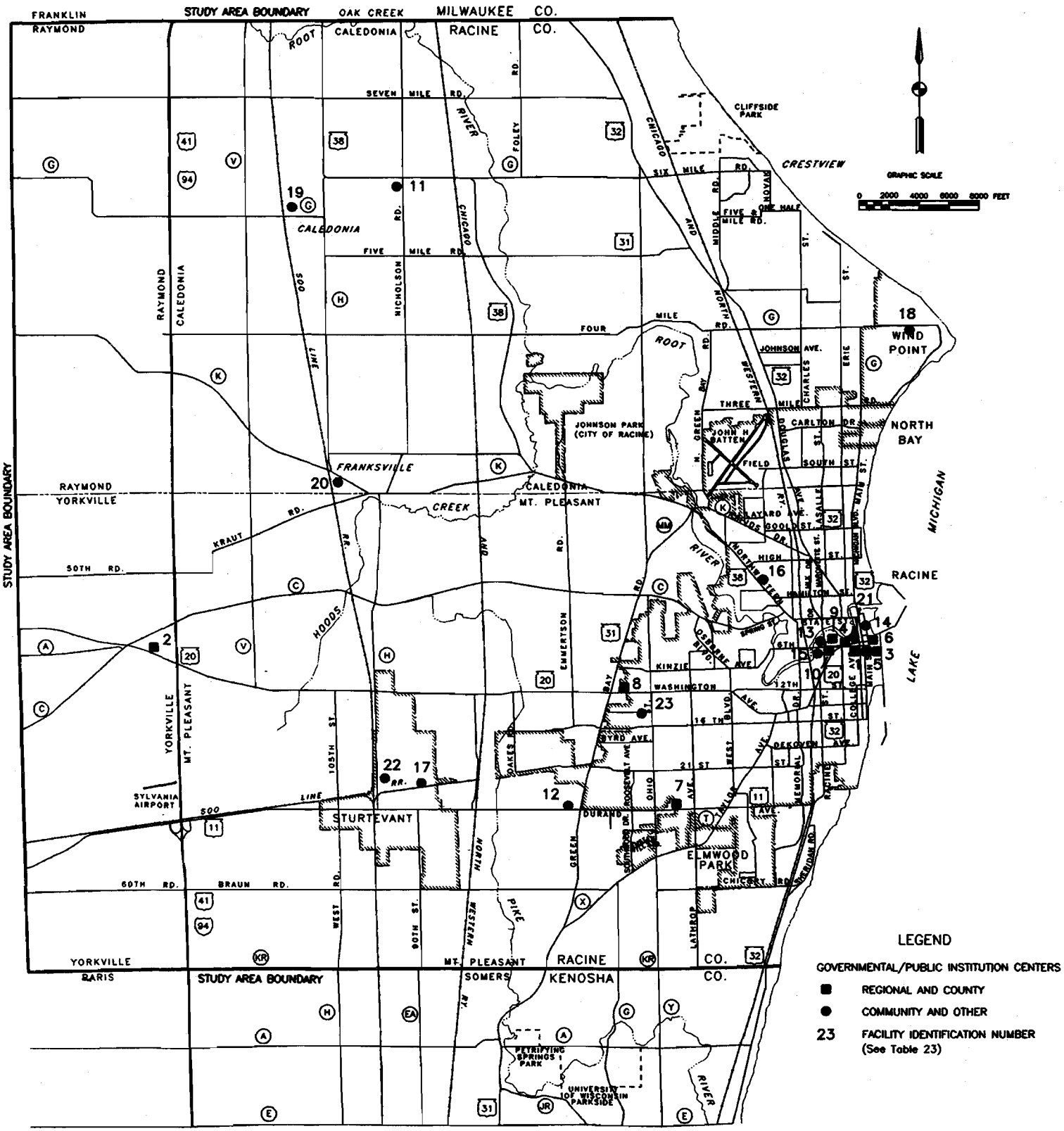
patterns of transit users in the Racine area. Survey forms were distributed to, and collected from, passengers on approximately 60 percent of the bus runs on the 10 regular routes. Provision was made for return by mail of survey forms which could not be collected on the bus. The on-board bus survey form used is reproduced in Appendix B of this report.

Actual ridership on the survey days totaled about 9,200 boarding passengers, including transfer and free passengers. Approximately 5,900 passengers, or about 64 percent of total system boarding passengers, rode on the surveyed bus runs on the survey days and were asked to complete a survey form. Usable survey forms were returned by approximately 1,600 passengers on the regular routes. This number represents about 30 percent of the surveyed boarding passengers and about 20 percent of the total boarding passengers using the Belle Urban System on the survey days.

The information gathered by the on-bus survey included socio-economic characteristics of the transit users, characteristics of the trips made by the transit users, and comments and service suggestions from transit users. The following

Map 16

## GOVERNMENTAL AND PUBLIC INSTITUTIONAL CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

## Table 24

## MAJOR EMPLOYMENT CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Maps 17 and 18 | Employment Center | Address[a] | Approximate Employment | | | |
|---|---|---|---|---|---|---|
| | | | 100-249 | 250-499 | 500-999 | 1,000+ |
| | Industrial/Manufacturing | | | | | |
| 1 | A&E Manufacturing Company | 5501 21st Street | X | -- | -- | -- |
| 2 | Acme Die Casting Corporation | 5626 21st Street | X | -- | -- | -- |
| 3 | AMETEK, Lamb Electric Division | 2745 Chicory Road, Town of Mt. Pleasant | -- | X | -- | -- |
| 4 | Andis Company | 1718 Layard Avenue | X | -- | -- | -- |
| 5 | Benjamin Air Rifle Company, Sheridan Products Division | 2600 Chicory Road | X | -- | -- | -- |
| 6 | Color Arts, Inc. | 1840 Oakdale Avenue | X | -- | -- | -- |
| 7 | E. C. Styberg Engineering Company | 1600 Goold Street | X | -- | -- | -- |
| 8 | FAI, Inc. | 1301 18th Street | X | -- | -- | -- |
| 9 | Gettys Corporation | 2701 N. Green Bay Road | X | -- | -- | -- |
| 10 | Great Northern Corporation | 1800 South Street | X | -- | -- | -- |
| 11 | Greene Manufacturing Company | 1028 Douglas Avenue | X | -- | -- | -- |
| 12 | Haban Manufacturing Company | 2100 Northwestern Avenue | X | -- | -- | -- |
| 13 | In-Sink-Erator, Division of Emerson Electric Company | 4700 21st Street | X | -- | -- | -- |
| 14 | Interlake Packaging Corporation | 718 Marquette Street | -- | -- | -- | -- |
| 15 | Jacobsen Manufacturing Company, Division of Textron, Inc. | 1721 Packard Avenue | X | -- | X | -- |
| 16 | Jensen Metal Products, Inc. | 1222 18th Street | -- | -- | -- | -- |
| 17 | J. I. Case Company | 700 State Street | -- | -- | X | -- |
| 18 | J. I. Case Company | 24th Street/Mead Street, Town of Mt. Pleasant | -- | -- | X | -- |
| 19 | J. I. Case Company | 7000 Durand Avenue, Town of Mt. Pleasant | -- | -- | X | -- |
| 20 | J. I. Case Company | 5724 Washington Avenue, Town of Mt. Pleasant | -- | X | -- | -- |
| 21 | Mamco Corporation | 8630 Industrial Drive, Town of Franksville | X | -- | -- | -- |
| 22 | Massey-Ferguson, Inc. | 2200 DeKoven Avenue | -- | -- | X | -- |
| 23 | Medical Engineering Corporation | 3037 Mt. Pleasant Street | -- | X | -- | -- |
| 24 | Modine Manufacturing Company | 1500 DeKoven Avenue | -- | -- | X | -- |
| 25 | Motor Specialty, Inc. | 2801 Lathrop Avenue | X | -- | -- | -- |
| 26 | Moxness Products, Inc. | 1914 Indiana Street | X | -- | -- | -- |
| 27 | Parker Hannifin Corporation | 7900 Durand Avenue, Town of Mt. Pleasant | X | -- | -- | -- |
| 28 | Pioneer Products, Inc. | 1917 S. Memorial Drive | X | -- | -- | -- |
| 29 | Printing Development, Inc. | 2010 Indiana Street | X | -- | -- | -- |
| 30 | Professional Positioners, Inc. | 2525 Three Mile Road, Town of Caledonia | X | -- | -- | -- |
| 31 | Promotions Unlimited Corporation | 7601 Durand Avenue, Town of Mt. Pleasant | X | -- | -- | -- |
| 32 | Racine Die Casting Corporation, Division of Ganton Technologies, Inc. | 2620 90th Street, Village of Sturtevant | -- | X | -- | -- |
| 33 | Racine Federated, Inc. | 2200 South Street | X | -- | -- | -- |
| 34 | Racine Fluid Power, Inc., Division of Dana Corporation | 7505 Durand Avenue, Town of Mt. Pleasant | -- | X | -- | -- |
| 35 | Racine Industries, Inc. | 1405 16th Street | X | -- | -- | -- |
| 36 | Racine Journal-Times | 212 4th Street | X | -- | -- | -- |
| 37 | Racine Steel Castings Company, Division of B R Holdings, Ltd. | 1442 N. Memorial Drive | -- | X | -- | -- |
| 38 | Rainfair, Inc. | 3600 S. Memorial Drive, Town of Mt. Pleasant | X | -- | -- | -- |
| 39 | SAF Entrprises, Inc. | 1701 N. Memorial Drive | X | -- | -- | -- |
| 40 | S. C. Johnson and Son, Inc. | 1525 Howe Street | -- | -- | -- | X |
| 41 | S. C. Johnson and Son, Inc. | 2512 Willow Road, Town of Mt. Pleasant | -- | -- | -- | X |
| 42 | Thermal Transfer Products, Ltd. | 5215 21st Street | X | -- | -- | -- |
| 43 | Twin Disc, Inc. | 1328 Racine Street | -- | X | -- | -- |
| 44 | Twin Disc, Inc. | 4600 21st Street | -- | X | -- | -- |

## Table 24 (continued)

| Number on Maps 17 and 18 | Employment Center | Address[a] | Approximate Employment | | | |
|---|---|---|---|---|---|---|
| | | | 100-249 | 250-499 | 500-999 | 1,000+ |
| | Industrial/Manufacturing (continued) | | | | | |
| 45 | Unico, Inc. | 3725 Nicholson Road, Town of Caledonia | X | -- | -- | -- |
| 46 | United Mechanical, Inc. | 1500 12th Street | X | -- | -- | -- |
| 47 | United States Can Company | 1901 Chicory Road, Town of Mt. Pleasant | X | -- | -- | -- |
| 48 | Walker Forge, Inc. | 2000 17th Street | -- | X | -- | -- |
| 49 | Walker Manufacturing Company | 1201 Michigan Boulevard | -- | X | -- | -- |
| 50 | Warren Industries, Inc. | 3130 Mt. Pleasant Street | -- | X | -- | -- |
| 51 | Webster Fluid Power Division | 1900 Clark Street | -- | X | -- | -- |
| 52 | Western Publishing Company, Inc. | 1220 Mound Avenue | -- | -- | X | -- |
| 53 | Western Publishing Company, Inc. | 5947 Erie Street, Town of Caledonia | -- | X | -- | -- |
| | Retail/Service | | | | | |
| 54 | Phar-Mor | 2360 S. Green Bay Road | X | -- | -- | -- |
| 55 | Porter Furniture | 301 6th Street | X | -- | -- | -- |
| 56 | Racine West[b] | Durand Avenue/S. Green Bay Road | -- | -- | -- | X |
| 57 | School Services and Leasing | 1622 Oakes Road | -- | X | -- | -- |
| 58 | Shopko Department Stores | 4801 Washington Avenue | X | -- | -- | -- |
| | Governmental/Institutional | | | | | |
| 59 | Kurten Medical Group | 2405 Northwestern Avenue | X | -- | -- | -- |
| 60 | Racine City Hall | 730 Washington Avenue | X | -- | -- | -- |
| 61 | Racine County Courthouse | 730 Wisconsin Avenue | X | -- | -- | -- |
| 62 | Racine County Highway and Office Building | 14200 Washington Avenue, Town of Yorkville | X | -- | -- | -- |
| 63 | Racine County Human Services Department | 207 7th Street | -- | X | -- | -- |
| 64 | Racine County Opportunity Center | 4214 Sheridan Road, Town of Mt. Pleasant | X | -- | -- | -- |
| 65 | Racine Medical Clinic | 3807 Spring Street | X | -- | -- | -- |
| 66 | Racine County Law Enforcement Center | 717 Wisconsin Avenue | -- | X | -- | -- |
| 67 | Racine Police Department | 730 Center Street | -- | X | -- | -- |
| 68 | St. Luke's Hospital | 1320 Wisconsin Avenue | -- | -- | X | -- |
| 69 | St. Mary's Medical Center | 3801 Spring Street | -- | -- | X | -- |
| 70 | Town of Caledonia Town Hall | 6922 Nicholson Road, Town of Caledonia | X | -- | -- | -- |
| 71 | Town of Mt. Pleasant Town Hall | 6126 Durand Avenue, Town of Mt. Pleasant | X | -- | -- | -- |
| 72 | Lincoln Lutheran Home | 2015 Prospect Avenue | X | -- | -- | -- |
| 73 | Lincoln Village Convalescent Center | 1700 C.A. Becker Drive | X | -- | -- | -- |
| 74 | Racine Community Care Center | 1600 Ohio Street | X | -- | -- | -- |
| 75 | Ridgewood Care Center of Racine County | 5455 Durand Avenue, Town of Mt. Pleasant | X | -- | -- | -- |
| | Educational | | | | | |
| 76 | University of Wisconsin-Parkside | Wood Road, Town of Somers | -- | X | -- | -- |
| 77 | Gateway Technical Institute | 1001 S. Main Street | -- | -- | X | -- |
| 78 | Washington Park High School | 1901 12th Street | X | -- | -- | -- |
| 79 | William Horlick High School | 2119 Rapids Drive | X | -- | -- | -- |
| 80 | J. I. Case High School | 7345 Washington Avenue, Town of Mt. Pleasant | X | -- | -- | -- |
| 81 | Gilmore Middle School | 2330 Northwestern Avenue | X | -- | -- | -- |
| 82 | McKinley Middle School | 2326 Mohr Avenue | X | -- | -- | -- |
| 83 | Mitchell Middle School | 2701 Drexel Avenue | X | -- | -- | -- |
| 84 | Starbuck Middle School | 1516 Ohio Street | X | -- | -- | -- |
| 85 | Jerstad-Agerholm Middle School | 3601 LaSalle Street | X | -- | -- | -- |

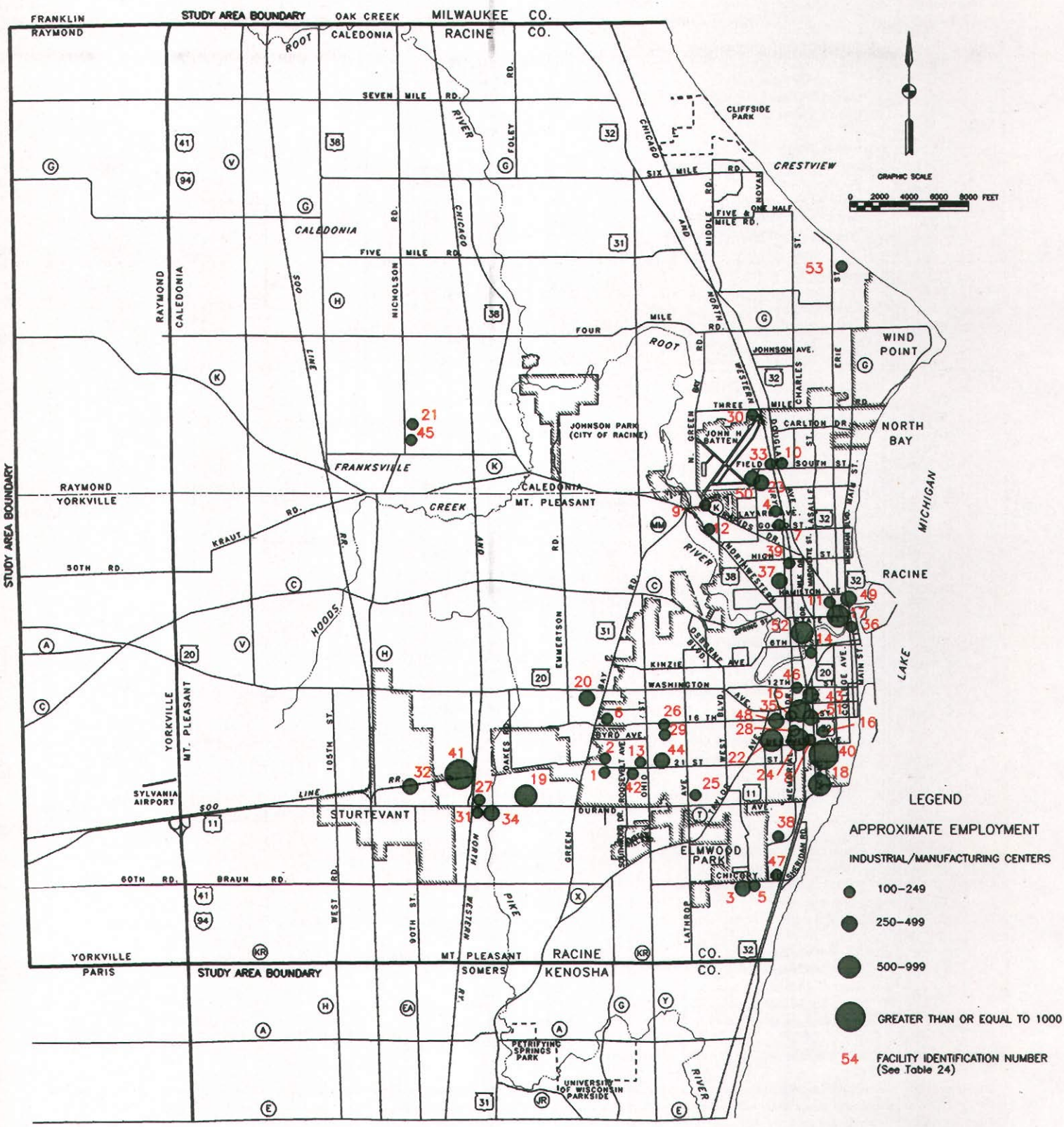
[a] *Except where noted, all addresses refer to the City of Racine.*

[b] *The Racine-West retail/service area includes the major retail and service establishments located immediately to the north of the intersection of Green Bay Road (STH 31) and Durand Avenue (STH 11) in the City of Racine, including the Regency Mall shopping center, the Highridge Mall, the Regency Point shopping center, and Sam's Warehouse Club.*

*Source: SEWRPC.*

## Map 17

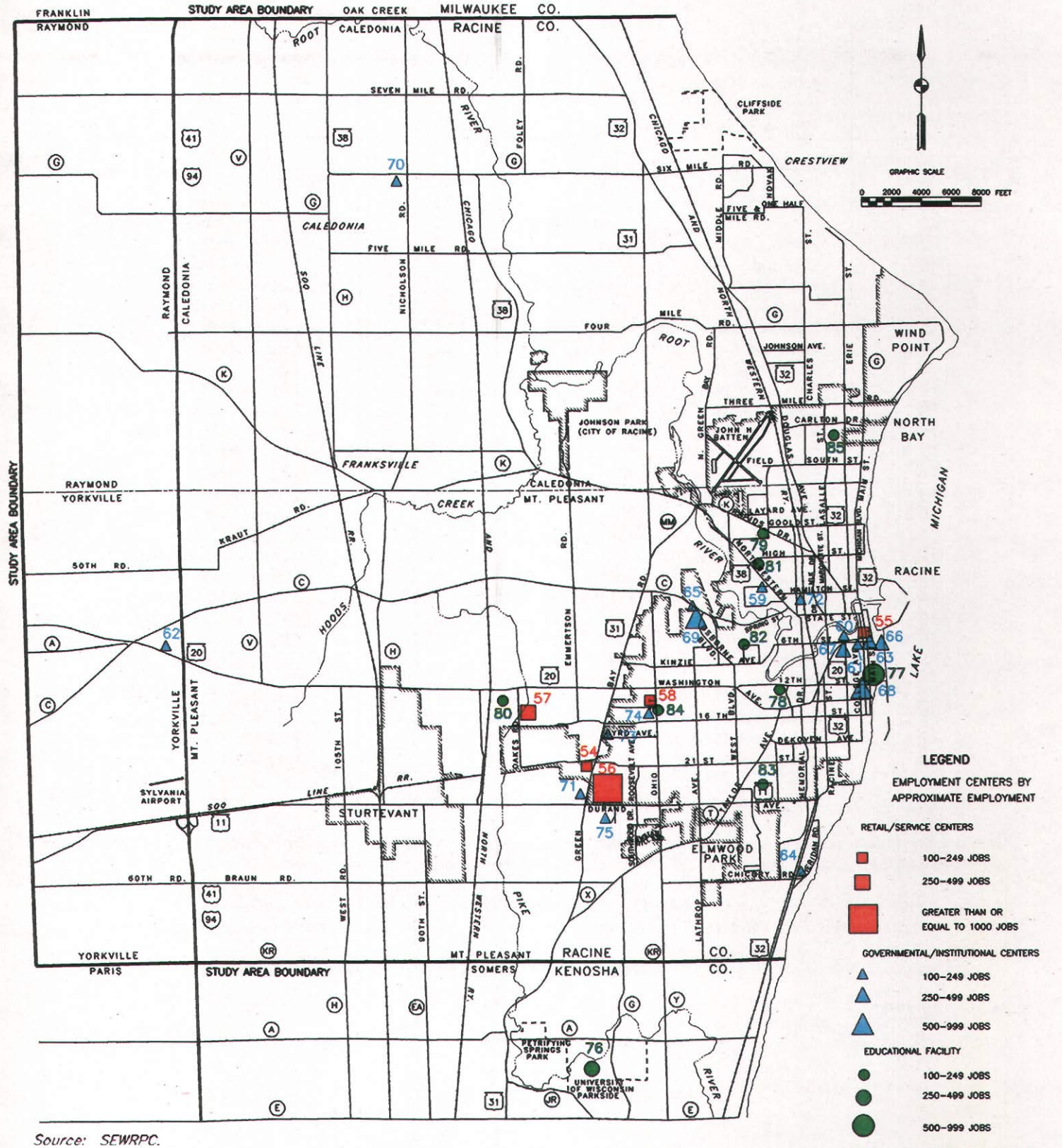
## MAJOR INDUSTRIAL/MANUFACTURING EMPLOYMENT CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

## Map 18

## MAJOR RETAIL/SERVICE, GOVERNMENTAL/INSTITUTIONAL, AND EDUCATIONAL EMPLOYMENT CENTERS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




Source: SEWRPC.

Table 25

**MAJOR RECREATIONAL AREAS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992**

| Number on Map 19 | Recreational Area | Civil Division |
|---|---|---|
| | Regional[a] | |
| 1 | Cliffside County Park | Town of Caledonia |
| 2 | Johnson Park | City of Racine |
| 3 | Petrifying Springs County Park | Town of Somers |
| | Community[b] | |
| 4 | Colonial Park | City of Racine |
| 5 | Dr. Martin Luther King Center | City of Racine |
| 6 | Douglas Park and Community Center | City of Racine |
| 7 | Franklin Park | City of Racine |
| 8 | Greenridge Park | Town of Caledonia |
| 9 | Horlick Athletic Field | City of Racine |
| 10 | Horlick Island Park | City of Racine |
| 11 | Humble Park and Community Center | City of Racine |
| 12 | Lakeview Park and Community Center | City of Racine |
| 13 | Lincoln Park | City of Racine |
| 14 | Lockwood Park | City of Racine |
| 15 | Caledonia/Mt. Pleasant Memorial Park[c] | Town of Caledonia |
| 16 | 95th Street Park | Village of Sturtevant |
| 17 | North Beach Park | City of Racine |
| 18 | Pershing Park | City of Racine |
| 19 | Pritchard County Park | City of Racine |
| 20 | Quarry Lake Park | Town of Mt. Pleasant |
| 21 | Roosevelt Park and Community Center | City of Racine |
| 22 | Sanders County Park | Town of Mt. Pleasant |
| 23 | Shoop Park | Village of Wind Point |
| 24 | Stuart-McBridge Memorial Park | Town of Mt. Pleasant |
| 25 | Sturtevant Park | Village of Sturtevant |
| 26 | Washington Park Bowl | City of Racine |
| | Special[d] | |
| 27 | Wustum Park and Art Museum | City of Racine |
| 28 | Zoological Gardens | City of Racine |
| 29 | Armstrong Park | Town of Caledonia |
| 30 | Racine Festival Park | City of Racine |

[a] *Defined as public recreation sites at least 250 acres in size offering multiple recreational opportunities.*

[b] *Defined as multiple-use public recreation sites which are community-oriented in service area and which contain community recreation facilities such as baseball or softball diamonds, swimming pools, or tennis courts.*

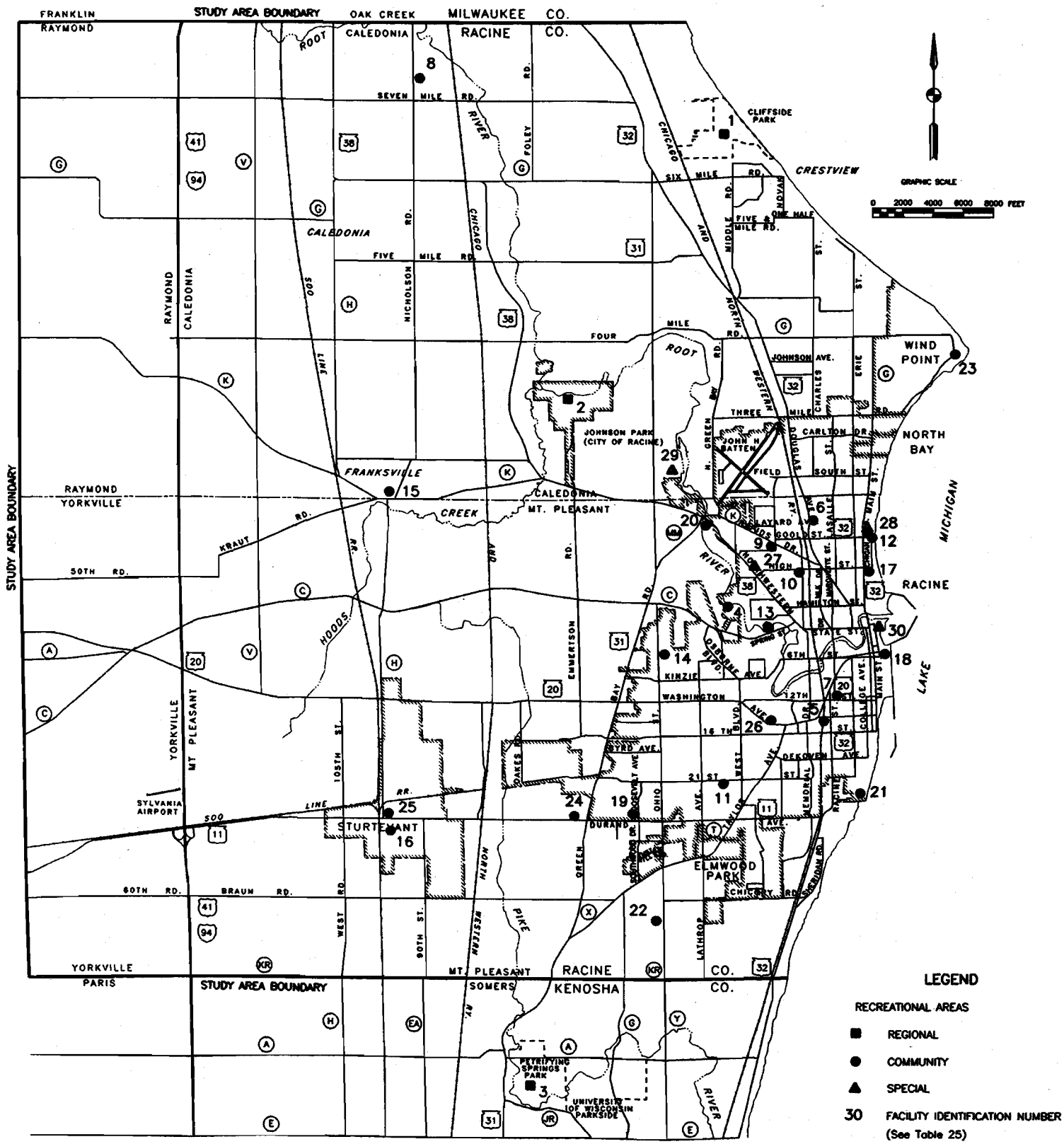
[c] *Memorial Park also contains several soccer fields operated by the Racine Area Soccer Association (RASA). RASA also expects to expand their operations at Memorial Park on land adjacent to the existing park.*

[d] *Comprises public and private recreational areas used primarily for special purposes.*

*Source: SEWRPC.*

Map 19

## MAJOR RECREATIONAL AREAS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992




*Source: SEWRPC.*

Table 26

**1991 ESTIMATED TOTAL PERSON TRIPS WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA AND BETWEEN THE STUDY AREA AND OTHER COUNTIES IN THE SOUTHEASTERN WISCONSIN REGION BY ANALYSIS AREA**

| Analysis Area | Analysis Area Description | Total Person Trips by Analysis Area[a] | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Racine Transit System Development Plan Study Area | 1 Racine Central Business District | 1,580 | -- | -- | -- | -- | -- | -- | -- |
| | 2 Northern Racine | 9,440 | 46,440 | -- | -- | -- | -- | -- | -- |
| | 3 Southern Racine | 13,870 | 57,470 | 99,990 | -- | -- | -- | -- | -- |
| | 4 Caledonia | 4,150 | 34,710 | 21,770 | 22,480 | -- | -- | -- | -- |
| | 5 Mt. Pleasant | 1,740 | 13,760 | 33,820 | 9,210 | 8,630 | -- | -- | -- |
| | 6 Sturtevant | 100 | 1,620 | 8,760 | 1,370 | 3,640 | 2,200 | -- | -- |
| | 7 Raymond[b] | 0 | 70 | 0 | 210 | 100 | 10 | 90 | -- |
| | 8 Yorkville[b] | 50 | 270 | 770 | 170 | 220 | 90 | 100 | 590 |
| Racine County | 9 Western Racine County | 550 | 1,880 | 6,240 | 1,830 | 2,650 | 800 | 440 | 1,340 |
| | 10 Burlington | 0 | 390 | 530 | 460 | 210 | 70 | 20 | 40 |
| Kenosha County | 11 Kenosha | 830 | 4,190 | 17,390 | 2,260 | 4,370 | 1,120 | 0 | 60 |
| | 12 Somers | 180 | 1,490 | 6,430 | 1,090 | 1,390 | 850 | 30 | 70 |
| | 13 Pleasant Prairie | 40 | 340 | 2,490 | 110 | 490 | 60 | 0 | 10 |
| | 14 Western Kenosha County | 0 | 790 | 2,430 | 140 | 550 | 290 | 10 | 230 |
| Milwaukee County | 15 Milwaukee Central Business District | 80 | 1,270 | 1,590 | 1,710 | 660 | 50 | 10 | 70 |
| | 16 Northern Milwaukee County | 530 | 860 | 2,280 | 1,760 | 310 | 30 | 20 | 0 |
| | 17 Southern Milwaukee County | 650 | 5,190 | 5,750 | 13,160 | 2,180 | 1,140 | 280 | 370 |
| Walworth County | 18 Walworth County | 60 | 290 | 960 | 310 | 70 | 50 | 20 | 0 |
| Waukesha County | 19 Waukesha County | 210 | 1,070 | 1,170 | 1,410 | 1,020 | 60 | 10 | 60 |
| Ozaukee County | 20 Ozaukee County | 60 | 160 | 240 | 180 | 0 | 0 | 0 | 0 |
| Washington County | 21 Washington County | 0 | 140 | 130 | 160 | 40 | 0 | 0 | 0 |

[a] *Boundaries of analysis areas are shown on Map 21.*

[b] *Includes only that portion of analysis area within the Racine transit system development plan study area.*

*Source: SEWRPC.*

sections summarize the results of the survey with respect to this information.

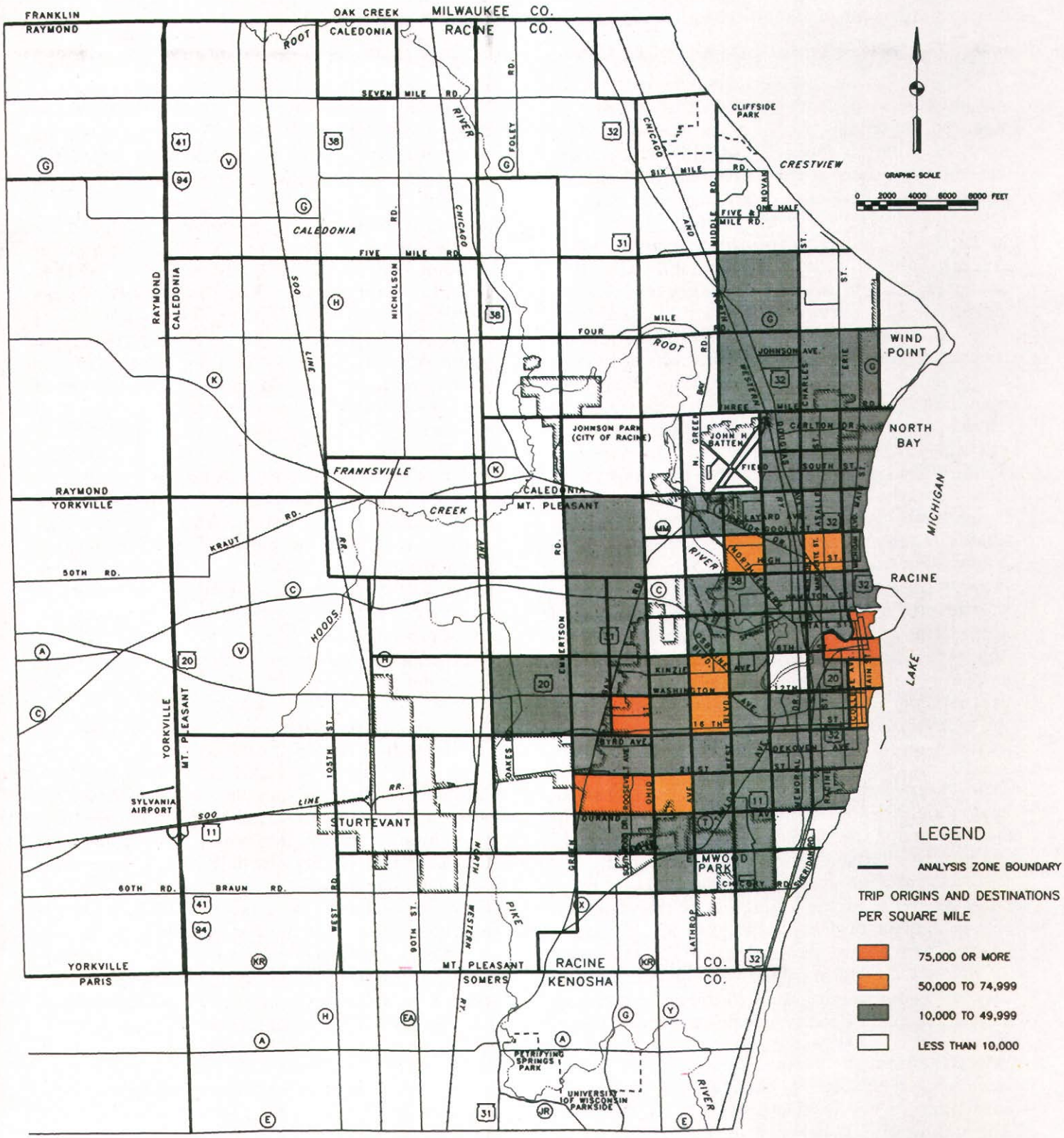
Socio-Economic Characteristics: The socio-economic characteristics generally considered relevant to the provision of transit facilities and services include sex, age, licensed driver status, income, household size, and vehicle availability. A summary of this information for all transit system users is presented in Table 27. Similar information for the users of each of the 10 regular bus routes is presented in Appendix C.

As indicated in Table 27, about 62 percent of the Racine transit system users are female and about 66 percent do not possess a valid driver's license. This is consistent with national figures, which indicate that women and unlicensed drivers constitute the overwhelming majority of transit riders.

By age group, use of the Belle Urban System by persons 18 years of age or under is prominent, representing 34 percent of system ridership. This age group includes secondary and elementary school students in the City. Other age groups of transit system riders representing substantial proportions of the transit system ridership included the age group of 19 through 24 years and the age group of 25 through 34 years. These age groups probably represent passengers just entering the labor force, with lower household incomes and lower household automobile availability. However, members of the former age

## Map 20

## TOTAL PERSON TRIP DENSITY BY TRAFFIC ANALYSIS ZONE WITHIN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1991




*Source: SEWRPC.*

group could also be attending a technical school, college, or university. Based upon the survey results, the median household income of the transit riders on the Belle Urban System was between $10,000 to $15,000, with the predominant household income of transit riders under $10,000.

Automobile availability is an important factor influencing transit use. Households without an automobile are dependent upon other persons, or upon public transit, for essential transportation services. Also, in those households where there are more members of the household, particularly persons of driving age, than there are automobiles, some members of the household may also be dependent either upon others or upon public transit. Table 28 tabulates automobile availability by household size for the surveyed transit ridership. The survey findings indicated that, over all, about 33 percent of the Belle Urban System riders were members of households with no vehicles available; another 32 percent were members of households with one vehicle available, totaling a total of about 65 percent of system riders with limited automobile availability. As shown in Table 27, the proportion of riders with limited automobile availability is much higher for riders making work trips; about 76 percent of these riders are members of households with limited automobile availability. However, a relatively large number of total system riders, about 35 percent, resided in households with two or more automobiles available. This may be attributed to the larger, three or more person, household size characterizing this category and to the use of the transit system by members of these households for school-related trips.

Trip Characteristics: As would be expected, the vast majority, approximately 94 percent, of trip makers using the Belle Urban System reside within the City of Racine. The remaining 6 percent of transit system riders were principally residents of the Village of Sturtevant and of the Towns of Caledonia and Mt. Pleasant within the study area. Notably, less than 0.5 percent of system riders were residents of the City of Kenosha and immediately surrounding area in Kenosha County, outside the study area.

Information on the purpose of trips made on the Belle Urban system as identified through the passenger survey is also presented in Table 27. Approximately 33 percent of all transit trips involved travel that was school-based, that is, at least one end of the trip had school as an origin or destination. An additional 25 percent of transit trips involved travel between home and work.

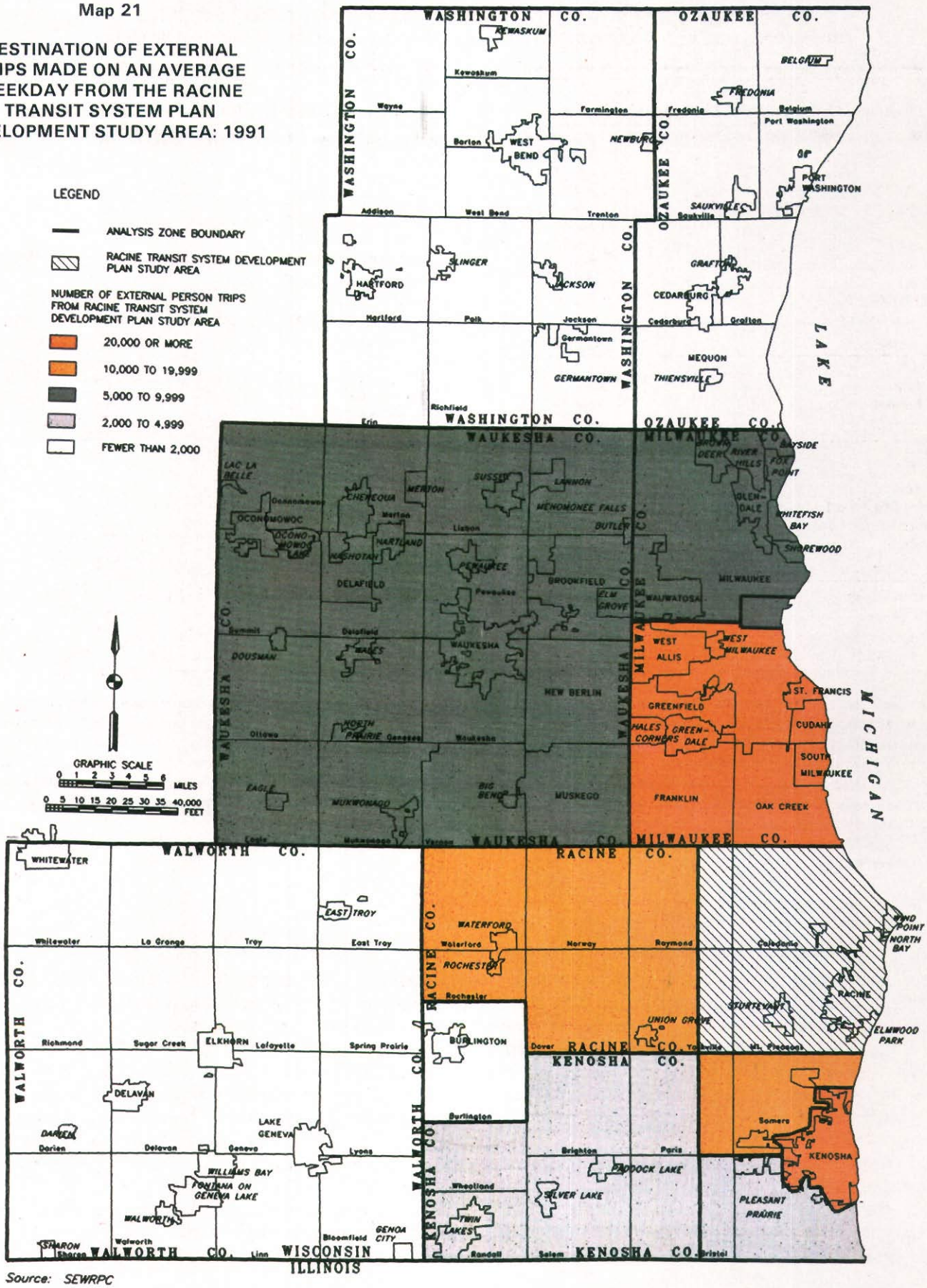
To facilitate the further analyses of person trip characteristics, it is convenient to express travel in terms of trip ends, with one end of the trip being the "production end" and the other end being the "attraction end." For trips beginning or ending at home, or home-based trips, the production end is always considered the home end of the trip, while the attraction end is always considered the nonhome end, regardless of the actual direction of the trip. The number of home-based trips produced within a specified area, for example, would be the number of trips from homes in that area to places of employment in all other areas plus the number of trips from places of employment in all other areas to homes in the specified area. Conversely, the number of home-based work trips attracted to a specified area would be the number of trips from homes in all other areas to a place of employment within that specified area plus the number of trips from places of employment in that specified area to homes in all other areas. Such a designation is helpful in defining the residential distribution of trip makers and also the concentrations of work, shopping, and school facilities. For trips having neither end at home or nonhome-based-trips, the origin of the trip is defined as the production end, while the destination is defined as the attraction end.

Based upon this distinction, Maps 22 and 23 illustrate graphically the distribution of transit person trip productions and attractions by U. S. Public Land Survey quarter-section within the study area. In general, the map of transit trip productions reflects the residential concentrations of the users of the Belle Urban system. The heaviest concentrations of transit trip attractions are located in the quarter-sections containing the Racine central business district, which attracted about 1,600 transit trips on the survey days; the Regency Mall, which attracted about 500 transit trips; and the Westgate Mall, which attracted about 400 transit trips.

The hourly distributional pattern of transit system revenue passengers on the survey days is shown in Figure 9. This figure indicates that most of the travel on the transit system occurs

Map 21

## DESTINATION OF EXTERNAL TRIPS MADE ON AN AVERAGE WEEKDAY FROM THE RACINE TRANSIT SYSTEM PLAN DEVELOPMENT STUDY AREA: 1991




Source: SEWRPC

Table 27

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE CITY OF RACINE BELLE URBAN SYSTEM FOR VARIOUS RIDERSHIP CHARACTERISTICS: APRIL 16-18, 1991

| Ridership Characteristics | Percent of Revenue Passengers |
|---|---|
| Age | |
| 5 and Under | 0.0 |
| 6-12 | 2.5 |
| 13-15 | 12.9 |
| 16-18 | 18.8 |
| 19-24 | 17.1 |
| 25-34 | 21.2 |
| 35-44 | 12.4 |
| 45-54 | 5.5 |
| 55-64 | 3.9 |
| 65 and Older | 5.7 |
| Total | 100.0 |
| Sex | |
| Male | 38.2 |
| Female | 61.8 |
| Total | 100.0 |
| Race | |
| Black | 39.9 |
| White | 49.8 |
| American Indian/Alaskan | 1.3 |
| Asian/Pacific Islander | 0.4 |
| Other | 8.6 |
| Total | 100.0 |
| Licensed Driver | |
| Yes | 33.7 |
| No | 66.3 |
| Total | 100.0 |
| Household Income | |
| Under $5,000 | 22.2 |
| $ 5,000 - $ 9,999 | 18.5 |
| $10,000 - $14,999 | 14.6 |
| $15,000 - $19,999 | 7.4 |
| $20,000 - $24,999 | 9.2 |
| $25,000 - $29,999 | 6.0 |
| $30,000 - $34,999 | 6.4 |
| $35,000 - $39,999 | 4.6 |
| $40,000 - $49,999 | 4.2 |
| $50,000 and Over | 6.9 |
| Total | 100.0 |
| Trip Purpose[a] | |
| Home-Based Work | 25.0 |
| Home-Based Shopping | 8.6 |
| Home-Based Other | 23.3 |
| Nonhome-Based | 10.6 |
| School-Based | 32.5 |
| Total | 100.0 |
| Work Trip Vehicle Availability | |
| No Vehicle | 35.3 |
| One Vehicle | 40.4 |
| Two Vehicles | 18.2 |
| Three or More Vehicles | 6.1 |
| Total | 100.0 |

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

*Source: SEWRPC.*

during two peak periods of transit ridership, from 6:30 a.m. to 8:00 a.m. and from 2:30 p.m. to 4:00 p.m. Approximately 33 percent of the total daily ridership occurring during these two periods. The ridership peak occurring between 2:30 p.m. and 4:00 p.m. accounted for about 17 percent of the total daily ridership. About 38 percent of the trips made during this peak period were school-based. Peaking during the morning peak period was only slightly less than during the afternoon peak period, with about 16 percent of the total daily ridership occurring during the morning peak period. More than 58 percent of the trips made during the morning peak period were school-based.

During the on-bus survey, information was also collected on the transfer movement of all boarding passengers between bus routes. Approximately 28 percent of the revenue passengers surveyed indicated that they transferred between bus routes to complete their trip. An analysis of the transfer movements of transit system passengers is provided in Chapter V of this report.

Table 28

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE CITY OF RACINE BELLE URBAN SYSTEM BY VEHICLE AVAILABILITY AND HOUSEHOLD SIZE: APRIL 16-18, 1991

| Vehicle Availability | Household Size | | | | | | |
|---|---|---|---|---|---|---|---|
| | One Person | Two Persons | Three Persons | Four Persons | Five Persons | Six or More Persons | Total |
| No Vehicle | 10.3 | 7.5 | 5.8 | 4.8 | 2.9 | 2.2 | 33.5 |
| One Vehicle | 3.1 | 6.5 | 7.6 | 6.0 | 4.7 | 3.6 | 31.5 |
| Two Vehicles | 0.2 | 2.2 | 6.2 | 6.5 | 4.1 | 4.6 | 23.8 |
| Three or More Vehicles | 0.0 | 0.4 | 2.6 | 3.3 | 1.9 | 3.0 | 11.2 |
| Total | 13.6 | 16.6 | 22.2 | 20.6 | 13.6 | 13.4 | 100.0 |

*Source: SEWRPC.*

Transit Passenger Comments: Belle Urban System passengers were also given the opportunity to make comments or service suggestions on the survey form. A summary of the comments and suggestions made by transit system passengers is presented in Table 29. The most frequent comments received were suggestions calling for expansion of the days or hours of transit system operation, with 55 percent of all survey comments pertaining to such improvements. The second most frequently received comment, accounting for only 7 percent of the total comments, was to reduce the operating headways between the buses. Those comments, both included under the category of "Change Service Times or Frequency," accounted for over 62 percent of all comments received. Other frequently monitored comments included requests for better on-time performance, improved driver friendliness, improved downtown transfers, and reduced fares.

## SUMMARY

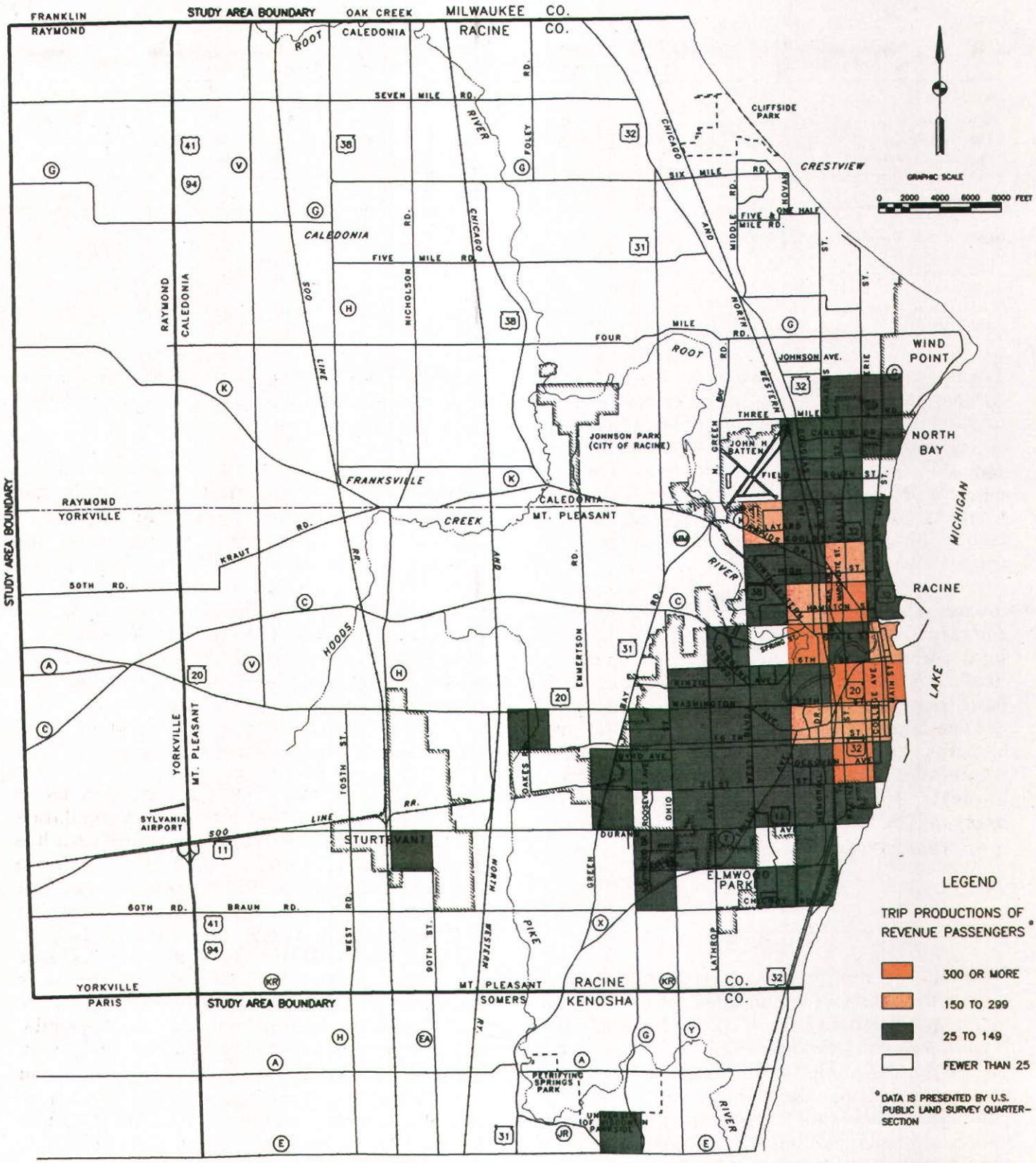
This chapter has presented pertinent information on those factors which affect, or are affected by, the provision and use of transit service in the Racine System Development Plan Study Area. These factors include the existing land use patterns; the size and distribution of the resident population, including those population groups which typically exhibit a high dependence on public transportation; the location of major potential transit trip generators; and the current travel habits and patterns of the population of the study area.

With respect to land use, until about 1950, historic urban development in the greater Racine area generally occurred in relatively tight, concentric rings extending outward from the center of the City of Racine. Urban development after 1950 became discontinuous and diffused throughout much of the study area. At the present time, much of the land within the study area is still in open rural uses with substantial areas of high- and medium-density land uses capable of supporting traditional fixed-route transit service located primarily in the City of Racine and in the Village of Sturtevant.

The results of the 1990 Federal Census of Population indicate that the resident population of the City of Racine and of the study area has again begun to increase after experiencing a period of decline from 1970 to 1985. The resident population of the City and of the study area in 1985 was about 81,500 persons and 130,800 persons, respectively. By 1990, the resident populations for the City and the study area were estimated to have increased to 84,700 persons and 134,600 persons, respectively. While population levels within the City and the study area declined between 1970 and 1990, the number of households actually increased. The number of households within the City and within the study area in 1990 was estimated at 31,800 households and 49,500 households, respectively.

## Map 22

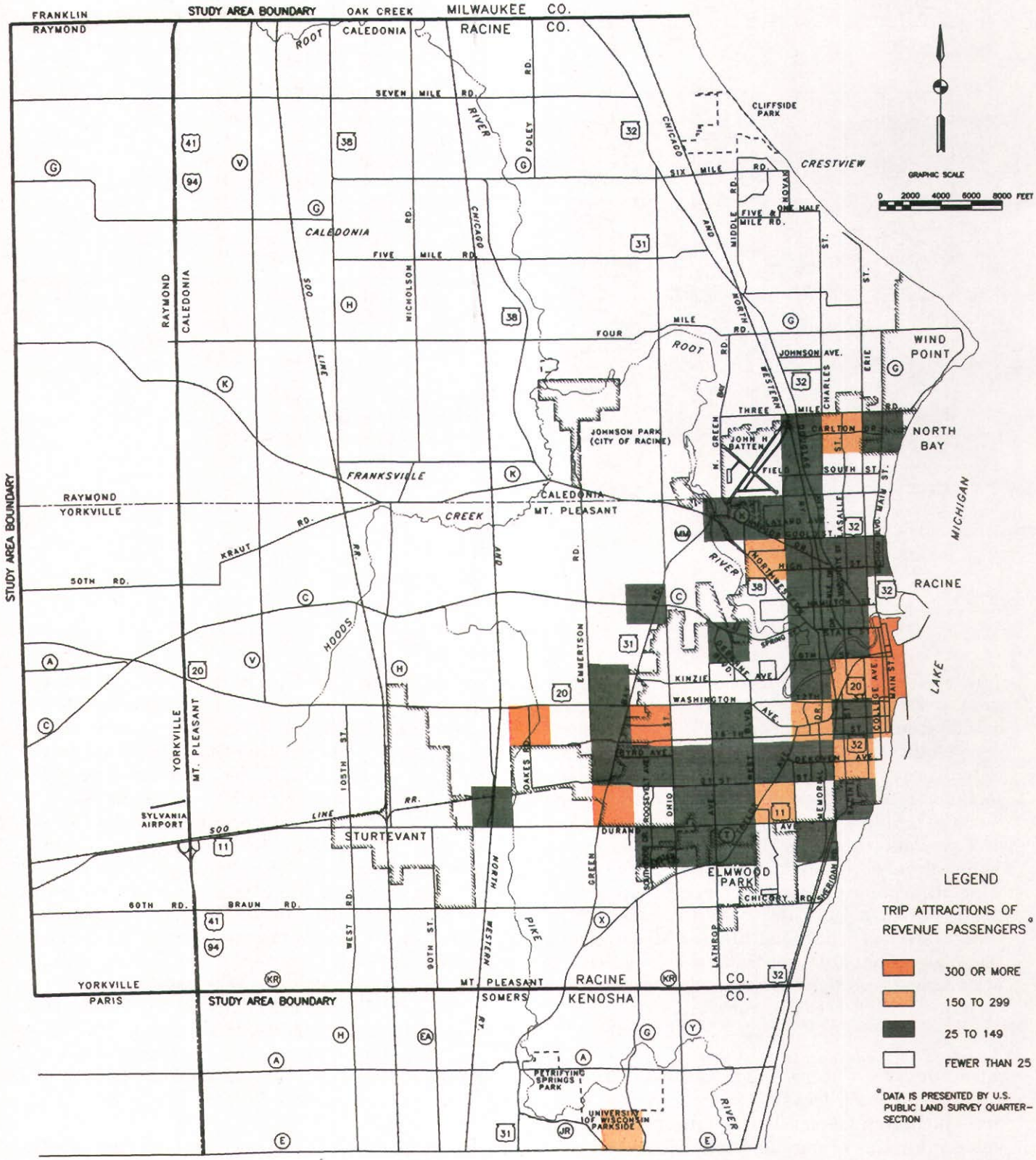
## TRIP PRODUCTIONS OF REVENUE PASSENGERS ON THE CITY OF RACINE BELLE URBAN SYSTEM: APRIL 16-18, 1991




*Source: SEWRPC.*

Map 23

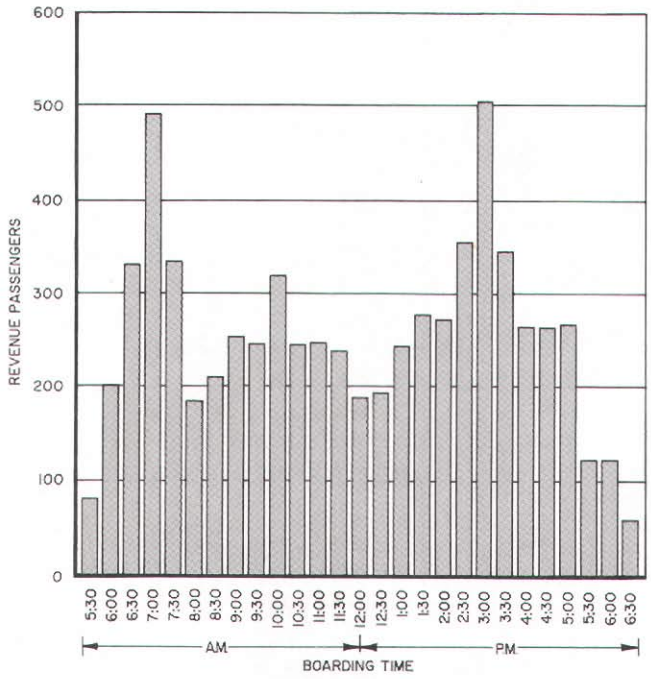
## TRIP ATTRACTIONS OF REVENUE PASSENGERS ON THE CITY OF RACINE BELLE URBAN SYSTEM: APRIL 16-18,1991




*Source: SEWRPC.*

Figure 9

HOURLY DISTRIBUTION OF TRIPS MADE BY REVENUE PASSENGERS ON THE CITY OF RACINE BELLE URBAN SYSTEM: APRIL 16-18, 1991




*Source: SEWRPC.*

Table 29

SUMMARY OF COMMENTS AND SUGGESTIONS RECEIVED FROM SURVEYED PASSENGERS ON THE CITY OF RACINE BELLE URBAN SYSTEM

| Comments and Suggestions | Percent of Survey Comments |
|---|---|
| Change Service Times or Frequency | |
| Add Evening Service | 23 |
| Add Sunday Service | 17 |
| Provide Longer Hours of Service | 10 |
| Reduce Headways | 7 |
| Extend Saturday Service | 3 |
| Add Early Morning Service | 2 |
| Subtotal | 62 |
| Change Routes | |
| Add Stops | 1 |
| Increase Service Area | 1 |
| Subtotal | 2 |
| Other Service Improvements | |
| On-Time Operation | 5 |
| Improved Driver Friendliness | 4 |
| Improved Downtown Transfers | 3 |
| Reduced Fares | 2 |
| Subtotal | 14 |
| No Improvements Needed | 7 |

*Source: SEWRPC.*

The residential concentrations of population groups within the study area which typically exhibit high dependence on public transportation for mobility were identified, using 1990 census data. These transit-dependent population groups include: school-age children, the elderly, low-income families, racial and ethnic minorities, and persons residing in households with limited automobile availability. Identification of the residential concentrations of these groups within the study area indicated that the older, intensively developed portions of the City of Racine have significant concentrations of persons in several of these population groups making this area one of high need for transit service.

Also identified were the locations of major potential transit trip generators in the study area, including transit-dependent population trip generators and major land use trip generators. The transit-dependent population trip generators included facilities specifically serving, or frequently used by, elderly and/or disabled persons and persons residing in low-income households. A high proportion of the person trips generated by such facilities would be expected to be made using public transit service if available. The major land use trip generators included six specific land uses: major commercial centers, educational institutions, hospitals and medical centers, governmental and public institutional centers, major employment centers, and recreational areas. Such land uses attract a relatively large number of person trips and, therefore, have the potential to attract a relatively large number of transit trips. Identification of the locations of these potential transit trip generators indicates that the vast majority are concentrated in the densely developed eastern portion of the study area, primarily within the City of Racine.

An on-board bus survey was conducted on the Belle Urban System bus routes by the Regional

Planning Commission on April 16-18, 1991, to ascertain the socio-economic and travel characteristics of the users of the City's transit system. Survey responses were received from about 20 percent of the transit system passengers during the survey period. The survey data collected indicated that the current transit users were predominantly female, 18 years of age and under, and without a valid driver's license. Transit riders were also found to come predominantly from households having three or more persons, no automobile or only one automobile available, and an annual household income of less than $10,000. Similar survey data concerning the trip characteristics of the transit passengers indicated that most trips made on the transit system were school-based and home-based work trips, with about 33 and 25 percent, respectively, of all transit trips made for these purposes. Comments and suggestions were also received calling for expansion of the days and hours of transit system operation, reduction of operating headways, improved on-time performance, and improved driver friendliness and downtown transfers. About 55 percent of all comments received pertained to requests for extending the hours of service or the addition of Sunday service.

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## Chapter IV

# TRANSIT SERVICE OBJECTIVES AND STANDARDS

## INTRODUCTION

A critical step in the preparation of any transit system development plan is the articulation of the objectives to be served by the transit system and the identification of supporting standards used to measure the degree of attainment of the objectives by the system. The objectives and standards provide the criteria upon which the performance of the existing transit system may be assessed, alternative service plans designed and evaluated, and recommendations for improvement made. The objectives should, therefore, comprehensively set forth the transit service and system performance desired by the City of Racine. The standards should permit direct measurement of the extent to which the objectives are being attained. Only if the objectives and standards clearly reflect transit-related goals will the recommended transit system plan provide the desired level of service within the limits of available financial resources.

The following sections of this chapter present the public transit objectives, principles, and standards formulated and approved by the advisory committee guiding the City transit system development plan preparation effort, and used in the performance evaluation of the existing transit system, and the subsequent design and evaluation of the alternative short-range transit system development plans. In addition, these objectives and standards are also intended to be used for the conduct of the routine service planning and monitoring done by transit system management following the completion of this transit system development plan. Finally, these objectives and standards can also be drawn upon by the transit system in conducting an assessment of transit system compliance with current Federal regulations governing compliance with Title VI of the Civil Rights Act of 1964 which pertain to the provision, planning, and programming of transit services in a manner which is not discriminatory to minority communities or minority users. A glossary of technical terms which are used in this chapter or which will appear in later sections of this report is presented in Appendix D.

## OBJECTIVES

Transit service objectives and standards should reflect the underlying values of the elected officials and citizens of the community to be served. Accordingly, the task of formulating objectives and standards should involve actively interested and knowledgeable public officials and private citizens representing a broad cross-section of interests in the community, as well as transit technicians. Accordingly, one of the important functions of the Racine Public Transit Planning Advisory Committee was to articulate transit service objectives and supporting standards for the Belle Urban System. 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 public transit system performance desired by the City of Racine was obtained and a relevant set of transit service objectives and supporting standards was defined.

The five objectives adopted basically envision a transit system which will effectively serve the City of Racine and adjacent communities while minimizing the costs entailed. More specifically, the following objectives were adopted by the Advisory Committee:

1. Public transit should be provided to those areas of the City and its immediate environs which can be efficiently served. This includes those areas which are fully developed to medium or high densities, and, in particular, areas with transit-dependent populations.

2. Specialized transportation service should be available within the transit service area to meet the transportation needs of those members of the disabled population unable to avail themselves of fixed-route transit service.

3. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety.

4. The public transit system should promote efficiency in the total transportation system.

5. The 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 a set of service and design standards, as set forth in Table 30. The planning principle supports each objective by assessing its validity. Each set of standards is directly related to the transit service objective, and serves several purposes including: to facilitate quantitative application of the objectives in the evaluation of the performance of the existing transit system, to provide guidelines for the consideration of new or improved transit services, and to provide warrants for capital projects. The standards are intended to include all relevant and important measures which would help to indicate the degree to which existing or proposed transit services contribute to the attainment of each objective.

The performance evaluation of the existing transit system utilized in the current study included assessments of transit performance on both a systemwide and individual-route basis. The service standards set forth in this chapter represent a comprehensive list from which specific performance standards and measures, as deemed appropriate, were drawn in conducting the systemwide and route performance evaluations. A more complete description of the evaluation process is presented in Chapter V.

In addition, a number of the service standards set forth in Table 30 can provide guidance in meeting certain requirements which the Wisconsin Department of Transportation has attached to the use of State urban transit operating assistance funds. As a condition of eligibility for receiving State urban transit operating assistance, applicants must annually establish multi-year service and performance goals and assess the effectiveness of the applicant's transit system in relation to those goals on a quarterly basis. At a minimum, systemwide goals must be established for the following performance indicators: operating expense per total vehicle mile, operating expense per platform hour, operating expense per revenue passenger, the proportion of operating expenses recovered from operating revenues; revenue passengers per revenue vehicle mile, and revenue passengers per service area population. The service standards set forth in this chapter to establish the State-required performance goals are set forth in Table 31.

## OVERRIDING CONSIDERATIONS

The objectives and standards set forth in Table 30 were intended to be used to guide the evaluation of the performance of existing transit system and the design and evaluation of public transit system service and facility improvements. However, any application of the objectives and standards in the preparation of a transit system development plan for the Belle Urban System must recognize several overriding considerations.

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

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

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

## Table 30

## PUBLIC TRANSIT SERVICE OBJECTIVES, PRINCIPLES, AND STANDARDS FOR THE CITY OF RACINE BELLE URBAN SYSTEM

| Objective | Principle | Standards |
|---|---|---|
| 1. Public transit should serve those areas of the City and its immediate environs which can be efficiently served. This includes those areas which are fully developed to medium or high densities and, in particular, areas with transit dependent population | Public transit can provide an important means of access for all segments of the population, but particularly for low- to middle-income households, the youth and elderly, and the transportation-disabled | 1. Local fixed-route transit service should be provided only within areas of contiguous high- and medium-density urban development[a]<br><br>2. Public transit service to residential neighborhoods[b] and major nonresidential land use areas should be maximized. Major nonresidential land use areas served should include the following:<br>a. Major regional, community, and neighborhood retail and service centers[c]<br>b. Educational institutions including universities, colleges, vocational schools, secondary schools, and parochial schools[d]<br>c. Major community and special medical centers[c]<br>d. Major employment centers[e]<br>e. Major governmental and public institutional centers[d]<br>f. Major recreational areas[f]<br><br>3. The population served and, particularly that portion which is transit-dependent, should be maximized<br><br>4. The system should maintain an annual level of ridership of at least 13 rides per capita<br><br>5. The number of jobs served should be maximized |
| 2. Specialized transportation service should be available within the transit service area to meet the transportation needs of those portions of the disabled[g] population unable to avail themselves of fixed-route transit service | Individuals with physical and mental disabilities should not be restricted in their daily activities by the lack of transportation. The availability of paratransit service for disabled individuals which is comparable to the fixed-route transit service available to the general public is, therefore, important, in particular as such transit service may represent the only transportation option available for disabled persons | 1. Paratransit service should be made available to any disabled individual who is unable to use fixed-route bus service in accordance with Federal guidelines<br><br>2. The paratransit service should be comparable to the fixed-route bus service provided for the general public, in accordance with Federal guidelines, with respect to the following service criteria:<br>a. Service area<br>b. Response time<br>c. Fares<br>d. Restrictions or priorities placed on trips<br>e. Hours and days of operation<br>f. Capacity restraints |
| 3. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety | The benefits of a public transit system are, to a large extent, greatly related to the degree to which it is used. The extent of such use, as measured by public transit ridership, is a function of the degree to which the transit facilities and services provide for user convenience, comfort, and safety | 1. Ridership on the public transit system should be maximized. The following minimum systemwide effectiveness levels[h], however, should be maintained:<br>a. 1.4 revenue passengers per revenue vehicle mile<br>b. 18 revenue passengers per revenue vehicle hour<br><br>2. Existing bus routes with ridership and effectiveness levels which are less than 80 percent of the average for all routes of the Belle Urban System should be reviewed for potential service changes unless special circumstances warrant otherwise.[i] The measures used to evaluate individual route ridership and effectiveness levels should include:<br>a. Total boarding passengers per route<br>b. Boarding passengers per route mile<br>c. Boarding passengers per revenue vehicle mile<br>d. Boarding passengers per revenue vehicle hour<br>e. Percent of weekday ridership carried on Saturday<br><br>3. The fare policy for the public transit system should encourage transit ridership by providing special or discounted fares for certain population groups, including transit-dependent persons and frequent transit riders |

## Table 30 (continued)

| Objective | Principle | Standards |
|---|---|---|
| No. 3 (continued) | | 4. Public transit service should be designed to provide adequate capacity to meet existing and projected demand. The average minimum load factor[j] for local transit service during peak periods should not exceed 1.25. During off-peak periods and at the 10-minute point,[k] the maximum load factor should not exceed 1.0<br>5. The following minimum travel speeds for local transit service should be provided on the transit system:<br>a. Five miles per hour within the central business district<br>b. Ten miles per hour outside the central business district<br>6. The public transit system should provide a level of service commensurate with potential demand. Operating headways for all fixed-route public transit service should be capable of accommodating passenger demand at the recommended load standards<br>7. The public transit system should be designed and operated to maximize schedule adherence and be "on time" at least 95 percent of the time[l]<br>8. Transit stops for fixed-route local transit service should be located two to three blocks apart along the entire route<br>9. Public transit routes should be direct in alignment, with a minimum of turns, and arranged to minimize transfers and duplication of service, which would discourage transit use<br>10. Local transit service should have route spacings of one-half mile in high-density and medium-density areas<br>11. To provide protection from the weather, bus passenger shelters of an attractive design should be constructed at all major loading points[m]<br>12. Paved passenger loading areas should be provided at all fixed-route transit loading and unloading points, and all such points should be clearly marked by easily recognized bus stop signs<br>13. 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:<br>a. For standard-size heavy-duty (approximately 35 to 40 feet) transit buses, normal service life is considered to be at least 12 years or at least 500,000 miles;<br>b. For medium-size heavy-duty (approximately 30 feet) transit buses, normal service life should be considered to be at least 10 years or 350,000 miles;<br>c. For small medium-duty (under 30 feet) transit buses, normal service life should be considered to be at least seven years or at least 200,000 vehicle miles; and<br>d. For other vehicles such as automobile and regular or specialized vans, normal service life should be considered to be at least four years or at least 100,000 vehicle miles<br>15. Preventive maintenance program standards should be established to achieve, at a minimum, 4,000 miles without an in-service breakdown |

## Table 30 (continued)

| Objective | Principle | Standards |
|---|---|---|
| 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 public transportation 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 centers of land use activity. Efficient public transit service also has the potential to reduce energy consumption and air pollutant emissions | 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 transit system is an integral part, particularly petroleum-based fuels, should be minimized<br>2. The amount of highway system capacity which must be provided to serve travel demand should be minimized |
| 5. The transit system should be economical and efficient, meeting all other objectives at the lowest possible cost | The total resources of the City are limited, hence any investment in transportation facilities and services provided outside the city limits of Racine would not occur at the expense of the City. 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 system | 1. The total operating and capital investment for the public transit system should be minimized and reflect efficient utilization of resources<br>2. The operating expense per total vehicle mile, per platform hour, and per revenue passenger; the operating deficit per revenue passenger should be minimized.[n] Annual increases in such costs should not exceed the average percentage increase experienced by small urban bus systems statewide<br>3. Transit system operating revenues generated from passenger fares and sources other than general public operating subsidies should be maximized. The transit system should recover at least 25 percent of operating expenses from such revenues[o]<br>4. Periodic increases in passenger fares should be considered to maintain the financial stability of the transit system[p]<br>5. Existing bus routes with financial performance levels which are less than 80 percent of the average for all routes of the Belle Urban System, should be reviewed for service changes unless special circumstances warrant otherwise. The measures used to evaluate individual route financial performance should include:<br>a. Operating expense per boarding passenger<br>b. Operating deficit per boarding passenger<br>c. Percent of operating expenses recovered from operating revenues, excluding general public operating subsidies |

[a] *The categories of urban residential land use development densities shall be defined as follows:*

| *Category* | *Number of Dwelling Units per Net Residential Acre* |
|---|---|
| *High-Density Urban* | *7.0 - 17.9* |
| *Medium-Density Urban* | *2.3 - 6.9* |
| *Low-Density Urban* | *0.7 - 2.2* |
| *Suburban-Density* | *0.2 - 0.6* |
| *Rural* | *Less than 0.2* |

[b] *Residential neighborhoods shall be considered as served by local fixed-route public transit service when located within a one-quarter mile walking distance of a bus route.*

[c] *Shall be considered as served if located within one block of a bus route.*

[d] *Shall be considered as served if located within one-eighth mile of a bus route.*

[e] *A major employment center shall be defined as an existing or planned concentration of industrial, commercial, or institutional establishments providing employment for more than 100 persons. Employment centers shall be considered as served if located within one-eighth mile of a bus route.*

[f] *Shall be considered as served if located within one-quarter mile of a bus route.*

[g] *The disabled shall be defined as individuals who, by reason of illness, injury, congenital malfunction, or other permanent or temporary incapacity or disability, are unable without special facilities or special planning or design to utilize public transit services.*

## Footnotes to Table 30 (continued)

*[h] The minimum systemwide effectiveness levels specified within this standard are based upon the average annual ridership per capita, per revenue vehicle mile, and per revenue vehicle hour for small urban bus systems within Wisconsin. During 1991, the Racine transit system carried 21.6 revenue passengers per capita, 1.45 revenue passengers per revenue vehicle mile, and 17.5 revenue passengers per revenue vehicle hour.*

*[i] A 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 30 percent of average performance levels for existing routes after six months of operation, 60 percent of average performance levels for existing routes after one year of operation, and 100 percent of average performance levels for existing routes after two years of operation.*

*[j] The average maximum load factor is calculated by dividing the number of passengers at the maximum loading point of a route by the number of seats a that point during the operating period.*

*[k] The 10-minute point is a point located 10 minutes travel time from the maximum loading point on a route. This means that passengers generally should not have to stand on board the public transit vehicle for longer than 10 minutes.*

*[l] "On-time" is defined as schedule adherence within the range of one minute early and three minutes late.*

*[m] Construction of bus passenger shelters at transit loading points should generally be considered where one or more of the following conditions exist: 1) the location serves major facilities designed specifically for the use of, or is frequently used by, elderly or disabled persons, 2) the location has a boarding passenger volume of 50 or more passengers per day, 3) the location is a major passenger transfer point between bus routes, or 4) the location is in a wide open space where waiting patrons would be unprotected from harsh weather conditions.*

*[n] During 1991, the systemwide average operating expense per total vehicle mile on the Belle Urban transit system was 2.68, the total operating expense per platform vehicle hour was $31.67, the total operating expense per revenue passenger was $1.98, and the total operating deficit per revenue passenger was $1.51.*

*[o] Since 1987, the Belle Urban transit system has recovered an average of about 25 percent of its operating expenses from operating revenues. During 1991, the transit system recovered about 23.9 percent of its operating expenses from passenger and other revenues, excluding Federal, State, and local operating assistance funds.*

*[p] Increases in passenger fares should generally be considered when: 1) the actual cost recovery rate for the transit system goes below the rate prescribed in Standard 3 under Objectives 2, 2) operating expenses for the transit system have increased by 10 to 15 percent since fares were last raised, or 3) 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.*

*Source: SEWRPC.*

## Table 31

## TRANSIT SERVICE OBJECTIVES AND STANDARDS WHICH CAN BE USED TO DEVELOP STATE-REQUIRED PERFORMANCE GOALS

| Objectives and Standards | Performance Measures |
|---|---|
| Objective No. 1—Provide Service to Those Areas of the City and Environs Which Are Most Densely Developed and Which Can Be Most Efficiently Served | |
| Standard No. 4: Maintain High Annual Ridership for Population Served | 13 annual rides per capita[a] |
| Objective No. 3—Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety | |
| Standard No. 1: Maximize Transit System Ridership | 1.4 revenue passengers per revenue vehicle mile; 18 revenue passengers per revenue vehicle hour[a] |
| Objective No. 5—Provide Economical and Efficient Service | |
| Standard No. 2: Minimize Operating Expenses and Operating Deficit per Unit of Transit Service and per Transit Ride | Increases in operating expenses per total vehicle mile, per platform hour, and per revenue passenger and increases in operating deficit per revenue passenger should not exceed the average percentage increase for small urban bus systems statewide |
| Standard No. 3: Maximize Percent of Operating Expenses Recovered through Operating Revenues | Recover at least 25 percent of operating expenses from operating revenues, excluding general public subsidies[b] |

*[a] The specified performance levels are based upon average annual performance levels for small urban bus systems within Wisconsin. During 1991, the Belle Urban System carried 21.6 passengers per capita; 1.45 revenue passengers per revenue vehicle mile; and 17.5 revenue passengers per revenue vehicle hour.*

*[b] Since 1987, the Belle Urban System has recovered an average of 25 percent of its operating expenses from operating revenues. During 1991, the transit system recovered 23.9 percent of its operating expenses from operating revenues, excluding Federal, State, and local operating assistance funds. It should be noted that the adopted regional transportation system plan specifies that public transit services should recover 50 percent of their operating expenses from operating revenues. The highest recovery rate for the Belle Urban System since the City acquired it in 1975 was 51 percent of expenses from operating revenues, which occurred that same year.*

*Source: SEWRPC.*

# Chapter V

# TRANSIT SYSTEM PERFORMANCE EVALUATION

## INTRODUCTION

This chapter evaluates the performance of the City of Racine Belle Urban System on the basis of the transit service objectives and standards set forth in the previous chapter of this report. Five base objectives to be met in the provision of transit service were established in Chapter IV of this report. Table 32 lists these objectives and summarizes the key standards which were used to determine whether these objectives were being met by the existing system. Not all the standards listed under each objective were used in the evaluation process since not all were deemed appropriate for such use. Standards not used were primarily intended to serve as guidelines in the design of new services. Upon examination of the existing routes by the Commission staff, it was found that these standards were met in the design and operation of the current routes. Other standards not used were intended to serve as warrants for providing capital equipment and facilities for the transit system. These standards will be used to the extent necessary in the development of a program of recommended capital projects developed for the recommended transit system plan.

The performance evaluation was conducted at two levels using the sets of performance measures set forth in Table 33. These measures summarize quantitative application of the standards used in the performance evaluation. At the first level, an assessment of transit performance was made on a systemwide basis to ascertain the extent to which the transit system currently serves the existing land use pattern, employment, and resident population of the City of Racine and environs, to assess the overall ridership and financial performance of the transit system, to determine the transit system's contribution to the efficiency of the total transportation system, and to determine the availability of specialized transit service for disabled persons in accordance with Federal guidelines. At the second level of evaluation, the performance of each regular route of the transit system was evaluated on the basis of performance with respect to ridership and effectiveness levels, operating headways and peak passenger loading characteristics, on-time performance, directness of route alignment, and accommodation of transfers. The following sections of this chapter present the findings of the evaluation process. These findings were used to develop the alternative transit system plans described in Chapter VI of this report.

## SYSTEMWIDE PERFORMANCE EVALUATION

### Service to Existing Land Uses and Population Groups

Performance measures used to evaluate the existing transit service provided to Racine area land uses and population groups included measures of the total resident population served, the major nonresidential land use centers served, the facilities used by transit-dependent persons served, and the residential concentrations of transit-dependent population groups served. The evaluation was based upon the extent of geographic coverage provided by the existing transit system, as shown on Map 2 in Chapter II. Ideally, the geographic coverage should include the residential concentrations of the general and transit-dependent population, employment concentrations, and the potential major transit trip generators within the study area and, in particular, the City of Racine. Such residential areas, employment concentrations, and potential transit trip generators were identified in Chapter III.

The performance of the existing transit system with respect to these performance measures is summarized in Tables 34 through 36 and on Maps 24 and 25. On the basis of this information, the following conclusions were reached:

1. The existing transit system provides excellent areal coverage of the existing residential areas within the City of Racine and of the most densely populated residential areas adjacent to the City within the Towns of Caledonia and Mt. Pleasant and within the Village of Sturtevant. Virtually all of the resident population within the City and about 84 percent of the resident population within the study area resided within one-quarter mile of a City bus route.

Table 32

STANDARDS USED IN THE PERFORMANCE EVALUATION OF THE EXISTING TRANSIT SYSTEM

| Objectives and Standards | Standards Used in Transit System Performance Evaluation |
|---|---|
| Objective No. 1—Provide Service to Portions of City that Can Be Efficiently Served | |
| Standard 1: Provide local fixed-route transit service within areas of contiguous high- and medium-density development | X |
| Standard 2: Maximize the residential and nonresidential land use areas served | X |
| Standard 3: Maximize the population served | X |
| Standard 4: Maximize annual rides per capita | X |
| Standard 5: Maximize the jobs served | X |
| Objective No. 2—Provide Specialized Service to Disabled Individuals Unable to Use Fixed-Route Bus Service | |
| Standard 1: Provide paratransit service to all disabled individuals unable to use fixed-route bus service in accordance with Federal guidelines | X |
| Standard 2: Provide paratransit service comparable to fixed-route transit service in accordance with Federal guidelines | X |
| Objective No. 3—Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety | |
| Standard 1: Maximize transit system ridership | X |
| Standard 2: Review routes with substandard ridership and effectiveness levels | X |
| Standard 3: Provide special or discounted fares for transit-dependent persons and frequent riders | -- |
| Standard 4: Provide adequate capacity so as not to exceed load factors | X |
| Standard 5: Provide service which meets or exceeds minimum vehicle speeds | -- |
| Standard 6: Provide service at headways capable of accommodating demand | X |
| Standard 7: Achieve minimum acceptable schedule adherence | X |
| Standard 8: Provide stops meeting minimum stop spacing | -- |
| Standard 9: Minimize indirect routing, duplication of service, and transfers which discourage transit use | X |
| Standard 10: Provide local routes at intervals of no more than one-half mile in high-density and medium-density residential areas | -- |
| Standard 11: Construct bus passenger shelters at major passenger loading areas | -- |
| Standard 12: Provide signs and paved passenger loading areas at bus stops | -- |
| Standard 13: Replace public transit vehicles at end of maximum service life for vehicles | -- |
| Standard 14: Minimize in-service breakdowns of revenue vehicles | -- |
| Objective No. 4—Promote Efficiency in the Total Transportation System | |
| Standard 1: Minimize the energy consumed in operating the total transportation system | X |
| Standard 2: Minimize the amount of highway system capacity needed to serve travel demand | X |
| Objective No. 5—Provide Economical and Efficient Service | |
| Standard 1: Minimize total transit system operating and capital costs | -- |
| Standard 2: Minimize operating expenses and public subsidy per unit of transit service and per transit ride | X |
| Standard 3: Maximize percent of operating expenses recovered through operating revenues | X |
| Standard 4: Consider periodic increases in passenger fares | -- |
| Standard 5: Review routes with substandard financial performance | X |

*Source: SEWRPC.*

Table 33

APPLICATION OF SPECIFIC PERFORMANCE MEASURES IN THE PERFORMANCE EVALUATION PROCESS

| Performance Measure by Objective | Systemwide Performance Evaluation | Route Performance Evaluation |
|---|---|---|
| Objective No. 1—Provide Service to Portions of City that Can Be Efficiently Served | | |
| 1. Population served | X | -- |
| 2. Total employment served | X | -- |
| 3. Major nonresidential land use centers served | X | -- |
| 4. Areas of proposed new or expanding development served | X | -- |
| 5. Facilities used by elderly persons, disabled persons, and low-income households served | X | -- |
| 6. Residential concentrations of transit-dependent population groups served | X | -- |
| Objective No. 2—Provide Specialized Service to Disabled Individuals Unable to Use Fixed-Route Bus Service | | |
| 1. Attainment of Federal eligibility requirements | X | -- |
| 2. Attainment of Federal minimum service criteria | X | -- |
| Objective No. 3—Promote Transit Utilization and Provide for User Comfort, Convenience, and Safety | | |
| 1. Ridership per capita | X | -- |
| 2. Revenue passengers per revenue vehicle mile | X | -- |
| 3. Revenue passengers per revenue vehicle hour | X | -- |
| 4. Total boarding passengers | -- | X |
| 5. Boarding passengers per revenue vehicle hour | -- | X |
| 6. Boarding passengers by scheduled bus run | -- | X |
| 7. Saturday ridership as a percent of weekday ridership | -- | X |
| 8. Percent on-time adherence | -- | X |
| 9. Travel distance and time by transit versus travel distance and time by automobile | -- | X |
| 10. Route-to-route transfers | -- | X |
| Objective No. 4—Promote Efficiency in the Total Transportation System | | |
| 1. Passenger miles per gallon of petroleum-based fuel | X | -- |
| 2. Impacts on highway capacity due to transit system operation | X | -- |
| Objective No. 5—Provide Economical and Efficient Service | | |
| 1. Operating expense per total vehicle mile | X | -- |
| 2. Operating expense per platform hour | X | -- |
| 3. Operating expense per revenue passenger | X | -- |
| 4. Operating deficit per revenue passenger | X | -- |
| 5. Operating expense per boarding passenger | -- | X |
| 6. Operating deficit per boarding passenger | -- | X |
| 7. Percent of operating expenses recovered by operating revenues | X | X |

*Source: SEWRPC.*

The resident population of the study area not served by the transit system is located principally within partially developed or undeveloped portions of the study area where residential densities are generally too low to support conventional fixed-route transit service. The only significant unserved residential area developed at densities capable of supporting fixed-route transit service is located within the Town

Table 34

TRANSIT SERVICE PROVIDED TO RACINE AREA LAND USES AND POPULATION GROUPS: 1992

| Performance Measure | Systemwide Performance Characteristics |
|---|---|
| Population Served[a] | |
| Inside City | 84,000 |
| Outside City | 28,300 |
| Total | 112,300 |
| Percent of City of Racine Resident Population Served | 99.6 |
| Percent of Study Area Resident Population Served | 83.9 |
| Employment Served[b] | |
| Inside City | 39,100 |
| Outside City | 16,500 |
| Total | 55,600 |
| Percent of Total Employment within City of Racine Served | 97.8 |
| Percent of Total Employment within Study Area Served | 79.8 |
| Major Land Use Trip Generators Served[c] | |
| Commercial Centers | 13 of 13 |
| Educational Institutions | 27 of 31 |
| Community and Special Medical Centers | 7 of 7 |
| Governmental and Public Institutional Centers | 17 of 23 |
| Employment Centers | 80 of 85 |
| Recreational Areas | 23 of 30 |
| Transit-Dependent Population Trip Generators Served[d] | |
| Elderly Facilities | 45 of 51 |
| Disabled Facilities | 26 of 27 |
| Federally Subsidized Rental Housing | 18 of 19 |
| Residential Concentrations of Transit-Dependent Population Groups[e] | |
| Elderly | Served |
| Persons in Low-Income Families | Served |
| Zero Automobile Households | Served |

[a] *Residential areas were considered served by the transit system if they were located within one-quarter mile of a bus route. Population figures are estimates based on the 1990 U. S. Federal Census population in quarter-sections within local transit service area.*

[b] *Employment figures shown represent the number of jobs located within one-quarter mile of a bus route, a maximum walking distance for transit users based on industry standards. Employment figures are estimates based on 1990 employment in quarter-sections within local transit service area.*

[c] *The major land use trip generators identified within the study area are presented in Table 35 and shown on Map 24. The trip generators which are not served by the transit system are so indicated.*

[d] *The transit-dependent population trip generators identified within the study area are presented in Table 36 and shown on Map 25. The trip generators which are not served by the transit system are so indicated.*

[e] *The residential concentrations of transit-dependent persons identified within the study area based upon 1990 U. S. Census data are shown on Map 10 in Chapter III. The concentrations were all completely served by the transit system.*

*Source: SEWRPC.*

## Table 35

## MAJOR LAND USE TRIP GENERATORS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1992

| Number on Map 24 | Name | Type of Major Land Use Trip Generator | | | | | | Not Served by Transit[a] |
|---|---|---|---|---|---|---|---|---|
| | | Major Commercial Center | Educational Institution | Community and Special Medical Center | Governmental and Public Institutional Center | Major Employment Center | Major Recreational Area | |
| 1 | A & E Manufacturing Company | -- | -- | -- | -- | X | -- | -- |
| 2 | Acme Die Casting Corporation | -- | -- | -- | -- | X | -- | -- |
| 3 | Ametek-Lamb Electric Division | -- | -- | -- | -- | X | -- | -- |
| 4 | Andis Company | -- | -- | -- | -- | X | -- | -- |
| 5 | Benjamin Air Rifle Company, Sheridan Products Division | -- | -- | -- | -- | X | -- | -- |
| 6 | Cliffside County Park | -- | -- | -- | -- | -- | X | X |
| 7 | Colonial Park | -- | -- | -- | -- | -- | X | -- |
| 8 | Color Arts, Inc. | -- | -- | -- | -- | X | -- | -- |
| 9 | Concordia Lutheran School | -- | X | -- | -- | -- | -- | -- |
| 10 | Douglas Avenue strip development | X | -- | -- | -- | -- | -- | -- |
| 11 | Douglas Park and Community Center | -- | -- | -- | -- | -- | X | -- |
| 12 | Dr. Martin Luther King Center | -- | -- | -- | -- | -- | X | -- |
| 13 | E. C. Styberg Engineering Company | -- | -- | -- | -- | X | -- | -- |
| 14 | Elmwood Plaza Shopping Center | X | -- | -- | -- | X | -- | -- |
| 15 | FAI, Inc. | -- | -- | -- | -- | X | -- | -- |
| 16 | Flat Iron Village Mall | X | -- | -- | -- | X | -- | -- |
| 17 | Franklin Park | -- | -- | -- | -- | -- | X | -- |
| 18 | Gateway Technical Institute | -- | X | -- | -- | -- | X | -- |
| 19 | Gettys Corporation | -- | -- | -- | -- | X | -- | -- |
| 20 | Gilmore Middle School | -- | X | -- | -- | -- | -- | -- |
| 21 | Great Northern Corporation | -- | -- | -- | -- | X | -- | -- |
| 22 | Greene Manufacturing Company | -- | -- | -- | -- | X | -- | -- |
| 23 | Greenridge Park | -- | -- | -- | -- | -- | X | X |
| 24 | Green Tree Centre | X | -- | -- | -- | X | -- | -- |
| 25 | Haban Manufacturing Company | -- | -- | -- | -- | X | -- | -- |
| 26 | Holy Name School | -- | X | -- | -- | -- | -- | -- |
| 27 | Horlick Athletic Field | -- | -- | -- | -- | -- | X | -- |
| 28 | Horlick Island Park | -- | -- | -- | -- | -- | X | -- |
| 29 | Humble Park and Community Center | -- | -- | -- | -- | -- | X | -- |
| 30 | In-Sink-Erator, Division Emerson Electric Company | -- | -- | -- | -- | X | -- | -- |
| 31 | Interlake Packaging Corporation | -- | -- | -- | -- | X | -- | -- |
| 32 | J. I. Case Company | -- | -- | -- | -- | X | -- | -- |
| 33 | J. I. Case High School | -- | X | -- | -- | -- | -- | -- |
| 34 | Jacobsen Manufacturing Company, Division of Textron, Inc. | -- | -- | -- | -- | X | -- | -- |
| 35 | Jensen Metal Products, Inc. | -- | -- | -- | -- | X | -- | -- |
| 36 | Jerstad-Agerholm Middle School | -- | X | -- | -- | -- | -- | -- |
| 37 | Johnson Park | -- | -- | -- | -- | -- | X | X |
| 38 | K-Mart Discount Store | -- | -- | -- | -- | X | -- | -- |
| 39 | Kurten Medical Group | -- | -- | X | -- | -- | -- | -- |
| 40 | Lakeview Park and Community Center | -- | -- | -- | -- | -- | X | -- |
| 41 | Lathrop Avenue strip development | X | -- | -- | -- | -- | -- | -- |
| 42 | Lincoln Park | -- | -- | -- | -- | -- | X | -- |
| 43 | Lockwood Park | -- | -- | -- | -- | -- | X | -- |
| 44 | Lutheran High School | -- | X | -- | -- | -- | -- | -- |
| 45 | Mamco Corporation. | -- | -- | -- | -- | X | -- | X |
| 46 | Massey-Ferguson, Inc. | -- | -- | -- | -- | X | -- | -- |
| 47 | Medical Engineering Corporation | -- | -- | -- | -- | X | -- | X |
| 48 | Memorial Park | -- | -- | -- | -- | -- | X | X |
| 49 | Mitchell Middle School | -- | X | -- | -- | -- | -- | -- |
| 50 | Modine Manufacturing Company | -- | -- | -- | -- | X | -- | -- |
| 51 | Motor Specialty, Inc. | -- | -- | -- | -- | X | -- | -- |
| 52 | Moxness Products, Inc. | -- | -- | -- | -- | X | -- | -- |
| 53 | McKinley Middle School | -- | X | -- | -- | -- | -- | -- |
| 54 | Ninety Fifth Street Park | -- | -- | -- | -- | -- | X | -- |
| 55 | North Beach Park | -- | -- | -- | -- | -- | X | -- |
| 56 | Parker Hanifin Corporation | -- | -- | -- | -- | X | -- | -- |
| 57 | Pershing Park | -- | -- | -- | -- | -- | X | -- |
| 58 | Petrifying Springs County Park | -- | -- | -- | -- | -- | X | X |
| 59 | Phar-Mor | -- | -- | -- | -- | X | -- | -- |
| 60 | Pioneer Products, Inc. | -- | -- | -- | -- | X | -- | -- |
| 61 | Porter Furniture | -- | -- | -- | -- | X | -- | -- |
| 62 | Prairie School | -- | X | -- | -- | -- | -- | X |
| 63 | Printing Development, Inc. | -- | -- | -- | -- | -- | X | -- |
| 64 | Pritchard County Park | -- | -- | -- | -- | -- | X | -- |
| 65 | Professional Positioners, Inc. | -- | -- | -- | -- | X | -- | -- |
| 66 | Promotions Unlimited Corporation | -- | -- | -- | -- | X | -- | -- |
| 67 | Quarry Lake Park | -- | -- | -- | -- | -- | X | -- |
| 68 | Racine Baptist School | -- | X | -- | -- | -- | -- | X |
| 69 | Racine central business district | X | -- | -- | -- | X | -- | -- |
| 70 | Racine Christian School | -- | X | -- | -- | -- | -- | -- |
| 71 | Racine City Hall | -- | -- | -- | X | -- | -- | -- |
| 72 | Racine County Courthouse | -- | -- | -- | X | -- | -- | -- |

## Table 35 (continued)

| Number on Map 24 | Name | Type of Major Land Use Trip Generator | | | | | | Not Served by Transit[a] |
|---|---|---|---|---|---|---|---|---|
| | | Major Commercial Center | Educational Institution | Community and Special Medical Center | Governmental and Public Institutional Center | Major Employment Center | Major Recreational Area | |
| 73 | Racine County Highway and Office Building | -- | -- | -- | X | -- | -- | X |
| 74 | Racine County Historical Society and Museum, Inc. | -- | -- | -- | X | -- | -- | -- |
| 75 | Racine County Human Services Department | -- | -- | -- | X | -- | -- | -- |
| 76 | Racine County Law Enforcement Center | -- | -- | -- | X | -- | -- | -- |
| 77 | Racine County Opportunity Center | -- | -- | -- | -- | -- | -- | -- |
| 78 | Racine Die Casting Corporation, Division of Ganton Technologies, Inc. | -- | -- | -- | -- | X | -- | X |
| 79 | Racine Federated, Inc. | -- | -- | -- | -- | X | -- | X |
| 80 | Racine Fluid Power, Inc., Division of Dana Corporation | -- | -- | -- | -- | X | -- | -- |
| 81 | Racine Industries, Inc. | -- | -- | -- | -- | X | -- | -- |
| 82 | Racine Journal-Times | -- | -- | -- | -- | X | -- | -- |
| 83 | Racine Medical Clinic | -- | -- | X | -- | -- | -- | -- |
| 84 | Racine Memorial Hall | -- | -- | -- | X | -- | -- | -- |
| 85 | Racine Montessori School | -- | X | -- | -- | -- | -- | -- |
| 86 | Racine Police Department | -- | -- | -- | X | -- | -- | -- |
| 87 | Racine Public Library | -- | -- | -- | X | -- | -- | -- |
| 88 | Racine Steel Castings Company, Division of B R Holdings, Ltd. | -- | -- | -- | -- | X | -- | -- |
| 89 | Racine Unified School District | -- | -- | -- | X | -- | -- | -- |
| 90 | Racine-West Retail Area | X | -- | -- | -- | X | -- | -- |
| 91 | Rainfair, Inc. | -- | -- | -- | -- | X | -- | -- |
| 92 | Rapids Plaza Shopping Center | X | -- | -- | -- | X | -- | -- |
| 93 | Roosevelt Park and Community Center | -- | -- | -- | -- | -- | X | -- |
| 94 | SAF Enterprises, Inc. | -- | -- | -- | -- | X | -- | -- |
| 95 | S. C. Johnson and Son, Inc. | -- | -- | -- | -- | X | -- | -- |
| 96 | Sacred Heart Catholic Church School | -- | X | -- | -- | -- | -- | -- |
| 97 | Sanders County Park | -- | -- | -- | -- | -- | X | -- |
| 98 | School Services and Leasing | -- | -- | -- | -- | X | -- | -- |
| 99 | Shoop Park | -- | -- | -- | -- | -- | X | X |
| 100 | Shopko Department Store | -- | -- | -- | -- | X | -- | -- |
| 101 | Shorecrest Shopping Center | X | -- | -- | -- | X | -- | -- |
| 102 | Social Security Administration | -- | -- | -- | X | -- | -- | -- |
| 103 | St. Catherine's Family Practice Center, UW-Parkside | -- | -- | X | -- | -- | -- | -- |
| 104 | St. Catherine's High School | -- | X | -- | -- | -- | -- | -- |
| 105 | St. Edward's Elementary School | -- | X | -- | -- | -- | -- | -- |
| 106 | St. John Nepomuk Elementary School | -- | X | -- | -- | -- | -- | -- |
| 107 | St. John's Lutheran School | -- | X | -- | -- | -- | -- | -- |
| 108 | St. Joseph's Elementary School | -- | X | -- | -- | -- | -- | -- |
| 109 | St. Louis Elementary School | -- | X | -- | -- | -- | -- | X |
| 110 | St. Lucy's Elemenary School | -- | X | -- | -- | -- | -- | -- |
| 111 | St. Luke's Hospital | -- | -- | X | -- | X | -- | -- |
| 112 | St. Mary's Medical Center | -- | -- | X | -- | X | -- | -- |
| 113 | St. Rita's Elementay School | -- | X | -- | -- | -- | -- | -- |
| 114 | St. Sebastian's Elementary School | -- | X | -- | -- | -- | -- | -- |
| 115 | Starbuck Middle School | -- | X | -- | -- | -- | -- | -- |
| 116 | Stuart-McBridge Memorial Park | -- | -- | -- | -- | -- | X | -- |
| 117 | Sturtevant Park | -- | -- | -- | -- | -- | X | -- |
| 118 | Sturtevant Village Hall | -- | -- | -- | X | -- | -- | X |
| 119 | Thermal Transfer Products, Ltd. | -- | -- | -- | -- | X | -- | -- |
| 120 | Town of Caledonia Town Hall | -- | -- | -- | X | -- | -- | X |
| 121 | Town of Mt. Pleasant Town Hall | -- | -- | -- | X | -- | -- | -- |
| 122 | Trinity Evangelical Lutheran School, Wisconsin Synod | -- | X | -- | -- | -- | -- | X |
| 123 | Trinity Lutheran School, Missouri Synod | -- | X | -- | -- | -- | -- | -- |
| 124 | Twin Disc, Inc. | -- | -- | -- | -- | X | -- | -- |
| 125 | University of Wisconsin-Parkside | -- | X | -- | -- | -- | -- | -- |
| 126 | Unico, Inc. | -- | -- | -- | -- | X | -- | X |
| 127 | United Mechanical, Inc. | -- | -- | -- | -- | X | -- | -- |
| 128 | United States Can Company | -- | -- | -- | -- | X | -- | -- |
| 129 | Uptown Shopping Area | X | -- | -- | -- | -- | -- | -- |
| | U. S. Post Office | | | | | | | |
| 130 | Caledonia | -- | -- | -- | X | -- | -- | X |
| 131 | Franksville | -- | -- | -- | X | -- | -- | X |
| 132 | Racine main office | -- | -- | -- | X | -- | -- | -- |
| 133 | Sturtevant | -- | -- | -- | X | -- | -- | -- |
| 134 | Western Racine | -- | -- | -- | X | -- | -- | -- |
| 135 | Walden III High and Middle Schools | -- | X | -- | -- | -- | -- | -- |
| 136 | Walker Forge, Inc. | -- | -- | -- | -- | X | -- | -- |
| 137 | Walker Manufacturing Company | -- | -- | -- | -- | X | -- | -- |
| 138 | Warren Industries, Inc. | -- | -- | -- | -- | X | -- | -- |
| 139 | Washington Academy | -- | X | -- | -- | -- | -- | -- |
| 140 | Washington Avenue strip development | X | -- | -- | -- | -- | -- | -- |
| 141 | Washington Park Bowl | -- | -- | -- | -- | -- | X | -- |
| 142 | Washington Park High School | -- | X | -- | -- | -- | -- | -- |

**Table 35 (continued)**

| Number on Map 24 | Name | Type of Major Land Use Trip Generator | | | | | | Not Served by Transit[a] |
|---|---|---|---|---|---|---|---|---|
| | | Major Commercial Center | Educational Institution | Community and Special Medical Center | Governmental and Public Institutional Center | Major Employment Center | Major Recreational Area | |
| 143 | Webster Fluid Power Division | -- | -- | -- | -- | X | -- | -- |
| 144 | West Racine shopping area | X | -- | -- | -- | X | -- | -- |
| 145 | Western Publishing Company, Inc. | -- | -- | -- | -- | X | -- | -- |
| 146 | Western Publishing Company, Inc. | -- | -- | -- | -- | X | -- | -- |
| 147 | Westgate Mall Shopping Center | X | -- | -- | -- | X | -- | -- |
| 148 | Westwind Treatment Center | -- | -- | X | -- | -- | -- | -- |
| 149 | Wind Point Village Hall | -- | -- | -- | X | -- | -- | X |
| 150 | William Horlick High School | -- | X | -- | -- | -- | -- | -- |
| 151 | Wisconsin Department of Health and Social Services, | | | | | | | |
| 152 | Division of Vocational Rehabilitation | -- | -- | -- | X | -- | -- | -- |
| | Wisconsin Department of Industry, Labor and Human Relations | | | | | | | |
| | Job Service Division | -- | -- | -- | X | -- | -- | -- |
| 153 | Unemployment Compensation Division | -- | -- | -- | X | -- | -- | -- |
| 154 | Wustum Park and Art Museum | -- | -- | -- | -- | -- | X | -- |
| 155 | Zoological Gardens | -- | -- | -- | -- | -- | X | -- |
| 156 | Armstrong Park | -- | -- | -- | -- | -- | X | X |
| 157 | Racine Festival Park | -- | -- | -- | -- | -- | X | -- |

[a]*Major land use centers are considered as served by the transit sytem based upon the following criteria as specified under the transit service objectives and standards:*

*1. Commercial and office centers must be located within one block of a bus route.*
*2. Educational institutions must be located within one-eighth mile of a bus route.*
*3. Hospitals and medical centers must be located within one block of a bus route.*
*4. Governmental and public institutional facilities must be located within one-eighth mile of a bus route.*
*5. Employment centers must be located within one-eighth mile of a bus route.*
*6. Recreational areas must be located within one-quarter mile of a bus route.*

*Source: SEWRPC.*

of Mt. Pleasant, northwest of the City on both sides of Northwestern Avenue between Rapids Drive and Emerson Road.

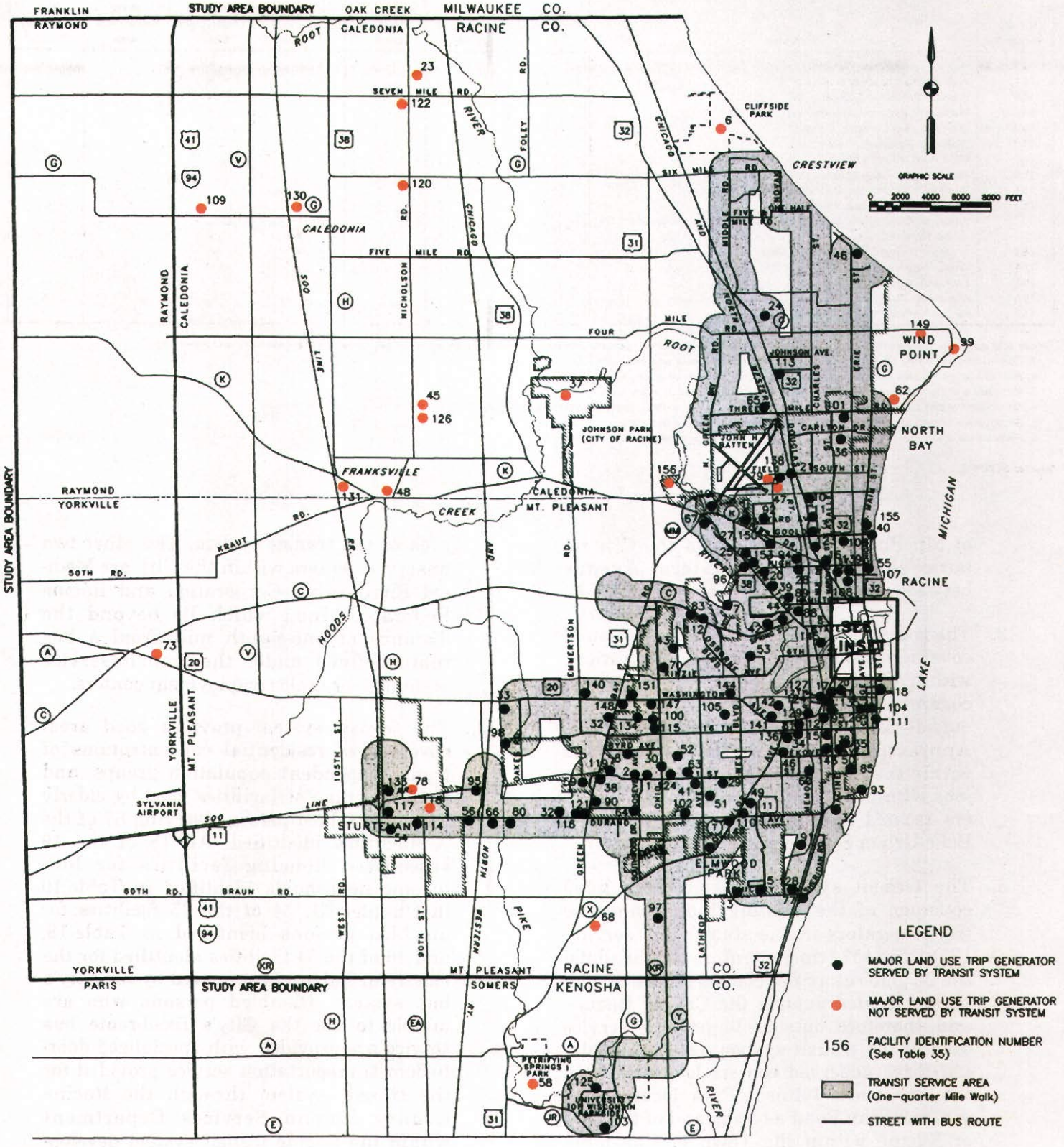
2. The transit system provides excellent areal coverage of the employment concentrations within the City of Racine and very good coverage of the employment concentrations outside of the City within the study area. Approximately 98 percent of the jobs within the City and about 80 percent of the jobs within the study area were at employers located within one-quarter mile of a Belle Urban System bus route.

3. The transit system also provides good coverage of the existing major land use trip generators in the study area, serving 135 of the 157 trip generators identified. Of the 22 generators not considered as served, 19 are located outside the City of Racine, and, therefore, outside the primary service area of the transit system. Of the remaining three unserved centers located within the City, one is Johnson Park, located west of Green Bay Road as an island of the City of Racine within the Town of Caledonia and, therefore, outside the primary service area of the transit system. The other two unserved centers within the City are Medical Engineering Corporation and Racine Federated, Inc., which lie beyond the distance of one-eighth mile from a bus route defined under the transit service standard for major employment centers.

4. The transit system provides good areal coverage of residential concentrations of transit-dependent population groups, and good coverage of facilities used by elderly and/or disabled persons, serving 67 of the 73 facilities identified. All 18 of the 19 subsidized housing facilities for low-income households identified in Table 19 in Chapter III; 34 of the 35 facilities for disabled persons identified in Table 18; and 48 of the 54 facilities identified for the elderly in Table 17 are served by the City's bus system. Disabled persons who are unable to use the City's fixed-route bus service are provided with specialized door-to-door transportation service provided for the transit system through the Racine County Human Services Department within the Racine transit system development plan study area.

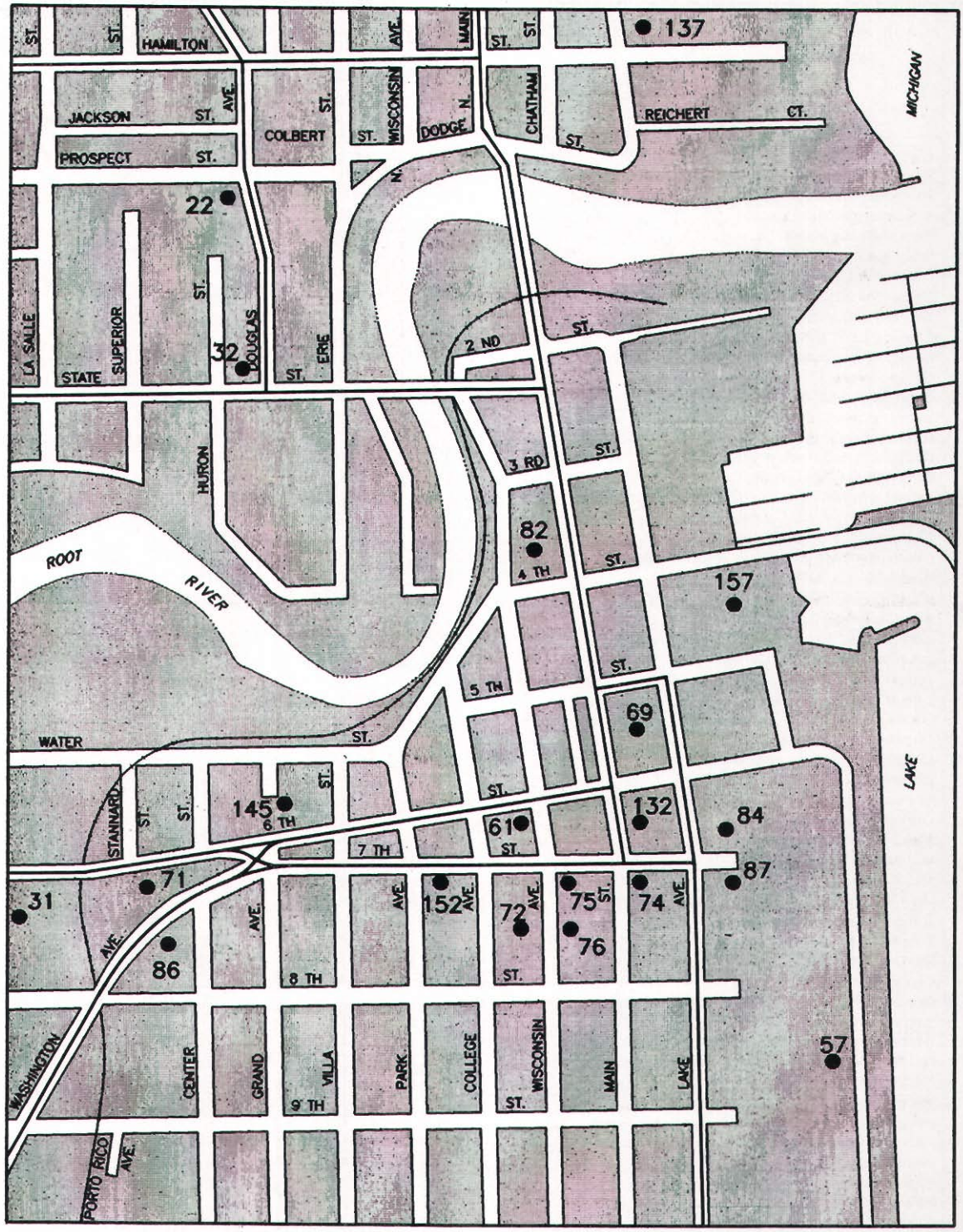
## Map 24

## MAJOR LAND USE TRIP GENERATORS SERVED AND NOT SERVED BY THE BELLE URBAN SYSTEM: 1992




*Source: SEWRPC.*

**Inset to Map 24**




INSET GRAPHIC SCALE

0 400 800 FEET

## Table 36

## MAJOR TRANSIT-DEPENDENT-POPULATION TRIP GENERATORS IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA: 1990

| Number on Map 25 | Name | Type of Transit-Dependent-Population Trip Generator | | | Not Served by Transit[a] |
|---|---|---|---|---|---|
| | | Facility for the Elderly | Federally Subsidized Rental Housing | Facility for the Disabled | |
| 1 | Albert House | X | X | -- | X |
| 2 | Association for Retarded Citizens of Racine County | -- | -- | X | -- |
| 3 | Atonement Lutheran Church | X | -- | -- | -- |
| 4 | Atrium of Racine | X | -- | -- | -- |
| 5 | Becker-Shoop Home | X | -- | X | -- |
| 6 | Biscayne Gardens | -- | -- | X | -- |
| 7 | Dr. Martin Luther King Center | X | -- | -- | -- |
| 8 | Career Industries of Racine, Inc. | X | -- | X | -- |
| 9 | Center for Community Concerns, Inc. | X | -- | -- | -- |
| 10 | Chateau I and II Apartments | X | X | -- | -- |
| 11 | Community Action Agency, Inc. | X | -- | -- | -- |
| 12 | Cornerstone | -- | -- | X | -- |
| 13 | Curative Workshop of Racine | -- | -- | X | -- |
| 14 | Danish Home of Racine | X | -- | -- | -- |
| 15 | Developmental Disabilities Information Service | -- | -- | X | -- |
| 16 | Douglas Park Community Center | X | -- | -- | -- |
| 17 | Durand Plaza Apartments | X | X | -- | -- |
| 18 | Fountain Hills | X | -- | -- | X |
| 19 | Gateway Technical College | -- | -- | X | -- |
| 20 | Gilmore Junior High School | -- | -- | X | -- |
| 21 | Goodwill Industries of Southeastern Wisconsin, Inc. | -- | -- | X | -- |
| 22 | Halpin Manor | X | -- | -- | -- |
| 23 | Imperial Apartments | X | -- | -- | -- |
| 24 | J. I. Case High School | -- | -- | X | -- |
| 25 | Lake Oaks at DeKoven | X | -- | -- | -- |
| 26 | Lakeview Community Center | X | -- | -- | -- |
| 27 | Lincoln Center | X | -- | -- | -- |
| 28 | Lincoln Lutheran Home | X | -- | X | X |
| 29 | Lincoln Manor | X | X | -- | -- |
| 30 | Lincoln Manor South | X | -- | -- | -- |
| 31 | Lincoln Village Convalescent Center | X | -- | X | -- |
| 32 | Lincoln Villas | X | X | -- | -- |
| 33 | Lincoln Villas North | X | X | -- | -- |
| 34 | Loving Care Home | X | -- | -- | X |
| 35 | Marion Housing | X | X | -- | -- |
| 36 | McMynn Tower | X | X | -- | -- |
| 37 | Mt. Pleasant Manor | X | X | -- | -- |
| 38A/B | New Beginnings Group Homes (two locations)[b] | X | -- | -- | X[b] |
| 39 | Oaks Village | -- | X | -- | -- |
| 40 | Oakview Manor | X | X | -- | -- |
| 41 | Oakwood Terrace | -- | X | -- | -- |
| 42 | Olympia Brown School | -- | -- | X | -- |
| 43 | Opportunities Industrialization Center of Racine County | X | -- | X | -- |
| 44 | Palmeter Home | X | -- | -- | -- |
| 45 | Racine Community Care Center | X | -- | X | -- |
| 46 | Racine County Human Services Department | -- | -- | X | -- |
| 47 | Racine County Housing Authority Facilities | -- | -- | X | -- |
| 48 | Racine County Opportunity Center, Inc. | -- | -- | X | -- |
| 49 | Racine County Ridgewood Health Care Center | X | -- | -- | -- |
| 50 | Racine Division of Vocational Rehabilitation | -- | -- | X | -- |
| 51 | Racine Memorial Hall | X | -- | -- | -- |
| 52 | Racine Residential Care | X | -- | X | -- |
| 53 | Rannd House | X | -- | -- | -- |
| 54 | Regency Apartments | X | X | -- | -- |
| 55 | Respite Ministry Program | X | -- | -- | -- |
| 56 | Rupe Homes | X | -- | -- | X |
| 57 | St. Catherine's Infirmary | X | -- | X | -- |
| 58 | St. Monica's Senior Citizens Home | X | -- | -- | -- |
| 59 | Salvation Army Senior Citizen Drop-In Center | X | -- | -- | -- |

Table 36 (continued)

| Number on Map 25 | Name | Type of Transit-Dependent-Population Trip Generator | | | Not Served by Transit[a] |
|---|---|---|---|---|---|
| | | Facility for the Elderly | Federally Subsidized Rental Housing | Facility for the Disabled | |
| 60 | Satellite House | -- | -- | X | -- |
| 61 | Shorehaven Apartments | -- | X | -- | -- |
| 62 | Shoreline Manor | -- | -- | X | -- |
| 63 | Society's Assets, Inc. | -- | -- | X | -- |
| 64 | Southeastern Wisconsin Private Industry Council, Inc. | X | -- | X | -- |
| 65 | Sunset Terrace Apartments | X | X | -- | -- |
| 66 | Urban League | X | -- | -- | -- |
| 67 | Villa St. Anna | X | -- | -- | -- |
| 68 | Wadewitz School | -- | -- | X | -- |
| 69 | Washington Apartments | X | X | -- | -- |
| 70 | Washington Court | X | X | -- | -- |
| 71 | Washington Park Community Center | X | -- | -- | -- |
| 72 | Westridge Manor | X | X | -- | -- |
| 73 | Woodside Village | -- | X | -- | -- |

[a] *Transit-dependent population trip generators are considered as served by the transit system based upon the following criteria as specified under the transit service objectives and standards:*

1. *Facilities for elderly and/or disabled persons must be located within one block of a bus system.*
2. *Subsidized housing for low-income persons must be located within one-quarter mile of a bus route.*

[b] *The New Beginnings group homes are at two locations: No. 38A at 5535 16th Street in the City of Racine, and No. 38B at 3509 S. Green Bay Road in the Town of Mt. Pleasant. The facility in the Town of Mt. Pleasant is not served by the transit system.*

*Source: SEWRPC.*

## Provision of Specialized Transportation Service for Disabled Individuals

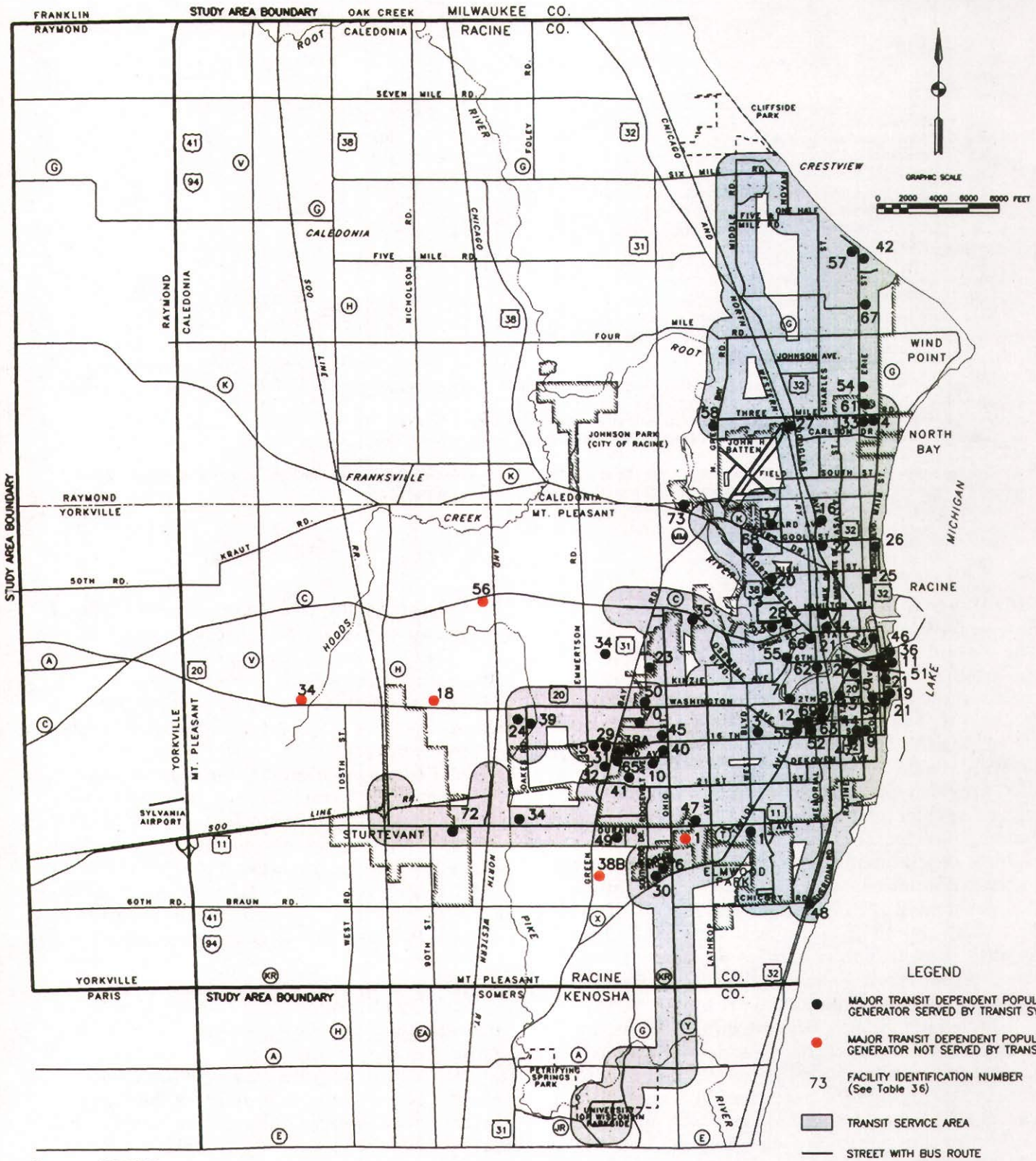
The second transit service objective stipulates the need to provide specialized transportation service for disabled individuals unable to use the fixed-route bus service provided by the Belle Urban System. The performance measures used to evaluate the existing specialized transportation provided for disabled persons within the transit system service area asked whether the existing service conformed to the paratransit service requirements set forth under current Federal regulations promulgated to implement the Americans with Disabilities Act of 1990. This act, signed into law on July 26, 1990, requires that all public entities providing fixed-route transit service, such as the City of Racine, also provide complementary paratransit service to disabled individuals who are unable to use the entity's fixed-route transit service, with such paratransit service comparable to the fixed-route transit service available to the general public. The types of disabled individuals who must be eligible for this service are identified in Table 37.

The City of Racine has provided some type of paratransit service for disabled individuals since 1975. Since 1983, it has contracted for such paratransit service from private transit operators in connection with the Racine County Human Services Department specialized transportation program. In compliance with the current Federal regulations, the City of Racine, in January 1992, completed and submitted to the Federal Transit Administration a plan setting forth the proposed changes to the City's existing paratransit service in order for the service to satisfy these Federal regulations and act as the Federally required complementary paratransit service.[1] Because the existing paratransit ser-

[1] *See SEWRPC Memorandum Report No. 60, A Paratransit Service Plan for Disabled Persons—City of Racine Transit System, January 1992. The City's proposed plan was determined by the Federal Transit Administration to be in compliance with Federal regulations on October 26, 1992.*

## Map 25

## MAJOR TRANSIT-DEPENDENT-POPULATION TRIP GENERATORS SERVED AND NOT SERVED BY THE BELLE URBAN SYSTEM: 1992




*Source: SEWRPC.*

## Table 37

## COMPARISON OF THE CURRENT ELIGIBILITY REQUIREMENTS OF THE PARATRANSIT SERVICE PROVIDED WITHIN THE RACINE TRANSIT SYSTEM SERVICE AREA WITH THE ELIGIBILITY REQUIREMENTS SPECIFIED UNDER FINAL FEDERAL REGULATIONS: 1992

| Criteria | Paratransit Service Eligibility Requirements under the Final Federal Regulations[a] | Eligibility Requirements for Existing Paratransit Service Provided within the Racine Transit System Service Area |
|---|---|---|
| Basic Disability Requirements | 1. Category 1<br>Any individual with a permanent or temporary disability who is unable because of a physical or mental impairment—without the assistance of another individual, except the operator of a wheelchair lift or other assistance device—to board, ride, or disembark from any vehicle on the system which is readily accessible and usable by individuals with disabilities<br>2. Category 2<br>Any individual with a permanent or temporary disability who is able to use fixed-route transit services if it is provided using accessible vehicles but cannot use accessible bus service for his/her specific trip because:<br>a. He/she wishes to travel on a fixed-route at a time when an accessible vehicle is not available<br>b. The wheelchair lift on the accessible vehicle he/she would use cannot be deployed at the specific stop location he/she would need to use<br>c. The "common wheelchair"[b] he/she uses cannot be accommodated on the accessible vehicle providing the fixed-route service he/she would use<br>3. Category 3<br>Any individual with a permanent or temporary disability who has a specific impairment-related condition which prevents such an individual from traveling to a boarding location or from a disembarking location on the entity's fixed-route transit service<br>4. Individuals who meet the above eligibility criteria for some trips but not others are to be considered eligible for only those trips for which they meet the criteria | 1. Any disabled person whose permanent or temporary physical or mental disability prevents him/her from using other modes of transportation or private automobile. Eligibility criteria include disabilities or other conflicts identified under Category 2, which would prohibit an individual from using a transit vehicle, or from traveling to or from a bus stop |
| Visitors to, and Nonresidents of, Service Area | 1. All visitors to, and nonresidents of, the service area who present ADA paratransit-eligibility documentation issued by another public entity must be considered as eligible for complementary paratransit service and provided with service on the same basis as local residents<br>2. Visitors and nonresidents who do not present ADA paratransit-eligibility documentation, but make a claim to be eligible for complementary paratransit service must be presumed immediately eligible for paratransit service. In such cases, proof of visitor status or proof of disability, if it is not apparent, may be required by the host public entity<br>3. The public entity may require visitors and nonresidents who use its paratransit service for more than 21 days to apply for eligibility through the local process in order to continue to be eligible for the service | 1. Disabled individuals from other areas who are temporarily residing within or visiting the service area and who meet the basic disability requirements under the program are granted temporary program eligibility. Individuals who will be short-term visitors to the service area are granted eligibility immediately. Individuals who will be short-term residents of, or regular visitors to, the service area are ultimately asked to complete the registration process |

**Table 37 (continued)**

| Criteria | Paratransit Service Eligibility Requirements under the Final Federal Regulations[a] | Eligibility Requirements for Existing Paratransit Service Provided within the Racine Transit System Service Area |
|---|---|---|
| Attendants and Companions | 1. One person accompanying an eligible individual is to be provided service along with the disabled individual<br>2. If the disabled person requires a personal care attendant, one other individual in addition to the attendant is to be provided with service<br>3. Additional individuals accompanying eligible individuals are to be provided service on a space-available basis | 1. One person is allowed to accompany the disabled individual<br>2. One personal care attendant is allowed in addition to the accompanying person if assistance is required by the certified user on his/her trip |
| Process for Determining Eligibility | 1. The process must ensure that only individuals who meet the specified eligibility criteria are regarded and identified as "ADA paratransit eligible"<br>2. The process may not impose any fees on applicants for service eligibility<br>3. Information about the application process and the materials necessary for seeking eligibility must be made available to disabled persons in accessible formats, such as computer disks, braille documents, audio cassettes, and large-print documents<br>4. Eligibility determination must be made within three weeks, 21 days, of the time the completed application is submitted, or the disabled person must be presumed to be eligible and provided with service until an eligibility decision is made<br>5. Notification of eligibility determination must be provided in writing, or accessible format as needed, with the reasons for a finding of ineligibility clearly stated<br>6. An administrative appeal process through which individuals who are denied ADA paratransit eligibility can obtain review of the denial of eligibility must be available. The process may provide for a time limit for the filing of an appeal of no less than 60 days from the notification of denial for eligibility. The persons deciding the case on appeal must not be, to the extent practicable, the same person involved in the eligibility decision. A decision must be made within 30 days of the completion of the appeals process, with notification of the decision and the reasons supporting it provided to the individual in writing or appropriate accessible format<br>7. An identification card or other documentation must be issued to eligible individuals by the public entity stating that the individual is "ADA paratransit eligible," and indicating at least the following other information:<br>a. The individual's name<br>b. The name of the transit provider<br>c. The telephone number of the public entity's paratransit service coordinator<br>d. An expiration date for eligibility<br>e. Any conditions or limitations on the individual's eligibility, including the need for a personal attendant | 1. The current process relies upon certification by the individual's physician that the individual has a disability which meets ADA paratransit eligibility criteria<br>2. No registration fees are charged to program applicants<br>3. Program information and application materials are to be available in standard accessible formats from the Racine County Human Services Department; and the City of Racine Department of Transportation; and the contract operator of the paratransit service as of January 1993. In addition, virtually all disabled groups and agencies providing transportation and social services to disabled persons in the service area provide information on the service to their clientele<br>4. Eligibility determinations are made the same day that completed application forms are received, and notice of eligibility is provided to the user per Federal regulations<br>5. All applicants receive written notification of the acceptance or denial of eligibility for the program. Notifications are in standard nonaccessible format and include reasons for denial of eligibility<br>6. An administrative appeal process is available through the Racine County Human Services Department to individuals who want to contest a finding of ineligibility for the program<br>7. An identification card is issued to each registered user which identifies the period of time the user is eligible for the program, as well as all the information specified under Federal regulations<br>8. Once certification for the program is obtained, individuals with permanent disabilities are not required to undergo any subsequent recertification for the program |

Table 37 (continued)

| Criteria | Paratransit Service Eligibility Requirements under the Final Federal Regulations[a] | Eligibility Requirements for Existing Paratransit Service Provided within the Racine Transit System Service Area |
|---|---|---|
| Process for Determining Eligibility (continued) | 8. The process may include a recertification of the eligibility of individuals at reasonable intervals, one to three years, to make sure that circumstances have not invalidated or changed an individual's eligibility status<br>9. A process may be established for suspending paratransit service to an individual for repeatedly missing scheduled trips or if the individual's behavior poses a threat to the safety of other persons. If established, the process must provide for notification to the individual of the intention to suspend service and the reasons for the suspension; for the opportunity for the individual to present information on his behalf; and for notification to the individual of the final decision on the suspension and the reasons for the decision. The individual may appeal the final decision through the appeals process noted above | |

[a] *See Federal Register, Vol. 56, No. 173, September 6, 1991, "Transportation for Individuals With Disabilities; Final Rule."*

[b] *Under the Federal regulations, a wheelchair is defined as a mobility aid belonging to any class of three or four wheeled devices, usable indoors, designed for, and used by, individuals with mobility impairments, whether operated manually or powered. A "common wheelchair" is such a device which does not exceed 30 inches in width and 48 inches in length measured two inches above the ground and does not weigh more than 600 pounds when occupied.*

*Source: U. S. Department of Transportation, City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

vice basically met the intent of the current Federal regulations, only minor changes to the existing paratransit service were proposed under the City's paratransit service plan. Most of those changes were implemented by mid-1992. A comparison of the eligibility requirements and service characteristics of the City's existing paratransit service as provided through the Racine County Human Services Department transportation-handicapped paratransit service with the minimum eligibility and service requirements specified under the current Federal regulations is provided in Tables 37 and 38. On the basis of this information, it may be concluded that the City's current paratransit service conforms to the current Federal eligibility and service requirements and, therefore, satisfies the standards specified under Objective No. 2, of the transit system service standards.

Ridership and Financial Performance

The systemwide ridership and financial performance of the Belle Urban System was evaluated by using the key measures of ridership performance specified under Objective No. 3, Standard No. 1, and the key measures of financial performance specified under Objective No. 5, Standards No. 2, 3, and 5. The performance measures used to evaluate existing transit system ridership included annual ridership per capita, annual revenue passengers per revenue vehicle mile, and annual revenue passengers per revenue hour. The measures used to evaluate the financial performance of the transit system included operating expense per total vehicle mile and per total vehicle hour, operating expense and operating deficit per revenue passenger, and percent of operating expenses recovered from operating revenues which is often referred to as the farebox recovery rate. The observed performance levels of the Belle Urban System for these measures were compared with minimum performance levels specified under the aforementioned transit service standards and also with the average performance levels for a

## Table 38

## COMPARISON OF THE CURRENT SERVICE CHARACTERISTICS OF THE PARATRANSIT SERVICE PROVIDED WITHIN THE RACINE TRANSIT SYSTEM SERVICE AREA WITH THE MINIMUM SERVICE CRITERIA SPECIFIED UNDER THE FINAL FEDERAL REGULATIONS: 1992

| Service Characteristics | Minimum Service Criteria for Complementary Paratransit Service Specified under Final Federal Rule[a] | Current Characteristics of Paratransit Service Provided within the Racine Transit System Service Area | Current Service Characteristics of the Regular Fixed-Route Transit Service Provided by the Belle Urban System |
|---|---|---|---|
| Service Area | 1. Service provided to all trip origins and trip destinations within a corridor three-quarters of a mile wide on each side of any fixed bus route operated by the public entity other than routes providing only commuter bus service[b]<br><br>2. The public entity is not required to provide service outside the jurisdiction in which it is authorized to operate | 1. Service provided throughout Racine County and to the University of Wisconsin-Parkside in Kenosha County. (Area includes the entire City of Racine and Racine Transit System service area) | 1. Area within one-quarter mile of City bus route |
| Response Time | 1. Paratransit service must incorporate "next-day service" concept, that is, must be scheduled and provided to any eligible person at any time on a particular day in response to a request for service made any time the previous day<br><br>2. The operator must make reservation service for trip requests available during at least normal business hours of the day preceding the service day, as well as at time comparable to normal business hours on a day preceding the service day when the operator's office is not open. Reservations may be taken by reservation agents or by mechanical means<br><br>3. Pick-up times may be negotiated with the individual requesting service but changes in time over one hour before or after the time requested must be agreed to by the individual<br><br>4. Reservations for service may be allowed to be made up to 14 days in advance of the time desired by the individual[c] | 1. Service incorporates "next-day service" concept advance reservation basis. Service also provided on a shorter notice whenever capacity permits. Reservations may be made at least 14 days in advance of time needed<br><br>2. Reservation service for trip requests available Monday through Friday from 7:00 a.m. until 6:00 p.m. | 1. Service provided on the basis of regular fixed schedules |
| Fares | 1. The fare charged to an individual for paratransit service must be comparable to the fare that would be charged to the individual on the public entity's fixed-route transit system for a trip of similar length at a similar time of day. The comparable fare for fixed-route transit service should be the full fare and not based upon the discounted fare available to disabled persons or any other discounts which may be offered. The paratransit fare should in no circumstances exceed twice the fixed-route fare | 1. Regular fare of $1.20 per one-way trip for service between 5:30 a.m. Monday and 7:00 p.m. Friday, and 7:00 a.m. to 6:00 p.m. Saturday. Service to adult day care and approved nutrition sites provided on donated fee-only basis<br><br>2. No fare is charged to a personal care attendant accompanying a disabled individual | 1. Full cash fare per one-way trip of $0.60 for children and adults between the ages of six and 64. (Cash fare per one-way trip of $0.25 for elderly and disabled persons with proper identification) |

## Table 38 (continued)

| Service Characteristics | Minimum Service Criteria for Complementary Paratransit Service Specified under Final Federal Rule[a] | Current Characteristics of Paratransit Service Provided within the Racine Transit System Service Area | Current Service Characteristics of the Regular Fixed-Route Transit Service Provided by the Belle Urban System |
|---|---|---|---|
| Fares (continued) | 2. If the equivalent of transfers, premiums, or other charges would be assessed to the individual for a trip on the fixed-route transit system, the individual may be assessed similar charges on the paratransit system, even if the total of the paratransit base fare and these extra charges is more than twice the fixed-route base fare[d]<br><br>3. No fare can be charged to a personal care attendant accompanying the individual | | |
| Restrictions or Priorities Place on Trips | 1. Restrictions or priorities based on trip purpose are not allowed | None | None |
| Hours and Days of Operation | 1. Paratransit service must be available throughout the same hours and on the same days as the public entity's fixed-route transit service<br><br>2. The times of paratransit service availability may be adjusted to reflect a cutback in the extent of fixed-route bus service during periods of low demand such as at night or on weekends and holidays | 1. Monday through Friday<br>5:30 a.m. to 7:00 p.m.<br>Saturday<br>7:00 a.m. to 6:00 p.m.<br>Sunday and holidays<br>No service | 1. Monday through Friday<br>5:30 a.m. to 7:00 p.m.<br>Saturday<br>7:00 a.m. to 6:00 p.m.<br>Sunday and holidays:<br>No service |
| Capacity Constraints | 1. Availability of paratransit service to eligible persons must not be limited by capacity constraints such as waiting lists, limits on the number of trips that an individual can take, consistent denial of trip requests on the basis of insufficient capacity, or consistent untimeliness with respect to scheduled pick-up times or excessively long trip times | None | None |

[a] *See Federal Register, Vol. 56, No. 173, September 6, 1991. "Transportation for Individuals With Disabilities: Final Rule."*

[b] *Commuter bus service means fixed-route bus service characterized by service predominantly in one direction during peak periods; limited stops; use of multi-ride tickets; and routes of extended length, usually between the central business district and outlying suburbs.*

[c] *The public entity is also allowed to provide subscription service as long as it does not absorb more than 50 percent of the available capacity of the paratransit service at any time of the day.*

[d] *The public entity may charge higher fares or fees to social service agencies or other organizations that contract with the entity to provide paratransit service for their clients or other individuals with disabilities.*

*Source: U. S. Department of Transportation, City of Racine Department of Transportation, Racine County Human Services Department, and SEWRPC.*

group of 12 urban bus systems Statewide.[2] The ridership data used were for the five-year period from 1986 through 1990 and were obtained from reports submitted by each transit operator to the Wisconsin Department of Transportation. The financial data used were also for the period 1986 through 1990, which represented the most recent five-year period for which audited financial information was available for the group of Wisconsin urban bus systems examined. This information was obtained from published reports prepared by the Federal Transit Administration using data reported by each transit system.

The performance of the existing transit system with respect to these performance measures is summarized in Table 39. On the basis of this information, the following conclusions were reached:

1. In terms of ridership, the Belle Urban System has about the same as, or slightly higher effectiveness levels than, the average for similar urban bus systems within Wisconsin. Ridership on the Belle Urban System in 1990 significantly exceeded the average observed for the 12 similar-size urban bus systems in Wisconsin in terms of annual rides per capita and was about the same as for the average of the systems in terms of passengers per revenue vehicle mile and per revenue vehicle hour. The effectiveness levels observed for the Belle Urban System also exceeded the minimum effectiveness levels of 13 rides per capita, 1.4 revenue passengers per vehicle hour, and 18 revenue passengers per revenue vehicle hour specified under the transit service standards.

2. In terms of financial performance, the trends for the Belle Urban System also compare favorably with the trends for the group of urban bus systems Statewide observed over the period 1986 through 1990 with respect to changes in costs per unit of service over this period and farebox recovery rates. In this respect, operating expenses per vehicle mile and per vehicle hour for the Belle Urban System increased at about the same rate as the rate experienced by the comparable group of urban bus systems Statewide over this period, that is, by between 4 and 5 percent for both the Belle Urban System and the State's similar-sized urban bus systems. The Belle Urban System has also been able to maintain a more stable farebox recovery rate than the average farebox recovery rate for the group of urban bus systems Statewide. The proportion of operating expenses recovered from operating revenues for the Belle Urban System actually increased slightly between 1986 and 1990, compared to an average decline of about 3 percent for the group of urban bus systems Statewide.

3. With respect to changes in operating costs and deficits per passenger, the trends for the Belle Urban System compare unfavorably with the trends observed over the period 1986 through 1990 for the group of urban bus systems Statewide. Increases in the operating expense and operating deficit per revenue passenger for the Belle Urban System have occurred at a higher rate than the average rate for the group of urban bus systems Statewide over this period, that is, by about 9 percent for the Belle Urban System, compared to between 4 and 5 percent for the group of urban bus systems Statewide. This performance of the Belle Urban System may be attributed to differential ridership changes observed for the Belle Urban System and the Statewide group of urban bus systems over the period. While both the Belle Urban System and the group of State urban systems have experienced decreases in ridership over the period, the ridership decline for the Belle Urban System has been more pronounced than that for the average for the Statewide group. Between 1986 and 1990, the Belle

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[2]*Averages for key performance indicators were developed on the basis of information reported by a group of 12 Wisconsin small and medium-sized urban bus systems, including those for Appleton, Beloit, Eau Claire, Green Bay, Janesville, Kenosha, LaCrosse, Oshkosh, Racine, Sheboygan, Wausau, and the City of Waukesha. This group of transit systems includes the same systems that were used in a peer group and trends analysis of urban bus systems, including the Belle Urban System, which was completed by the Wisconsin Department of Transportation in 1990.*

Table 39

## KEY INDICATORS OF RIDERSHIP AND FINANCIAL PERFORMANCE FOR THE CITY OF RACINE BELLE URBAN SYSTEM IN COMPARISON TO THE AVERAGE FOR WISCONSIN SMALL AND MEDIUM-SIZE BUS SYSTEMS: 1986-1990

| Performance Measure | Operating Data[a] | |
|---|---|---|
| | City of Racine Belle Urban System | Average for Wisconsin Small and Medium-Size Bus Systems[b] |
| Ridership: 1990 | | |
| Ridership per Capita | 17.2 | 12.7 |
| Revenue Passengers per Revenue Vehicle Mile | 1.56 | 1.45 |
| Revenue Passengers per Revenue Vehicle Hour | 18.6 | 19.2 |
| Ridership Change: 1986-1990 | | |
| Annual Revenue Passengers | | |
| 1986 | 2,287,400 | 1,048,500 |
| 1990 | 1,941,000 | 973,300 |
| Average Annual Percentage Change 1986-1990 | -4.0 | -1.8 |
| Financial Performance Change: 1986-1990 | | |
| Operating Expense per Vehicle Mile | | |
| 1986 | $ 2.39 | $ 2.38 |
| 1990 | 2.85 | 2.82 |
| Average Annual Percentage Change 1986-1990 | 4.5 | 4.4 |
| Operating Expense per Total Vehicle Hour | | |
| 1986 | $25.95 | $28.91 |
| 1990 | 31.55 | 34.32 |
| Average Annual Percentage Change 1986-1990 | 5.0 | 4.4 |
| Operating Expense per Revenue Passenger | | |
| 1986 | $ 1.25 | $ 1.66 |
| 1990 | 1.83 | 1.95 |
| Average Annual Percentage Change 1986-1990 | 9.1 | 4.1 |
| Operating Deficit per Revenue Passenger | | |
| 1986 | $ 1.03 | $ 1.22 |
| 1990 | 1.44 | 1.50 |
| Average Annual Percentage Change 1986-1990 | 8.9 | 5.3 |
| Percent of Operating Expenses Recovered from Operating Revenues | | |
| 1986 | 20.4 | 20.4 |
| 1990 | 20.9 | 18.2 |
| Average Annual Percentage Change 1986-1990 | 0.5 | -2.9 |

[a] *Ridership data were obtained from reports submitted by each transit operator to the Wisconsin Department of Transportation. Financial and service data were obtained from published reports prepared by the Federal Transit Administration using data submitted by each transit operator to comply with FTA Section 15 data reporting requirements.*

[b] *Averages for key performance indicators were developed based on information reported by a group of 12 Wisconsin small and medium-size urban bus systems including those for Appleton, Beloit, Eau Claire, Green Bay, Janesville, Kenosha, LaCrosse, Oshkosh, Racine, Sheboygan, Wausau and the City of Waukesha. This group of transit systems is the same as that used in a peer group and trends analysis of six small and medium-size bus systems, including the Racine transit system, which was completed by the Wisconsin Department of Transportation in 1990.*

*Source: Wisconsin Department of Transportation, Bureau of Transit; and SEWRPC.*

Urban System experienced a total decrease in ridership of about 15 percent, compared to a decline in ridership of about 7 percent for the Statewide group as a whole. As noted within Chapter II of this report, the majority of the ridership decline experienced by the Belle Urban System over this period can be attributed to reduced levels of student ridership, since fewer students were provided special passes through the school district for use on the Belle Urban System.

4. For the five-year period examined, the farebox recovery rate for the Belle Urban System, based upon the financial information submitted for Federal reporting purposes, ranged from about 19 to about 21 percent 1986 and 1990, respectively. This is below the minimum farebox recovery rate of 25 percent of transit system expenses specified as a goal under the service standards. This farebox recovery rate, however, is not truly representative of the actual farebox recovery rate for the Belle Urban System. This is because the system revenues included in Federal reports submitted by the transit system do not include special transit fares for student riders received from the Racine Unified School District. Such revenues are, instead, classified as local public funds under the Federal reporting system. When the subsidized fares provided by the School District are included in the transit system revenues, the actual farebox recovery rate for the Belle Urban System over the period examined ranged from a low of about 23 percent of transit system operating expenses in 1987 to a high of about 29 percent of transit system operating expenses in 1988. The actual farebox recovery rate for the transit system in 1991 was estimated to be about 26 percent, which exceeds the minimum level specified under the transit service standards. Increases in passenger fares implemented by the transit system in 1988 and 1991 have allowed the transit system to meet the desired farebox recovery rate.

Contributions to the Efficiency of the Total Transportation System

The fourth transit service objective concerns the promotion of both economy and efficiency in the total transportation system. This objective is supported by two standards relating to utilization of energy and the provision of adequate highway system capacity.

The first standard under this objective requires that the amount of energy, particularly petroleum-based motor fuels, utilized in operating the transportation system be minimized. This standard is intended to measure the potential energy savings of public transit services provided by the City of Racine Belle Urban System. To measure compliance with this standard, a comparison of relative energy efficiency of the current transit operation with that of automobile travel was undertaken. On the basis of 1991 average weekday operating information for the Belle Urban System obtained from reports submitted to the Federal Transit Administration, approximately 4,300 revenue bus miles on an average weekday were operated on the City transit system at an operating efficiency of about 3.9 bus miles per gallon. Approximately 8,400 total boarding passengers, at about 2.3 miles per unlinked trip, used the transit system to make about 19,100 passenger miles of travel on an average weekday in 1991. Based on these figures, the transit system provided over 17 passenger miles of travel for every gallon of diesel fuel consumed in providing the service. This compares with an estimated 14 to 17 passenger miles of travel provided per gallon of gasoline consumed if the transit trips had, instead, been made by automobile during 1991. This estimated range of automobile efficiency assumes an average 14 mile-per-gallon fuel efficiency for an automobile in city travel. Furthermore, the upper end of the range assumes that the comparable automobile travel is made at the average automobile occupancy in the Racine area, or about 1.2 persons per vehicle. The lower end of the range for automobile travel is based on an average auto occupancy of 1.0 person, assuming that present transit passengers do not now have the opportunity to travel by carpool and, therefore, would not have such opportunity if they were assumed, as in this analysis, to have an automobile available for their travel.

The second standard under Objective No. 3 states that the amount of highway system capacity provided to serve total travel demand should be minimized. The intent of this standard is to measure the impact of the additional passenger transportation capacity that is pro-

Table 40

TOTAL VEHICLE AND TRANSIT PASSENGER VOLUMES ON SELECTED SURFACE ARTERIALS WITHIN THE CITY OF RACINE: 1991

| Location | Average Weekday | | | Peak Hour | | |
|---|---|---|---|---|---|---|
| | Vehicle Count | Transit Passenger Count | Potential Percent Increase in Vehicle Traffic if Transit Trips Use Automobile[a] | Vehicle Count | Transit Passenger Count | Potential Percent Increase in Vehicle Traffic in Transit Trips Use Automobile[a] |
| Washington Avenue (between Taylor Avenue and Memorial Drive) | 16,500 | 940 | 4 | 1,650 | 140 | 6 |
| Main Street (between 7th Street and 6th Street) | 9,600 | 1,580 | 12 | 960 | 290 | 22 |
| State Street (between Marquette Avenue and Douglas Avenue) | 8,500 | 800 | 7 | 850 | 100 | 9 |
| Racine Street (between 24th Street and Durand Avenue | 12,300 | 630 | 4 | 1,230 | 120 | 7 |
| Main Street (between High Street and Hamilton Street) | 10,200 | 360 | 3 | 1,020 | 50 | 4 |

[a]*Assumes an average automobile occupancy of 1.2 persons per auto for work trips and 1.4 persons per auto for all other trips. About 25 percent of weekday trips on the transit system are home-based work trips.*

*Source: SEWRPC.*

vided by the public transportation system on peak-traffic loadings on arterial street and highway facilities, and on the need for improvements to existing arterial streets and highways. Table 40 provides a comparison for selected arterial street segments within the City of Racine of the current total vehicle traffic volume and the transit passenger volume. The street segments selected include arterial streets carrying a major route of the transit system and streets within the central business district, where generally more than one route uses the same street to serve the central business district. In reviewing this information, it should be noted that information presented on an average weekday basis understates somewhat the transportation system benefits of public transit. This is because a higher percentage of average weekday transit passenger volumes, about 15 percent for the Belle Urban System, is typically carried during the morning or evening peak-traffic hour than vehicle traffic volumes. The latter peak at 8 to 10 percent of the average weekday total. For this reason, information is also provided for peak-hour vehicular traffic passenger volumes and peak-hour transit passenger volumes.

On the basis of this information, the following conclusions were reached:

1. The overall energy efficiency of the Belle Urban System in serving travel on an average weekday within the Racine area is somewhat higher than that of the private automobile. Consequently, the transit service provided by the system does reduce the use of petroleum-based motor fuels by Racine residents on a daily basis. A comparison of average weekday energy efficiency of the five urban public transit systems within the Southeastern Wisconsin Region is shown in Table 41. The information presented in this table would indicate that the transit systems within the Region are generally more energy-efficient than the automobile and that the transit system serving Milwaukee County is substantially more energy-efficient than the private automobile, as is the Waukesha County transit system, which serves primarily commuter travel between Waukesha County and the Milwaukee central business district. The higher efficiency of

Table 41

COMPARISON OF THE WEEKDAY ENERGY EFFICIENCY OF PUBLIC TRANSIT SYSTEMS WITHIN SOUTHEASTERN WISCONSIN: 1991

| Characteristic | Transit System Operating Data[a] | | | | |
|---|---|---|---|---|---|
| | Waukesha County Transit System | Milwaukee County Transit System | City of Racine Transit System | City of Kenosha Transit System | City of Waukesha Transit System |
| Estimated Energy Efficiency of Travel by Transit | | | | | |
| Unlinked Transit Passenger Trips | 1,037 | 183,282 | 8,398 | 5,025 | 1,931 |
| Transit Passenger Miles of Travel[b] | 15,150 | 548,274 | 19,121 | 16,798 | 5,600 |
| Passenger Miles per Transit Trip | 14.6 | 3.0 | 2.3 | 3.3 | 2.7 |
| Revenue Bus Miles | 1,319 | 52,541 | 4,307 | 2,517 | 1,740 |
| Bus Miles per Gallon of Diesel Fuel | 5.3 | 3.8 | 3.9 | 4.4 | 4.5 |
| Gallons of Diesel Fuel Used | 249 | 13,827 | 1,104 | 572 | 387 |
| Transit Passenger Miles per Gallon of Diesel Fuel | 60.8 | 39.7 | 17.3 | 29.4 | 14.5 |
| Estimated Energy Efficiency if Transit Trips Were Made by Automobile | | | | | |
| Automobile Passenger Miles of Travel | 15,150 | 548,274 | 19,121 | 16,798 | 5,600 |
| Vehicle Miles (at 1.0 to 1.2 passengers per automobile) | 12,625-15,150 | 456,895-548,274 | 15,934-19,121 | 13,998-16,798 | 4,667-5,600 |
| Vehicle Miles per Gallon of Gasoline[c] | 21.2 | 14.6 | 14.0 | 14.0 | 14.0 |
| Automobile Passenger Miles per Gallon of Gasoline | 21.2-25.4 | 14.6-17.5 | 14.0-16.8 | 14.0-16.8 | 14.0-16.8 |

[a] *Transit system data are based upon information reported by each transit operator in its annual Section 15 report submitted to the Federal Transit Administration.*

[b] *Represents all boarding passengers including transfer and free passengers.*

[c] *Estimated based on an average auto fuel efficiency of about 21 miles per gallon, with average efficiency of about 14 miles per gallon for central city standard arterial travel and 26 miles per gallon for freeway and expressway travel.*

*Source: SEWRPC.*

the Milwaukee County transit system may be attributed to its service area, which includes central Milwaukee County, with high-density land uses and attendant travel and transit demand, particularly to and from the City of Milwaukee central business district. The higher energy efficiency of the Waukesha County transit system may be attributed to the focus of its service on travel between Waukesha County and the Milwaukee central business district and to the limitation of a sizable portion of its service to the morning and afternoon peak-traffic periods.

Each transit system generally operates at levels substantially higher than its average energy efficiency during the weekday peak-traffic periods and generally substantially lower than its average levels during off-peak-periods. In addition, each of the transit systems generally operates at substantially higher than their average energy efficiency levels on their routes which carry more than their average passenger loadings and, conversely, at substantially lower than their average energy efficiency levels on routes which carry less than their average passenger loadings.

In general, it can be stated that the public transit systems in the City of Racine and the other urban areas within Southeastern Wisconsin do, on a daily systemwide basis, provide energy savings when compared to the automobile. Furthermore, public transit is more energy-efficient than the automobile on its more heavily traveled routes and during peak-traffic periods, but only marginally more energy-efficient, or, in some cases, less energy-efficient, than the automobile on its more lightly traveled routes and during off-peak-traffic periods.

2. It would appear that the Belle Urban System may contribute to efficiency in the utilization of the total capacity of the transportation system. If the people traveling by public transit were, instead, traveling by automobile, there would be an increase in automobile traffic utilizing arterial streets of the area of from 4 to 22 percent during the peak-traffic hour. The effect would be most pronounced on the streets within the City of Racine central business district, where the potential exists for traffic congestion to occur during peak-traffic hours.

## ROUTE PERFORMANCE EVALUATION

### Route Ridership and Financial Performance

The ridership and financial performance characteristics of the regular bus routes composing the City of Racine transit system are shown in Table 42 and in Figures 10 through 17. The data presented in this table and in the figures are based upon the operating characteristics and the total daily ridership, revenue passengers and transfer passengers, for each route of the Belle Urban System derived from passenger counts taken by the transit system during the period May 13 through 18, 1991 and on an average systemwide cost per vehicle mile for operation of the transit system during 1991.

The performance measures included in the table provide an indication of the ridership, productivity, and financial performance of each bus route. For each performance measure, a minimum performance level equal to 80 percent of the systemwide average was set under the transit service objectives and standards presented in Chapter IV of this report. Use of the systemwide average as the performance standard directs the transit system toward improving the performance of routes that are significantly below average so that, over time, the overall performance of the entire transit system will improve.

To supplement this route ridership and financial information, the boarding and alighting passenger activity along each bus route was also examined to help identify productive and nonproductive route segments. Information concerning the number of boarding and alighting passengers by location for each bus route was obtained from passenger counts conducted by Commission staff during the period April 16 through 18, 1991. To facilitate the analysis of the passenger boarding and alighting information, the bus routes were divided into segments based upon distance and land uses served. Information on the total passenger activity, boarding passengers and alighting passengers for each route segment, is provided in Figure 18, while the route segments are identified on Map 26. Approximately 18,400 boarding and alighting passengers were recorded over the 78 route segments identified on the system. About 12,300 passengers, or about 67 percent of the total recorded, boarded or alighted on the 25 most productive route segments. In contrast, only about 1,760 passengers, or fewer than 10 percent of the total recorded, boarded or alighted on the 25 route segments having the lowest passenger boarding and alighting activity. The 25 most productive and 25 least productive route segments are also shown on Map 26.

The following conclusions, based upon the above information, were reached:

1. Certain bus routes have weekday performance levels consistently above the specified performance standard of 80 percent of the systemwide average effectiveness levels. Such routes include Routes No. 1, 2, 3, 4, 5, 7, and 8. Of these seven routes, Routes No. 3, 4, and 7 are clearly the best performers, having weekday effectiveness levels which exceed 100 percent of the systemwide average for all measures of performance. The remaining four routes, Routes No. 1, 2, 5, and 8, have acceptable weekday effectiveness levels, within 80 to 100 percent of the systemwide average for most performance measures. Based solely upon ridership and financial performance, these routes should continue to be operated without change.

2. The other three routes of the system, of Routes No. 6, 9 and 10, have weekday performance levels consistently below the specified performance standard. Of the 25 least productive route segments on the system, 17 are accounted for by these three routes, including all 12 of the segments on Route No. 10, three of the six segments on Route No. 6, and two of the five segments on Route No. 9. It should be noted, however, that Route No. 10 operates only

## Table 42

## AVERAGE WEEKDAY AND SATURDAY PERFORMANCE CHARACTERISTICS OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

| Bus Route | Performance Characteristics | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Length (roundtrip route miles) | | Revenue Vehicle Hours | | Revenue Vehicle Miles | | Total Boarding Passengers | | | | Boarding Passengers per Route Mile | | | | Boarding Passengers per Revenue Vehicle Hour | | | |
| | | | | | | | Weekdays | | Saturdays | | Weekdays | | Saturdays | | Weekdays | | Saturdays | |
| | Weekday | Saturday | Weekday | Saturday | Weekday | Saturday | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] |
| No. 1 | 14.4 | 14.4 | 39.8 | 32.3 | 381.6 | 308.5 | 861 | 6 | 422 | 4 | 60.0 | 5 | 29.4 | 2 | 21.6 | 6 | 13.1 | 4 |
| No. 2 | 17.9 | 17.9 | 50.5 | 32.3 | 572.8 | 383.7 | 1,122 | 4 | 385 | 5 | 62.9 | 4 | 21.6 | 5 | 22.2 | 4 | 11.9 | 5 |
| No. 3 | 20.3 | 20.3 | 50.5 | 32.3 | 649.6 | 436.4 | 1,505 | 2 | 541 | 2 | 74.1 | 2 | 26.7 | 3 | 29.8 | 2 | 16.7 | 2 |
| No. 4 | 18.0 | 18.0 | 50.5 | 32.3 | 576.0 | 385.9 | 1,579 | 1 | 1,093 | 1 | 88.0 | 1 | 60.9 | 1 | 31.3 | 1 | 33.8 | 1 |
| No. 5 | 16.0 | 16.0 | 39.8 | 32.3 | 410.8 | 344.0 | 884 | 5 | 243 | 7* | 55.3 | 6 | 15.2 | 8* | 22.2 | 4 | 7.5 | 8* |
| No. 6 | 17.4 | 17.4 | 39.8 | 32.3 | 461.1 | 374.1 | 611 | 7* | 339 | 6 | 35.1 | 8* | 19.5 | 6* | 15.4 | 8* | 10.5 | 7* |
| No. 7 | 17.2 | 19.5 | 46.3 | 31.8 | 576.2 | 419.2 | 1,146 | 3 | 430 | 3 | 66.6 | 3 | 25.0 | 4 | 24.8 | 3 | 13.5 | 3 |
| No. 8 | 13.0 | 13.0 | 27.0 | 22.0 | 351.0 | 286.0 | 584 | 8* | 239 | 8* | 44.9 | 7 | 18.4 | 7* | 21.6 | 6 | 10.9 | 6* |
| No. 9 | 16.7 | -- | 22.5 | -- | 384.1 | -- | 282 | 9* | -- | -- | 16.9 | 9* | -- | -- | 12.5 | 9* | -- | -- |
| No. 10 | 14.0 | 14.0 | 8.3 | 7.5 | 140.8 | 140.0 | 62 | 10* | 29 | 9* | 4.4 | 10* | 2.1 | 9* | 7.5 | 10* | 3.9 | 9* |
| Systemwide Total/Average | 164.8 | 150.5 | 375.0 | 255.1 | 4,504.0 | 3,077.8 | 8,636 | -- | 3,721 | -- | 52.4 | -- | 24.7 | -- | 23.0 | -- | 14.6 | -- |

| Bus Route | Performance Characteristics | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Boarding Passengers per Revenue Vehicle Mile | | | | Operating Cost per Boarding Passenger[b] | | | | Operating Deficit per Boarding Passenger[b] | | | | Percent of Operating Costs Recovered through Operating Revenues[b] | | | | Saturday Ridership as a Percent of Weekday Ridership | |
| | Weekdays | | Saturdays | | Weekdays | | Saturdays | | Weekdays | | Saturdays | | Weekdays | | Saturdays | | | |
| | Number | Route Rank[a] | Number | Route Rank[a] | Cost($) | Route Rank[a] | Cost($) | Route Rank[a] | Cost($) | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] | Number | Route Rank[a] |
| No. 1 | 2.26 | 3 | 1.37 | 2 | 1.60 | 6 | 2.66 | 4 | 1.20 | 6 | $2.26 | 4 | 24.9 | 6 | 15.1 | 4 | 49.0 | 3 |
| No. 2 | 1.96 | 6 | 1.00 | 5 | 1.56 | 4 | 2.91 | 5* | 1.16 | 4 | $2.51 | 5* | 25.6 | 4 | 13.7 | 5 | 34.3 | 8* |
| No. 3 | 2.32 | 2 | 1.24 | 3 | 1.16 | 2 | 2.07 | 2 | 0.76 | 2 | $1.67 | 2 | 34.4 | 2 | 19.3 | 2 | 35.9 | 7 |
| No. 4 | 2.74 | 1 | 2.83 | 1 | 1.11 | 1 | 1.03 | 1 | 0.71 | 1 | $0.63 | 1 | 36.0 | 1 | 39.0 | 1 | 69.2 | 1 |
| No. 5 | 2.15 | 4 | 0.71 | 8* | 1.56 | 4 | 4.61 | 8* | 1.16 | 4 | $4.21 | 8* | 25.6 | 4 | 8.7 | 8* | 27.5 | 9* |
| No. 6 | 1.33 | 8* | 0.91 | 6* | 2.26 | 8* | 3.31 | 7* | 1.86 | 8* | $2.91 | 7* | 17.7 | 8* | 12.1 | 7* | 55.5 | 2 |
| No. 7 | 1.99 | 5 | 1.03 | 4 | 1.40 | 3 | 2.57 | 3 | 1.00 | 3 | $2.17 | 3 | 28.5 | 3 | 15.6 | 3 | 37.5 | 6 |
| No. 8 | 1.66 | 7 | 0.84 | 7* | 1.60 | 6 | 3.20 | 6* | 1.20 | 6 | $2.80 | 6* | 24.9 | 6 | 12.5 | 6* | 40.9 | 5 |
| No. 9 | 0.73 | 9* | -- | -- | 2.77 | 9* | -- | -- | 2.37 | 9* | -- | -- | 14.4 | 9* | -- | -- | -- | -- |
| No. 10 | 0.44 | 10* | 0.21 | 9* | 4.65 | 10* | 8.98 | 9* | 4.25 | 10* | $8.58 | 9* | 8.6 | 10* | 4.5 | 9* | 46.8 | 4 |
| Systemwide Total/Average | 1.92 | -- | 1.21 | -- | 1.51 | -- | 2.38 | -- | 1.11 | -- | $1.98 | -- | 26.5 | -- | 16.8 | -- | 43.1 | -- |

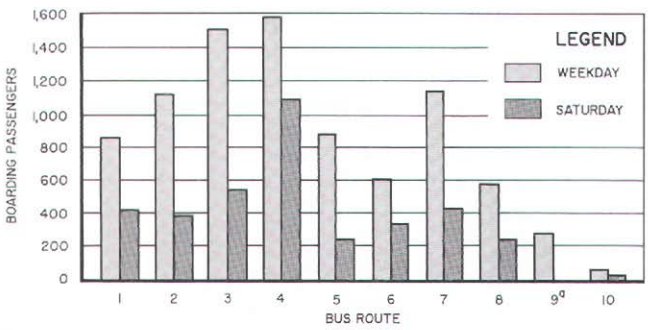
[a]*An * indicates that the route performs below 80% of the systemwide average for a particular performance measure.*

[b]*Figures represent estimates and are based upon systemwide average operating expenses and average passenger revenues. Estimates of average daily operating expenses per route were based upon the systemwide average operating cost for calendar year 1991 of $2.88 per vehicle mile and total daily vehicle miles for each route. Estimates of average daily revenues for each route were based upon systemwide average passengers for the week of May 13-18, 1991, and the total average daily total passengers for calendar year 1991 of about $0.40 per passenger.*

*Source: City of Racine Department of Transportation and SEWRPC.*

### Figure 10

### TOTAL PASSENGERS FOR THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

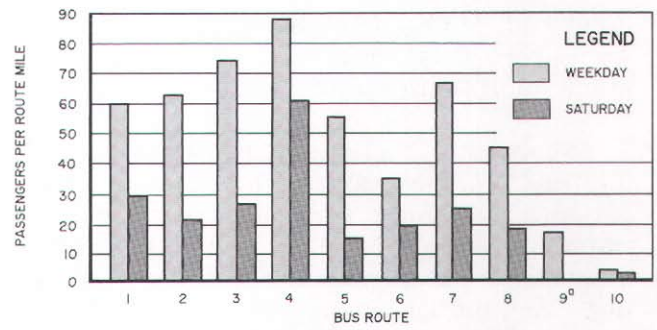



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

### Figure 11

### TOTAL PASSENGERS PER ROUTE MILE ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

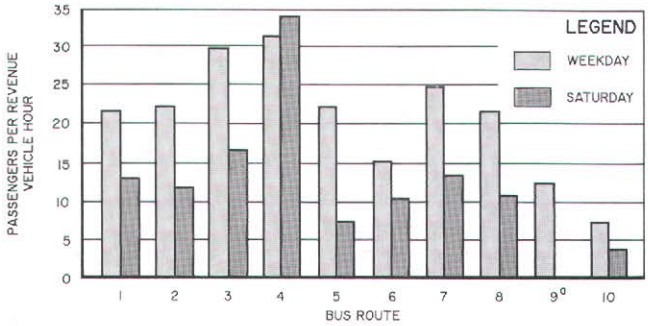



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 12

### TOTAL PASSENGERS PER REVENUE VEHICLE HOUR ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

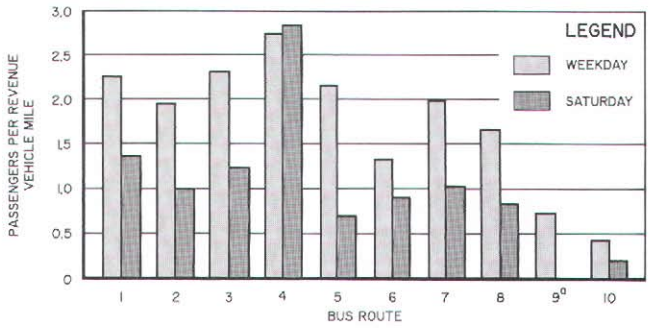



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 13

### TOTAL PASSENGERS PER REVENUE VEHICLE MILE ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

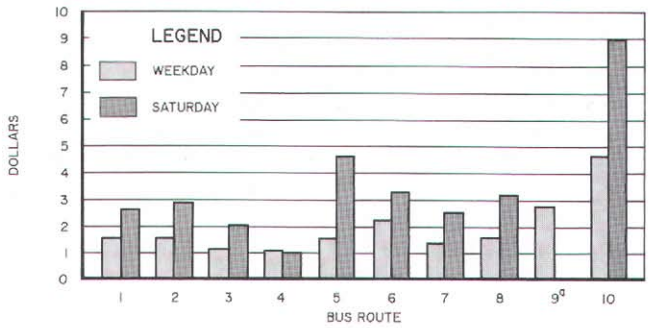



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 14

### TOTAL OPERATING EXPENSE PER PASSENGER ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

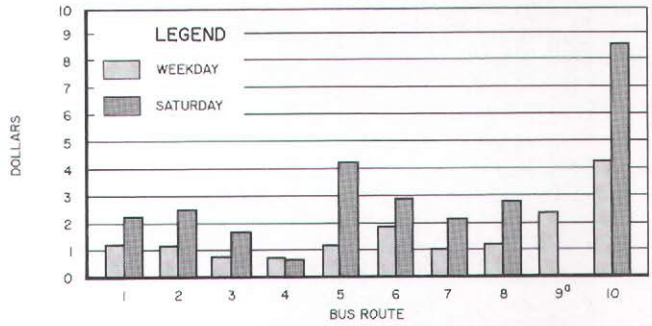



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 15

### TOTAL OPERATING DEFICIT PER PASSENGER ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

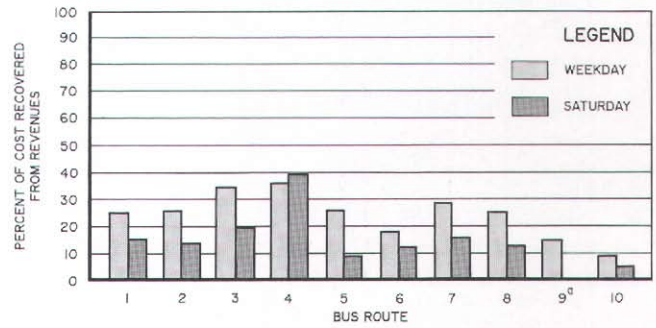



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 16

### PERCENT OF OPERATING EXPENSES RECOVERED FROM OPERATING REVENUES ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

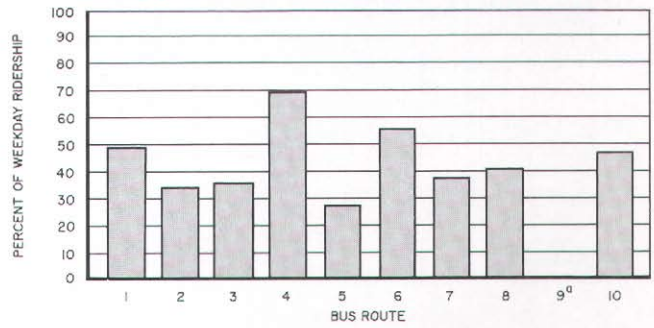



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure 17

### PERCENT OF WEEKDAY RIDERS RIDING ON SATURDAYS ON THE ROUTES OF THE BELLE URBAN SYSTEM: MAY 13-18, 1991

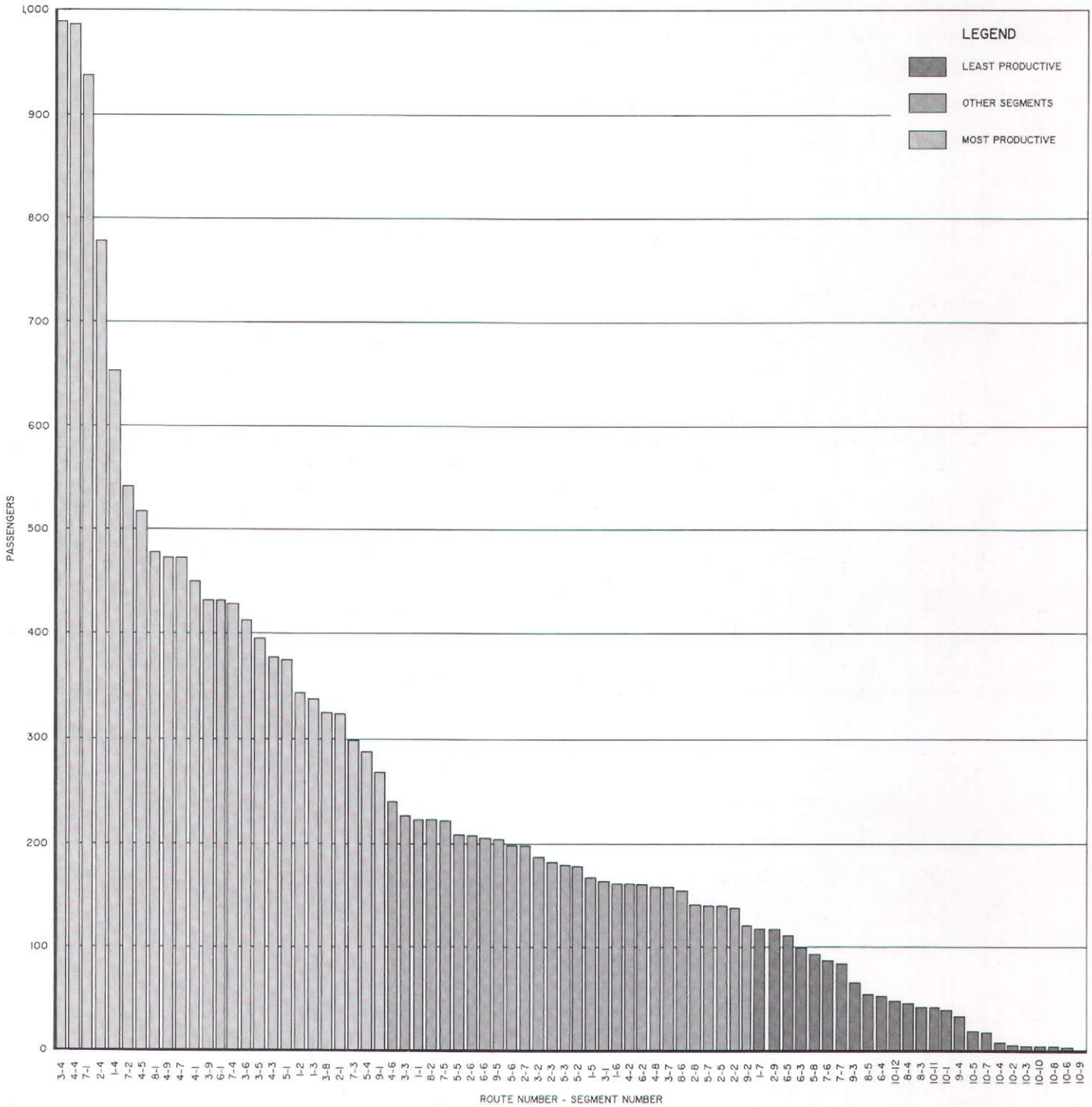



[a]*Route No. 9 does not operate on Saturdays, therefore information is only presented for this route's operational characteristics on weekdays.*

*Source: City of Racine Department of Transportation and SEWRPC.*

Figure 18

PASSENGER ACTIVITY BY ROUTE SEGMENT OF THE CITY OF RACINE TRANSIT SYSTEM: WEEKDAYS, MAY 13-18, 1991




*Source: SEWRPC.*

during the morning and afternoon periods on weekdays and consequently provides significantly less service than the other routes of the transit system. This directly affects the level of ridership the route is able to generate. Potential changes in these routes to improve performance should be considered.

3. While Route No. 10 had the most unproductive route segments, at least one unproductive route segment was found on all the other routes of the system with the exception of Routes No. 3 and 4, which included no unproductive segments. This information should be viewed as an indicator of where routing changes should be considered in the current route structure. This is particularly true of Route No. 10, which, as noted above, is comprised entirely of segments with very low ridership levels. It should be noted, however, that some of the route segments with the lowest ridership occur where bus routes pass through areas with little residential development or few major trip generators as they travel towards residential areas or trip generators within the greater Racine area which do generate significant ridership. Consequently, if the transit system is to continue to provide extensive areal coverage of the Racine area, some bus routes must be expected to perform at relatively lower levels of efficiency than other bus routes because of the specific and constrained operating and service area characteristics of each route.

4. In general, the same regular routes perform above or below the specified minimum performance levels on Saturdays as on weekdays. The exceptions to this are Routes No. 5 and 8, which have acceptable weekday performance levels of between 80 and 100 percent of the systemwide average, but have Saturday performance levels which are less than 80 percent of the systemwide average and, therefore, unacceptable. For Route No. 5, this may be attributed to the significant portion of route ridership which uses Route No. 5 for school-related travel on weekdays and not on Saturdays. For Route No. 8, this would appear to be attributable to generally lower level of Saturday ridership being generated by the land uses served by the route.

Compliance with Operating Headway and Passenger Loading Standards

Standard No. 6 of Objective No. 3 states that operating headways for fixed bus routes should be capable of accommodating passenger demand at the recommended load standards. The recommended load standards, as specified under Standard No. 4 of Objective No. 3, call for maximum load factors not to exceed 1.25 during peak-periods and 1.0 at all other times. The maximum load factor is defined as the ratio of passengers to bus seats as measured at the point on the route where passenger loads are highest. 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.

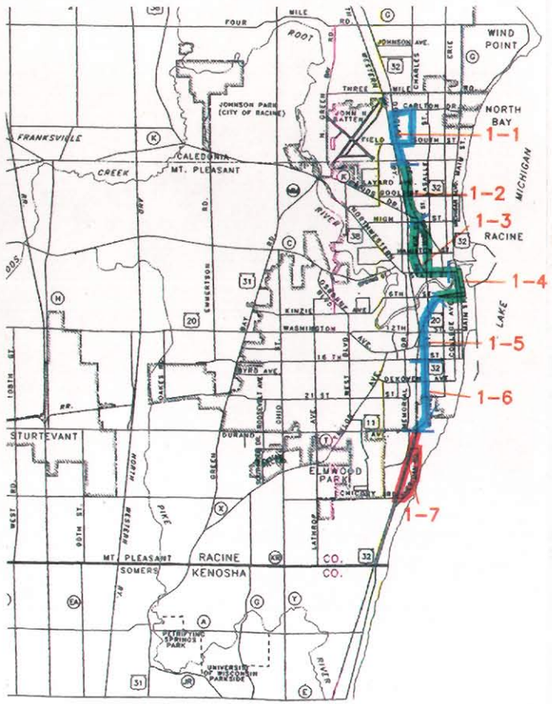
The performance of Racine bus routes against these two standards was determined from the weekday boarding and alighting passenger count data collected by the Commission staff from April 16 through 18, 1991. Information on the total weekday boarding passengers by bus run by direction of travel for each bus route was used to identify individual bus trips with total passenger boardings in excess of the seated capacity of the buses used. The pattern of boarding and alighting passengers on these individual bus runs was then reviewed to determine the highest passenger loads for the particular bus trip from which the maximum load factor was computed. Information on the total weekday boarding passengers by bus run for each of the regular bus routes is presented in Appendix E. The maximum load factors observed on each regular bus route are presented in Table 43. The information presented in this table can be used to help determine if increases in existing service levels or headways are needed to relieve overloading conditions on City bus routes during the peak or off-peak-periods of each weekday.

Effective September 8, 1992, headways on Route No. 2 during the morning and afternoon peak-periods were increased from 20 to 30 minutes, to be the same as base service levels operated on Routes No. 1, 5, 6, 7, 8, and 9 of the transit system. The elimination of peak-hour service on

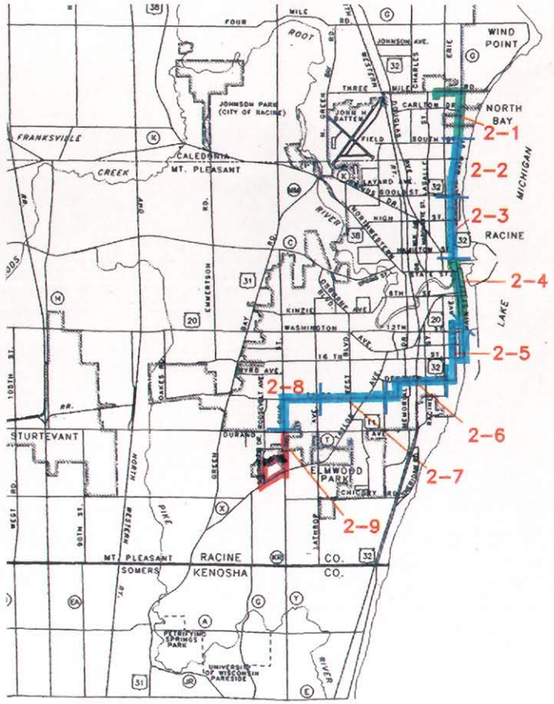
Map 26

## PRODUCTIVE AND UNPRODUCTIVE ROUTE SEGMENTS OF THE CITY OF RACINE BELLE URBAN SYSTEM: APRIL 16-18, 1991

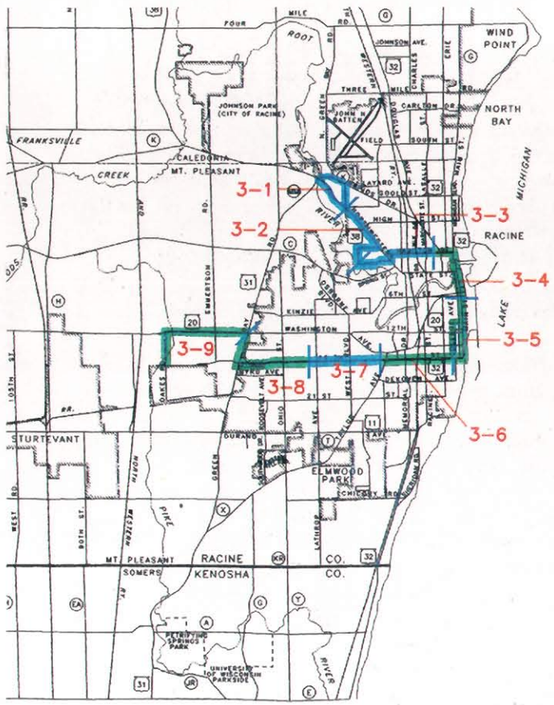
ROUTE NO. 1



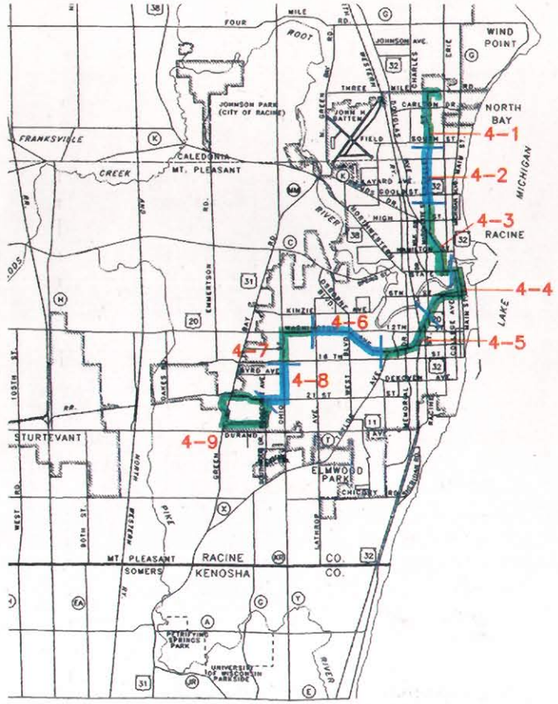

ROUTE NO. 2



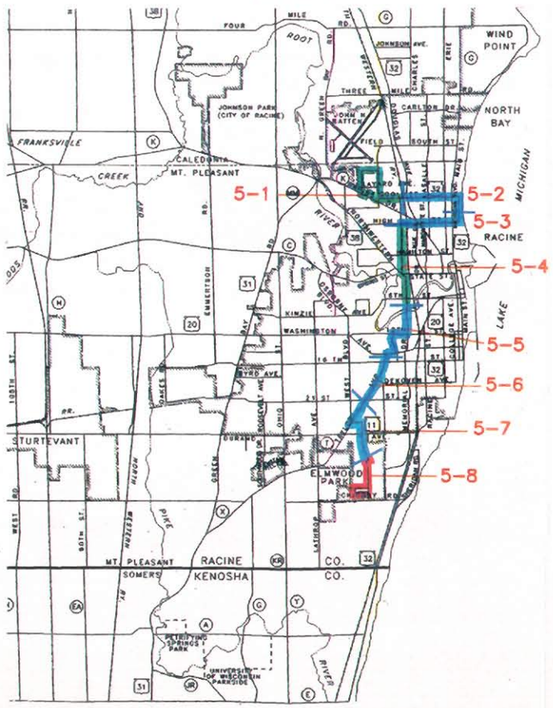

ROUTE NO. 3



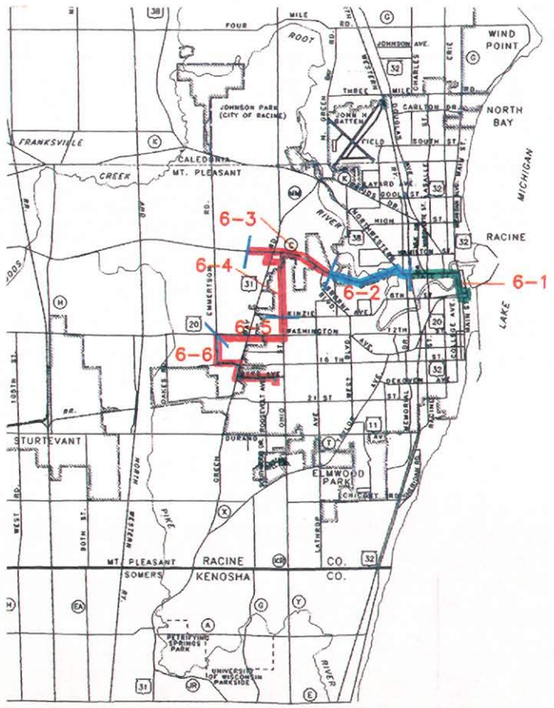

ROUTE NO. 4



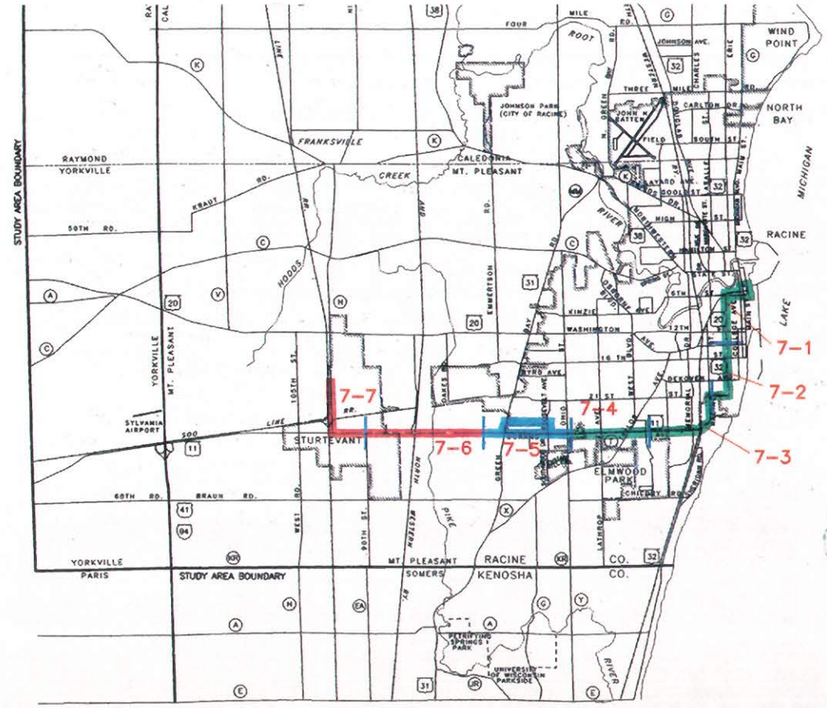

ROUTE NO. 5




ROUTE NO. 6




ROUTE NO. 7




LEGEND

ROUTE SEGMENTS

- MOST PRODUCTIVE ROUTE SEGMENTS
- LEAST PRODUCTIVE ROUTE SEGMENTS
- OTHER ROUTE SEGMENTS

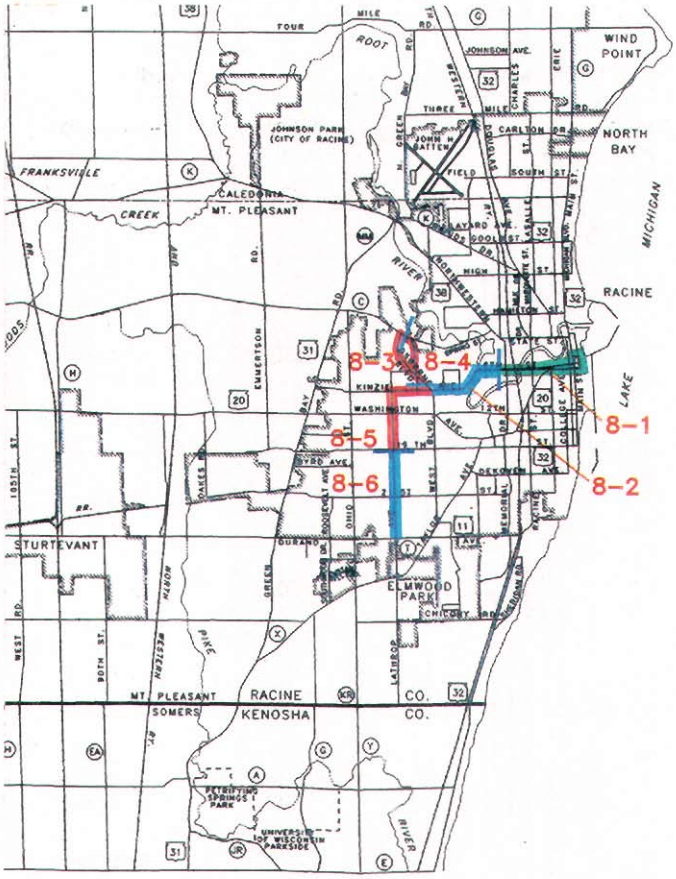
1-4 ROUTE NO. – SEGMENT NO.

GRAPHIC SCALE

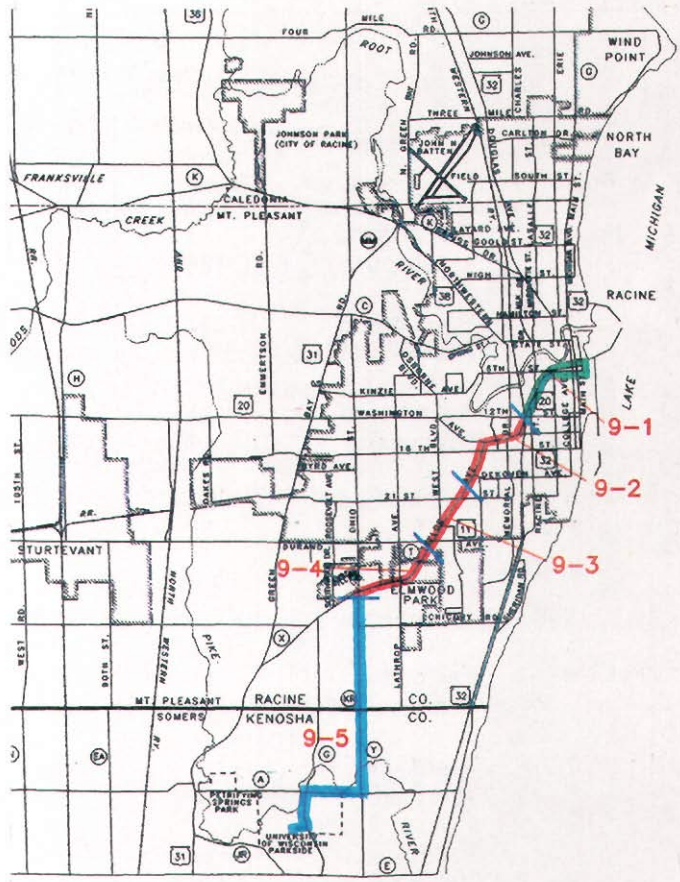
0 2000 4000 6000 8000 FEET

## Map 26 (continued)

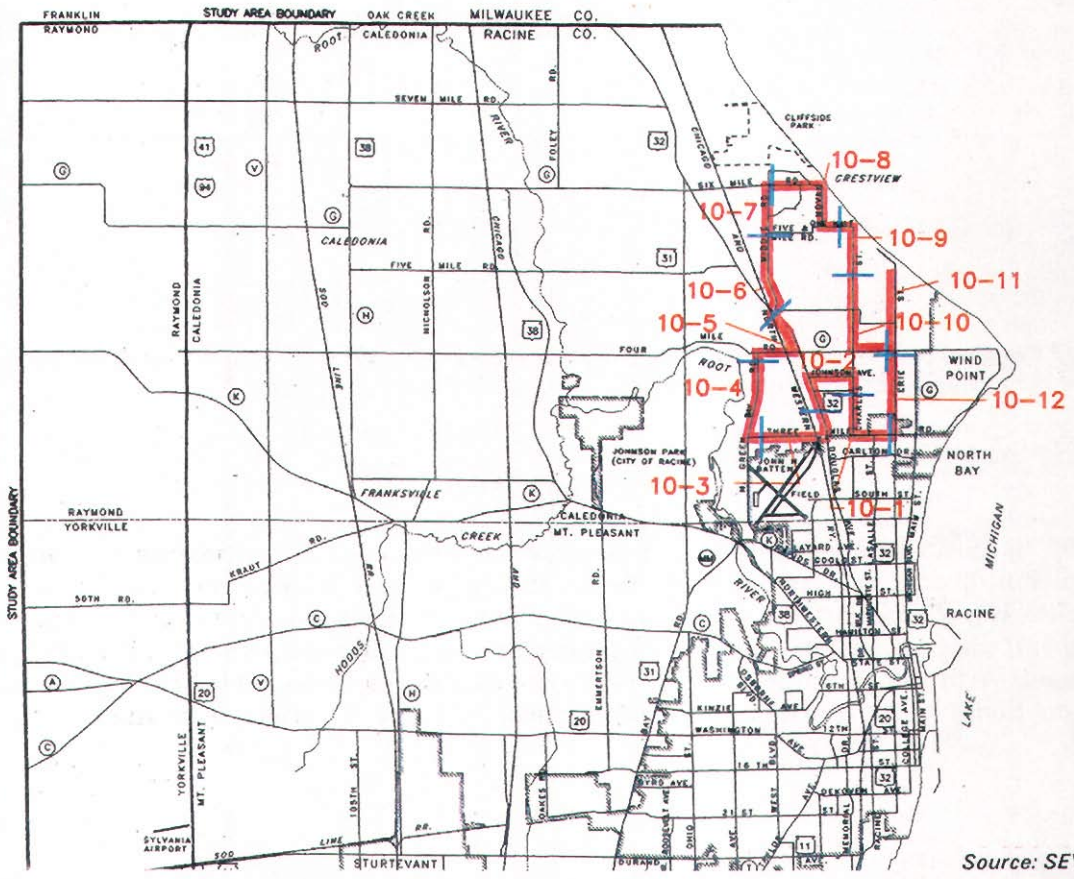
ROUTE NO. 8




ROUTE NO. 9




ROUTE NO. 10




LEGEND

ROUTE SEGMENTS

- MOST PRODUCTIVE ROUTE SEGMENTS
- LEAST PRODUCTIVE ROUTE SEGMENTS
- OTHER ROUTE SEGMENTS

10-4 ROUTE NO. – SEGMENT NO.

GRAPHIC SCALE

0 2000 4000 6000 8000 FEET

*Source: SEWRPC.*

Table 43

MAXIMUM LOAD FACTORS BY ROUTE FOR THE BELLE URBAN SYSTEM: APRIL 16-18, 1991

| Route | Direction | Morning Peak Period[a] | | Midday Off-Peak Period[b] | | Afternoon Peak Period[c] | |
|---|---|---|---|---|---|---|---|
| | | Maximum Passenger Volume | Maximum Load Factor[d] | Maximum Passenger Volume | Maximum Load Factor[d] | Maximum Passenger Volume | Maximum Load Factor[d] |
| No. 1 | Southbound | 15 | 0.37 | 15 | 0.37 | 21 | 0.51 |
| | Northbound | 25 | 0.61 | 29 | 0.71 | 26 | 0.63 |
| No. 2 | Southbound | 27 | 0.66 | 13 | 0.32 | 13 | 0.32 |
| | Northbound | 7 | 0.17 | 27 | 0.66 | 18 | 0.44 |
| No. 3 | Southbound | 32 | 0.78 | 27 | 0.66 | 27 | 0.66 |
| | Northbound | 23 | 0.56 | 23 | 0.56 | 46 | 1.12 |
| No. 4 | Southbound | 20 | 0.49 | 31 | 0.76 | 38 | 0.93 |
| | Northbound | 27 | 0.66 | 15 | 0.37 | 42 | 1.02 |
| No. 5 | Northbound | 29 | 0.71 | 11 | 0.27 | 24 | 0.59 |
| | Southbound | 33 | 0.80 | 6 | 0.14 | 38 | 0.93 |
| No. 6 | Eastbound | 11 | 0.27 | 18 | 0.44 | 20 | 0.49 |
| | Westbound | 9 | 0.22 | 17 | 0.41 | 16 | 0.39 |
| No. 7 | Eastbound | 15 | 0.37 | 19 | 0.46 | 37 | 0.90 |
| | Westbound | 56 | 1.37 | 23 | 0.56 | 19 | 0.46 |
| No. 8 | Eastbound | 17 | 0.41 | 16 | 0.34 | 11 | 0.27 |
| | Westbound | 8 | 0.20 | 16 | 0.39 | 19 | 0.46 |
| No. 9 | Southbound | 7 | 0.17 | 12 | 0.29 | 8 | 0.20 |
| | Northbound | 4 | 0.10 | 7 | 0.41 | 9 | 0.22 |
| No. 10 | Westbound | 12 | 0.29 | 12 | 0.29 | -- | -- |
| | Eastbound | -- | -- | -- | -- | 6 | 0.15 |

[a] *6:00 a.m. to 8:30 a.m.*

[b] *8:30 a.m. to 2:30 p.m.*

[c] *2:30 p.m. to 6:00 p.m.*

[d] *Assumes an average of 41 seats per bus. The maximum load factors specified under Objective No. 3, Standard No. 4 are 1.25 during weekday peak periods and 1.00 at all other times.*

*Source: SEWRPC.*

Route No. 2 was based upon an analysis conducted by City staff which indicated that current ridership levels on Route No. 2 did not justify higher service levels during the peak period than during the off-peak period. With the elimination of peak-period service on Route No. 2, questions also arose over the need for peak-hour service on Routes No. 3, 4 and 7, which continue to be operated with 20-minute headways during the morning and afternoon peak-periods. An analysis of the possible impacts on the load factors on Routes No. 3, 4 and 7 which could result from

Table 44

COMPARISON OF ESTIMATED LOAD FACTORS ON ROUTES NO. 3, 4, AND 7 OF THE BELLE URBAN SYSTEM WITH, AND WITHOUT, ADDITIONAL PEAK-PERIOD SERVICE

| Route | Direction | Range of Load Factors[a] | | | |
|---|---|---|---|---|---|
| | | A.M. Peak Period | | P.M. Peak Period | |
| | | With Additional Peak-Hour Service | Without Additional Peak-Hour Service[b] | With Additional Peak-Hour Service | Without Additional Peak-Hour Service[b] |
| No. 3 | Southbound | 0.20-0.78 | 0.29-1.07 | 0.07-0.66 | 0.10-0.95 |
| | Northbound | 0.17-0.46 | 0.20-0.80 | 0.15-1.12 | 0.22-1.27 |
| No. 4 | Southbound | 0.20-0.49 | 0.56-0.63 | 0.17-0.71 | 0.41-1.20 |
| | Northbound | 0.17-0.78 | 0.24-0.98 | 0.17-1.00 | 0.22-1.02 |
| No. 7 | Eastbound | 0.07-0.37 | 0.20-0.41 | 0.15-0.90 | 0.20-0.93 |
| | Westbound | 0.12-1.37 | 0.29-1.49 | 0.07-0.54 | 0.35-0.70 |

[a] *Based on passenger counts taken April 16-18, 1991 by Commission staff.*

[b] *Assumes no loss in ridership due to increase in peak-period headways from 20 to 30 minutes. During the morning peak period, it was assumed that two-thirds of the passengers on bus trips eliminated would board the immediately preceding bus trip, and one-third of the passengers would board the immediately succeeding bus trip. During the afternoon peak period, the reverse of the morning proportions were assumed.*

*Source: SEWRPC.*

the elimination of the additional bus trips operated over these routes to provide 20-minute headways during peak-periods was, therefore, also conducted, using the same passenger count data collected by Commission staff from April 16 through April 18, 1991.

For this analysis, it was assumed that there would be no ridership loss associated with the increase in headways on these routes and that passengers using the eliminated bus trips would, instead, shift their time of travel to use a different bus trip on the same route. For passengers traveling during the morning peak period, it was assumed that two-thirds of the passengers using the eliminated bus trip would use the immediately preceding bus trip and one-third would take the immediately succeeding bus trip. For the afternoon peak-period, the reverse of these proportions was assumed, with one-third of the passengers on the eliminated bus trip assumed to take the immediately preceding trip and two-thirds of the passengers assumed to take the immediately succeeding bus trip. These assumptions reflect that a majority of the passengers using the transit system during the peak-periods are making trips for work or school purposes, with jobs or classes with fixed starting and ending times. This would dictate that they either leave earlier in the morning or later in the afternoon to continue to use transit service. Table 44 compares the maximum load factors observed during the morning and afternoon peak-periods on Routes No. 3, 4, and 7 under operation with the current 20-minute peak-period headways with the estimated maximum-load factors which may occur on these routes if peak-hour bus trips were eliminated and headways increased from 20 to 30 minutes.

On the basis of the above information, the following conclusions were reached:

1. As would be expected, the regular routes of the transit system which carry the most weekday ridership, Routes No. 1, 3, 4, 5, and 7, also had the highest passenger loads during the period examined. In only one case, however, did the observed passenger loads result in load factors exceeding the recommended maximums of 1.25 during peak periods and 1.00 during off-

peak-periods specified in the transit service standards. Route No. 7 westbound during the morning peak-period had a load factor of 1.37, exceeding the specified maximum for peak periods. The next highest load factors were observed on Routes No. 3 and 4, which had load factors of 1.12 and 1.02, respectively, during the afternoon peak period. All other load factors observed during the peak and off-peak-periods were below 1.00. It may, therefore, be concluded that the existing headways on the regular routes of the transit system are capable of accommodating existing levels of passenger demand and that reductions in operating headways are not needed.

2. Increasing peak-period headways on Routes No. 3, 4, and 7 from 20 to 30 minutes would result in increases in peak-period passenger loads on these routes. Peak-period passenger loads and load factors could increase by an average of about 30 percent if the bus trips needed to provide 20-minute peak-period headways on these routes were eliminated. In only one case, however, Route No. 3 northbound in the afternoon peak period, would the estimated load factors increase to exceed the recommended maximum of 1.25 during peak periods specified in the transit service standards. This analysis would indicate that the elimination of some peak-period bus trips on Routes No. 3, 4, and 7 could possibly be considered a cost-saving measure for the transit system without significant concerns over creating overcrowded conditions on these routes. However, before taking action to reduce or eliminate peak-period bus trips on Routes No. 3, 4, and 7, the actual change in ridership on Route No. 2 which occurred after the elimination of the additional peak-period bus trips on this route in September 1992 should be considered. A comparison of passenger counts taken during similar periods by the transit system before and after the reduction of service on Route No. 2 indicates that a decline in weekday ridership of between 150 and 175 passengers per day occurred on Route No. 2. The ridership loss was approximately equal to the total passengers carried on the peak-hour bus trips eliminated; no increase in ridership was detected on the all-day bus trips which were not affected by the service change. Thus, it would appear that the passengers using the peak-hour bus trips which were eliminated did not shift to other bus trips on the route as assumed in the preceding analysis, but rather were lost from the route ridership.

Schedule Adherence

The provision of reliable and on-time transit service is important in attracting and keeping transit riders. For the purpose of this study, "on-time" has been defined as adhering to published schedules within the range of one minute early and three minutes late. The headways operated on the bus routes of the Belle Urban System range from 20 to 45 minutes. As a result, excessive waiting times can occur for passengers who miss service connections because of bus departures ahead of schedule. Performance within these guidelines, therefore, becomes important in minimizing passenger inconvenience.

To obtain a measure of schedule adherence on the Belle Urban System, random spot-checks of departure times at bus stops along each regular route were made by the Commission staff on April 23 and 24, 1991. The random checks were made on selected inbound and outbound bus trips during the morning peak, midday off-peak, and afternoon peak periods of transit system operation at the primary transfer point located downtown at 5th Street and Main Street and at bus stops outside downtown along each route. Spot-checks of schedule adherence were made on 186, or 35 percent, of the 529 one-way bus trips operated on the regular routes on weekdays. Actual departure times were recorded at each bus stop and then compared with the scheduled departure times at the stop to determine if any problems in schedule adherence existed. The schedule adherence data collected are summarized in Table 45.

On the basis of this information, the following conclusions may be drawn:

1. For the 186 stops for which observed bus departure times were checked for adherence to published schedules, 145 departures, or 78 percent, were considered to be on time, in accordance with the foregoing definition. This is somewhat below the recommended performance level of

## Table 45

## ON-TIME PERFORMANCE OF THE REGULAR ROUTE TRANSIT SERVICE PROVIDED BY THE BELLE URBAN SYSTEM: APRIL 23 AND 24, 1991

| Route | Weekday One-Way Bus Trips | | | Schedule Adherence Checks Made at Downtown Transfer Location | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Total | | Early Departures | | On-Time[a] | | Late Departures | |
| | Total | Number of Bus Trips Checked | Percent of Bus Trips Checked | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| No. 1 | 53 | 17 | 32 | 6 | 100 | 1 | 17 | 4 | 67 | 1 | 17 |
| No. 2 | 64 | 28 | 44 | 6 | 100 | 1 | 17 | 4 | 67 | 1 | 17 |
| No. 3 | 64 | 22 | 34 | 5 | 100 | 1 | 20 | 3 | 60 | 1 | 20 |
| No. 4 | 64 | 25 | 39 | 6 | 100 | 1 | 17 | 4 | 67 | 1 | 17 |
| No. 5 | 53 | 18 | 34 | -- | 100 | -- | -- | -- | -- | 0 | -- |
| No. 6 | 53 | 18 | 34 | 3 | 100 | -- | -- | 2 | 67 | 1 | 33 |
| No. 7 | 67 | 18 | 27 | 3 | 100 | -- | -- | 3 | 100 | -- | -- |
| No. 8 | 54 | 21 | 39 | 3 | 100 | -- | -- | 3 | 100 | -- | -- |
| No. 9 | 46 | 16 | 35 | 4 | 100 | -- | -- | 4 | 100 | -- | -- |
| No. 10 | 11 | 3 | 27 | -- | 100 | -- | -- | -- | -- | -- | -- |
| Total | 529 | 186 | 35 | 36 | 100 | 4 | 11 | 27 | 75 | 5 | 14 |

| Route | Schedule Adherence Checks Made at Stops Outside Downtown | | | | | | | | Schedule Adherence Checks Made Over Entire System | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total | | Early Departures | | On-Time[a] | | Late Departures | | Total | | Early Departures | | On-Time[a] | | Late Depatures | |
| | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| No. 1 | 11 | 100 | 1 | 9 | 10 | 91 | -- | -- | 17 | 100 | 2 | 12 | 14 | 82 | 1 | 6 |
| No. 2 | 22 | 100 | 4 | 18 | 15 | 68 | 3 | 14 | 28 | 100 | 5 | 18 | 19 | 68 | 4 | 14 |
| No. 3 | 17 | 100 | 5 | 29 | 9 | 53 | 3 | 18 | 22 | 100 | 6 | 27 | 12 | 55 | 4 | 18 |
| No. 4 | 19 | 100 | -- | -- | 17 | 89 | 2 | 11 | 25 | 100 | 1 | 4 | 21 | 84 | 3 | 12 |
| No. 5 | 18 | 100 | 2 | 11 | 15 | 83 | 1 | 6 | 18 | 100 | 2 | 11 | 15 | 83 | 1 | 6 |
| No. 6 | 15 | 100 | 2 | 13 | 13 | 87 | -- | -- | 18 | 100 | 2 | 11 | 15 | 83 | 1 | 6 |
| No. 7 | 15 | 100 | 2 | 13 | 10 | 67 | 3 | 20 | 18 | 100 | 2 | 11 | 13 | 72 | 3 | 17 |
| No. 8 | 18 | 100 | 1 | 6 | 16 | 89 | 1 | 6 | 21 | 100 | 1 | 5 | 19 | 90 | 1 | 5 |
| No. 9 | 12 | 100 | 1 | 8 | 10 | 83 | 1 | 8 | 16 | 100 | 1 | 6 | 14 | 88 | 1 | 6 |
| No. 10 | 3 | 100 | -- | -- | 3 | 100 | -- | -- | 3 | 100 | -- | -- | 3 | 100 | -- | -- |
| Total | 150 | 100 | 18 | 12 | 118 | 79 | 14 | 9 | 186 | 100 | 22 | 12 | 145 | 78 | 19 | 10 |

[a]*Defined as adherence to published schedules within the range of one minute early and three minutes late.*

*Source: SEWRPC.*

95 percent set forth under the transit service objectives and standards. Only Route No. 10 was found to have an on-time performance which met the specified performance standard.

2. Problems with schedule adherence were found to be almost equally divided between early and late departures at bus stops. Such problems most commonly are related to differences between the actual running time and scheduled time for a round trip on each bus route resulting from different passenger loading patterns or traffic conditions. Unless drivers constantly compensate for running time and scheduled time differences, schedule adherence problems will occur. To correct the observed problems with schedule adherence, the scheduled running times between timepoints along each route should be reviewed and, possibly, modified to reflect different passenger loading and traffic conditions which occur throughout the day and which affect actual running times between stops.

Directness of Public Transit Route Alignments

The directness of route alignments can affect the ability of the transit system to compete with private automobiles, since indirect and circuitous routing alignments can affect travel time and can discourage transit use. In order to

## Table 46

## TRANSIT-TO-AUTOMOBILE DISTANCES AT SELECTED LOCATIONS SERVED BY THE CITY OF RACINE TRANSIT SYSTEM: 1991

| Route | Termini for Travel Distance and Time Measurements | One-Way Travel Distance (miles)[a] | | | | One-Way Travel Time (minutes)[b] | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | Transit | Automobile | Difference (transit to automobile) | Ratio (transit to automobile) | Transit | Automobile | Difference (transit to automobile) | Ratio (transit to automobile) |
| No. 1 | Douglas Avenue and Carlton Drive to STH 32 and Sheridan Road | 7.1 | 6.2 | 0.9 | 1.15 | 36 | 15 | 21 | 2.40 |
| | Douglas Avenue and Carlton Drive to downtown | 3.4 | 3.1 | 0.3 | 1.10 | 18 | 8 | 10 | 2.25 |
| | STH 32 and Sheridan Road to downtown | 3.7 | 3.6 | 0.1 | 1.03 | 18 | 8 | 10 | 2.25 |
| No. 2 | Shorecrest Shopping Center to Meechum Road and Taylor Avenue | 8.9 | 7.5 | 1.4 | 1.19 | 40 | 21 | 19 | 1.90 |
| | Shorecrest Shopping Center to downtown | 3.3 | 3.3 | 0.0 | 1.00 | 16 | 9 | 7 | 1.78 |
| | Meechum Road and Taylor Avenue to downtown | 5.6 | 4.2 | 1.4 | 1.33 | 24 | 12 | 12 | 2.00 |
| No. 3 | Golf Avenue and Rapids Drive to J. I. Case High School | 10.2 | 4.8 | 5.4 | 2.13 | 43 | 11 | 32 | 3.91 |
| | Golf Avenue and Rapids Drive to downtown | 3.9 | 2.9 | 1.0 | 1.34 | 18 | 8 | 10 | 2.25 |
| | J. I. Case High School to downtown | 6.3 | 5.3 | 1.0 | 1.19 | 25 | 15 | 10 | 1.67 |
| No. 4 | Shorecrest Shopping Center to Regency Mall | 9.0 | 7.7 | 1.3 | 1.17 | 37 | 16 | 21 | 2.31 |
| | Shorecrest Shopping Center to downtown | 3.4 | 3.3 | 0.1 | 1.03 | 15 | 9 | 6 | 1.67 |
| | Regency Mall to downtown | 5.6 | 4.6 | 1.0 | 1.22 | 22 | 14 | 8 | 1.57 |
| No. 5 | Rapids Plaza to Concord Drive and Spruce Street | 7.7 | 5.6 | 2.1 | 1.38 | 40 | 18 | 22 | 2.22 |
| No. 6 | K-Mart to downtown | 8.7 | 3.7 | 5.0 | 2.35 | 39 | 12 | 27 | 3.25 |
| No. 7 | Sturtevant Amtrak Station to downtown | 8.6 | 7.6 | 1.0 | 1.13 | 33 | 19 | 14 | 1.74 |
| No. 8 | Elmwood Plaza to downtown | 6.5 | 3.4 | 3.1 | 1.91 | 26 | 11 | 15 | 2.36 |
| No. 9 | University of Wisconsin-Parkside to downtown | 8.3 | 8.2 | 0.1 | 1.01 | 21 | 17 | 4 | 1.24 |
| No. 10 | Shorecrest Shopping Center to Six Mile Road and Lone Elm Drive | 6.2 | 4.2 | 2.0 | 1.48 | 19 | 9 | 10 | 2.11 |
| | Six Mile Road and Lone Elm Drive to Shorecrest Shopping Center | 7.4 | 4.2 | 3.2 | 1.76 | 21 | 9 | 12 | 2.33 |
| Systemwide Average | Terminal-to-terminus (crosstown Routes No. 1-5 and Route No. 10) | 8.9 | 6.0 | 2.4 | 1.40 | 36 | 15 | 21 | 2.41 |
| | Terminus-to-downtown (Routes No. 1-4 and 6-9 only) | 5.6 | 4.4 | 1.2 | 1.27 | 23 | 12 | 11 | 1.94 |

[a] *Based on average over-the-road distances between points identified.*

[b] *Based on average off-peak travel times between points identified.*

*Source: SEWRPC.*

measure the directness of the alignments of the existing regular bus routes, the over-the-road distance and travel time for travel between selected locations within the transit service area by transit and by automobile were compared. As noted in Chapter III, the Racine central business district both produces and attracts a significant number of both total person and transit person trips made on an average weekday within the study area. In addition, a common transfer point for eight of the 10 routes in the system is located within the Racine central business district. Accordingly, distances and travel times were measured for travel between the outlying termini of the eight routes serving the Racine central business district and the common transfer point for these routes at 5th and Main Streets. For those routes which also provide crosstown service through the central business district, distances and travel times were also measured for travel between the outlying termini of each crosstown route.

Table 46 presents the comparison of automobile and transit travel distances and times used to measure the directness of the current transit

route alignments. From the information presented in this table the following conclusions were reached:

1. The majority of the existing transit system routes have at least a small segment of their alignment which is to some degree less direct than the more direct path which would be followed by automobile travel. Only the alignments of Routes No. 7 and 9 were found to contain no indirect routing segments. The indirectness of the current route alignments results largely from efforts made to maximize ridership by maximizing service to the residential areas and major travel generators on each route while, at the same time, minimizing both the number of routes needed and the attendant total expenditures for transit system operation. In addition, the alignments of some routes have been designed to provide direct transit service between the residential areas and major traffic generators, including schools, which are located along each route. The existing route alignments, consequently, do provide for relatively direct travel with only a minor amount of inconvenience for short trips and many longer crosstown trips.

2. For long crosstown trips made on Routes No. 3 and 6, however, the existing alignments of these routes result in a significant amount of inconvenient travel. The absolute differences between the measured over-the-road distances and travel times for the transit and automobile travel paths for these routes, shown in Table 46, range from about five to six miles and 27 to 32 minutes, respectively. Alternatives which would improve the convenience of crosstown travel on these routes while maintaining the service provided for shorter trips should be explored.

3. Several of the routes also incorporate one-way loops at the outer end of the routes, as shown on Map 27, to maximize the areas served by each route. While the one-way service along the loop portions of these routes can inconvenience passengers traveling between points along the loop, the loops on most routes are small and result in only a minor amount of indirection in travel for such passengers, as well as for passengers traveling between the outlying route termini and the Racine central business district or traveling crosstown. The principal exception would be Route No. 10, which is operated entirely of a single one-way loop route. While loop routing allows maximum coverage of the areas within the Town of Caledonia where transit service is desired by local officials, the large size of the loop results in a high degree of inconvenient travel for passengers along the route. Restructuring Route No. 10 to provide for more lineal two-way service over its more productive route segments would alleviate or eliminate the current inconvenience experienced by current passengers.

Accommodation of Transfers

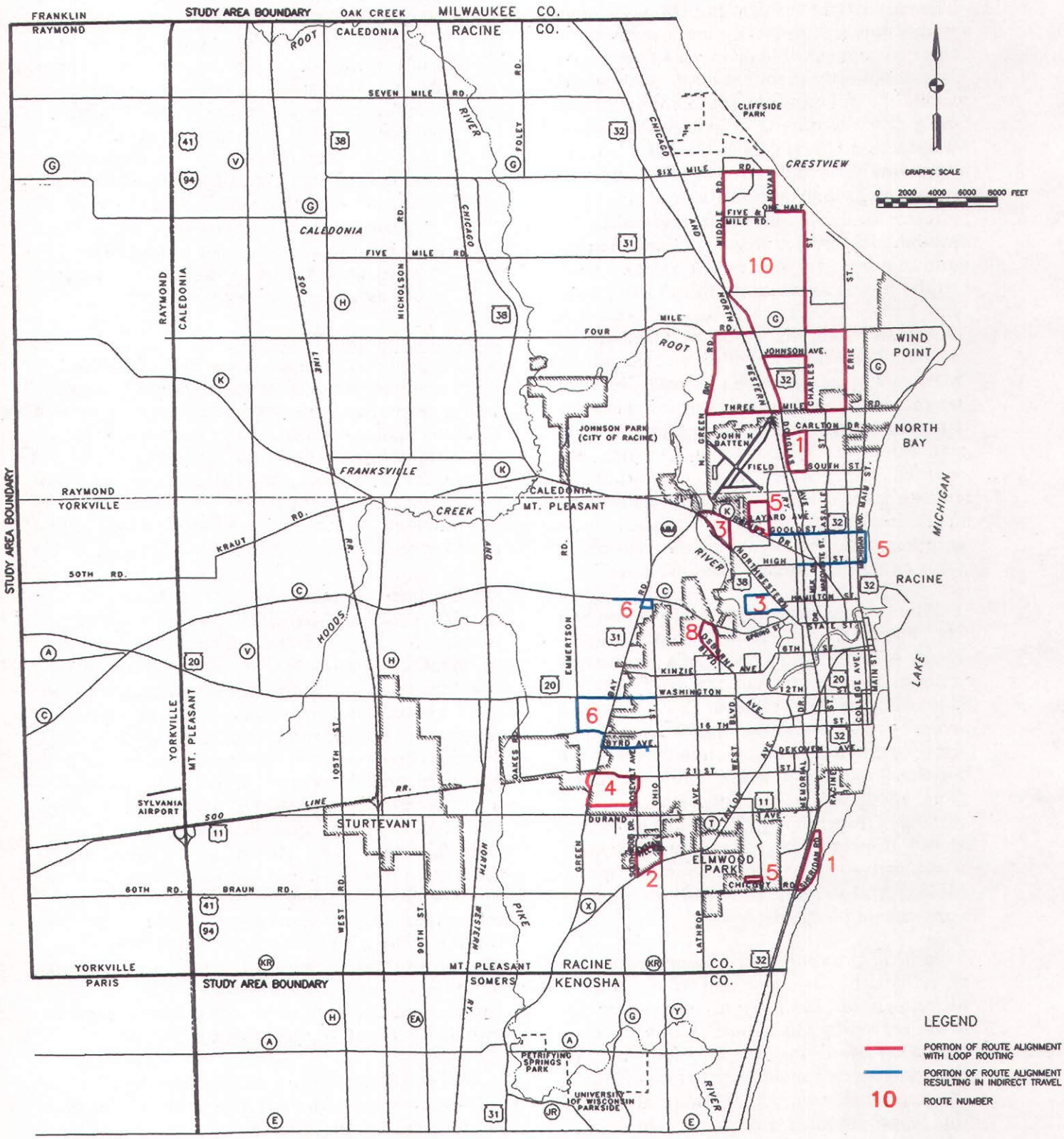
Transferring is perceived as one of the most onerous parts of any transit journey. Accordingly, minimizing transfers or the inconvenience of transferring between bus routes can help to promote transit ridership. The number and proportion of passengers transferring between routes can be an important indicator of the convenience of using a transit system and of the need for considering routing adjustments.

On the basis of passenger counts taken by the transit system during the week of May 13 through 18, 1991, it is estimated that an average of about 2,300 transfers on weekdays and about 1,050 transfers on Saturdays were made between the routes of the transit system. The transferring passengers during this period represented about 36 and 37 percent of the revenue passengers and about 26 and 28 percent of the total boarding passengers using the transit system during this period on weekdays and Saturdays, respectively. This relatively high proportion of transferring passengers on the existing system results from the design of the system, with eight of the ten routes stopping at a common location in the Racine central business district. While not eliminating the need to transfer to complete some trips, this design has reduced the inconvenience of some transfers by providing a common transfer location for most system routes.

In order to determine if transfers could be reduced, an analysis of the number of passengers transferring between each route was undertaken. In this respect, if a significant number of passengers are transferring between

## Map 27

## ROUTE SEGMENTS ON THE CITY OF RACINE BELLE URBAN SYSTEM NOT DIRECT IN ALIGNMENT: 1992




*Source: SEWRPC.*

Table 47

PERCENTAGE DISTRIBUTION OF PASSENGERS TRANSFERRING TO EACH ROUTE OF THE BELLE URBAN SYSTEM FROM ALL OTHER ROUTES: NOVEMBER 21-28, 1990

| Transfer from Route | Percent of Total Transfer Passengers on Weekdays | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transfer to Route | | | | | | | | | | Total System |
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | |
| No.1 | 0.0 | 6.2 | 9.7 | 6.2 | 17.8 | 9.0 | 7.6 | 6.0 | 2.3 | 0.0 | 13.7 |
| No. 2 | 7.4 | 0.0 | 18.4 | 15.7 | 27.9 | 9.0 | 7.0 | 12.0 | 11.6 | 31.3 | 11.6 |
| No. 3 | 14.9 | 20.7 | 0.0 | 21.5 | 13.9 | 20.2 | 29.8 | 22.0 | 18.6 | 0.0 | 16.1 |
| No. 4 | 16.0 | 22.1 | 20.5 | 0.5 | 20.2 | 16.9 | 18.7 | 17.0 | 18.6 | 68.7 | 15.3 |
| No. 5 | 34.8 | 19.3 | 11.4 | 17.1 | 3.1 | 10.1 | 10.5 | 6.0 | 16.3 | 0.0 | 14.0 |
| No. 6 | 16.0 | 12.4 | 18.9 | 17.1 | 10.8 | 15.7 | 12.3 | 28.0 | 18.6 | 0.0 | 14.9 |
| No. 7 | 2.9 | 1.4 | 4.9 | 2.9 | 1.6 | 5.6 | 0.0 | 4.0 | 2.3 | 0.0 | 2.5 |
| No. 8 | 5.7 | 10.3 | 10.8 | 11.4 | 3.1 | 7.9 | 11.7 | 0.0 | 11.7 | 0.0 | 7.7 |
| No. 9 | 2.3 | 5.5 | 5.4 | 5.7 | 1.6 | 5.6 | 2.4 | 5.0 | 0.0 | 0.0 | 3.7 |
| No. 10 | 0.0 | 2.1 | 0.0 | 1.9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.5 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |

| Transfer from Route | Percent of Total Transfer Passengers on Saturday | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transfer to Route | | | | | | | | | | Total System |
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | |
| No. 1 | 1.8 | 7.3 | 7.6 | 8.7 | 12.3 | 7.9 | 0.8 | 0.0 | - - | 0.0 | 5.6 |
| No. 2 | 7.1 | 3.1 | 10.9 | 15.8 | 15.8 | 11.8 | 9.8 | 14.8 | - - | 18.2 | 10.9 |
| No. 3 | 9.7 | 8.3 | 1.1 | 24.5 | 17.5 | 2.6 | 18.8 | 6.6 | - - | 0.0 | 13.1 |
| No. 4 | 28.3 | 20.9 | 39.1 | 0.0 | 31.6 | 17.1 | 24.1 | 32.8 | - - | 81.8 | 20.8 |
| No. 5 | 13.3 | 19.8 | 13.0 | 16.3 | 7.0 | 5.3 | 13.5 | 1.6 | - - | 0.0 | 13.6 |
| No. 6 | 23.0 | 19.8 | 12.0 | 17.9 | 7.0 | 9.2 | 16.5 | 34.4 | - - | 0.0 | 17.4 |
| No. 7 | 10.6 | 10.4 | 14.1 | 9.2 | 8.8 | 23.7 | 0.0 | 9.8 | - - | 0.0 | 9.8 |
| No. 8 | 6.2 | 8.3 | 2.2 | 4.9 | 0.0 | 22.4 | 16.5 | 0.0 | - - | 0.0 | 7.9 |
| No. 9 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | - - | 0.0 | 0.0 |
| No. 10 | 0.0 | 2.1 | 0.0 | 2.7 | 0.0 | 0.0 | 0.0 | 0.0 | - - | 0.0 | 0.9 |
| Total | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | - - | 100.0 | 100.0 |

*Source: City of Racine Department of Transportation and SEWRPC.*

specific route pairs, a recombining of route segments may be warranted to eliminate the need to transfer. Detailed information on the transfer movement of all boarding passengers on the regular routes of the transit system was collected during the week of November 21 through 28, 1990, by having the bus operators on each route collect and save all transfer tickets received each day from passengers transferring to each route. The transfer tickets indicated the route from which the passenger was transferring. The transfer tickets collected were then sorted, and the matrices for weekdays and Saturdays, shown in Table 47, were produced. These matrices indicate, by column, the percent of passengers transferring to each route from each of the other routes in the system. These percentages were then applied to the number of passengers transferring to each route as estimated from the passenger counts taken during May 1991. The estimates of the absolute number of passengers transferring between each route developed in this manner are shown in Table 48.

From the information presented in these tables, the following conclusions were reached:

1. The most significant transfer movements were estimated to occur between Routes

Table 48

ESTIMATED TRANSFERS BETWEEN ROUTES OF THE CITY OF RACINE BELLE URBAN SYSTEM: MAY 13-18, 1991

| Transfer from Route | Average Weekday | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transfer to Route | | | | | | | | | | |
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | Total |
| No. 1 | -- | 22 | 34 | 24 | 40 | 15 | 22 | 9 | 2 | 0 | 168 |
| No. 2 | 20 | -- | 64 | 60 | 64 | 15 | 20 | 18 | 8 | 9 | 278 |
| No. 3 | 39 | 75 | -- | 82 | 31 | 33 | 83 | 35 | 12 | -- | 390 |
| No. 4 | 44 | 79 | 70 | 2 | 45 | 27 | 53 | 26 | 12 | 19 | 377 |
| No. 5 | 95 | 69 | 40 | 66 | 7 | 16 | 30 | 9 | 10 | -- | 342 |
| No. 6 | 44 | 44 | 66 | 66 | 24 | 25 | 35 | 43 | 12 | -- | 359 |
| No. 7 | 8 | 5 | 17 | 11 | 3 | 9 | -- | 6 | 2 | -- | 61 |
| No. 8 | 16 | 37 | 38 | 44 | 7 | 13 | 33 | -- | 8 | -- | 196 |
| No. 9 | 6 | 20 | 19 | 22 | 3 | 9 | 7 | 8 | -- | -- | 94 |
| No. 10 | -- | 7 | -- | 7 | -- | -- | -- | -- | -- | -- | 14 |
| Total | 272 | 358 | 348 | 384 | 224 | 162 | 283 | 154 | 66 | 28 | 2,279 |

| Transfer from Route | Saturday | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Transfer to Route | | | | | | | | | | |
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | Total |
| No. 1 | 3 | 12 | 11 | 18 | 14 | 6 | -- | -- | -- | -- | 64 |
| No. 2 | 11 | 5 | 16 | 33 | 19 | 10 | 9 | 9 | -- | 4 | 116 |
| No. 3 | 15 | 14 | 2 | 51 | 21 | 2 | 16 | 4 | -- | -- | 125 |
| No. 4 | 44 | 33 | 57 | -- | 38 | 14 | 22 | 20 | -- | 19 | 247 |
| No. 5 | 20 | 32 | 19 | 34 | 8 | 4 | 12 | 1 | -- | -- | 130 |
| No. 6 | 35 | 32 | 17 | 37 | 8 | 8 | 14 | 21 | -- | -- | 172 |
| No. 7 | 16 | 17 | 20 | 19 | 10 | 20 | -- | 6 | -- | -- | 108 |
| No. 8 | 9 | 14 | 3 | 10 | -- | 18 | 14 | -- | -- | -- | 68 |
| No. 9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| No. 10 | -- | 3 | -- | 6 | -- | -- | -- | -- | -- | -- | 9 |
| Total | 153 | 162 | 145 | 208 | 118 | 82 | 87 | 61 | -- | 23 | 1,039 |

*Source: SEWRPC.*

No. 3 and 4, with about 150 transfer passengers on weekdays and about 110 transfer passengers Saturdays. Other significant weekday transfer movements were estimated between Routes No. 1 and 5, Routes No. 2 and 3, and Routes No. 2 and 4, each with about 140 transfer passengers, and Routes No. 2 and 5, with about 130 transfer passengers.

2. As shown in Table 49, these transfer passengers do not, however, represent a large segment of the total ridership, revenue passengers and transfer passengers, on the specified route pairs. For example, the 150 passengers who were estimated to transfer between Routes No. 3 and 4 on weekdays included about 80 passengers transferring from Route No. 3 to Route No. 4, or only about 5 percent of the 1,500 total weekday passengers carried on Route No. 3 for the period examined. The remaining 70 passengers who transferred from Route No. 4 to Route No. 3 represented about 4 percent of the 1,580 total weekday passengers carried on Route No. 4. In total, the 150 transfer passengers represented less than 5 percent of the 3,080 total weekday passengers carried on both Routes No. 3 and 4. On the basis of this information, it would appear that recombining routes or route segments principally

Table 49

ESTIMATED PERCENTAGE OF TOTAL BOARDING PASSENGERS ON THE CITY OF RACINE BELLE URBAN SYSTEM TRANSFERRING FROM OTHER ROUTES: MAY 13-18, 1991

| Transfer from Route | Percent of Average Weekday Boarding Passengers Transferring to Route | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | |
| No. 1 | -- | 2.6 | 3.9 | 2.8 | 4.6 | -- | 2.6 | 1.0 | 0.2 | -- | 17.8 |
| No. 2 | 1.8 | -- | 5.7 | 5.3 | 5.7 | 1.3 | 1.8 | 1.6 | 0.7 | 0.8 | 24.8 |
| No. 3 | 2.6 | 5.0 | -- | 5.4 | 2.1 | 2.2 | 5.5 | 2.3 | 0.8 | -- | 25.9 |
| No. 4 | 2.8 | 5.0 | 4.4 | 0.1 | 2.8 | 1.7 | 3.4 | 1.6 | 0.8 | 1.2 | 23.9 |
| No. 5 | 10.7 | 7.8 | 4.5 | 7.5 | 0.8 | 1.8 | 3.4 | 1.0 | 1.1 | -- | 38.7 |
| No. 6 | 7.2 | 7.2 | 10.8 | 10.8 | 3.9 | 4.1 | 5.7 | 7.0 | 2.0 | -- | 58.8 |
| No. 7 | 0.7 | 0.4 | 1.5 | 1.0 | 0.3 | 0.8 | 0.0 | 0.5 | 0.2 | -- | 5.3 |
| No. 8 | 2.7 | 6.3 | 6.5 | 7.5 | 1.2 | 2.2 | 5.7 | -- | 1.4 | -- | 33.6 |
| No. 9 | 2.1 | 7.1 | 6.7 | 7.8 | 1.1 | 3.2 | 2.5 | 2.8 | 0.0 | -- | 33.3 |
| No. 10 | -- | 11.3 | -- | 11.3 | -- | -- | 0.0 | -- | -- | -- | 22.6 |
| Total | 3.1 | 4.1 | 4.0 | 4.4 | 2.6 | 1.9 | 3.3 | 1.8 | 0.8 | 0.3 | 26.4 |

| Transfer from Route | Percent of Saturday Boarding Passengers Transferring to Route | | | | | | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | No. 1 | No. 2 | No. 3 | No. 4 | No. 5 | No. 6 | No. 7 | No. 8 | No. 9 | No. 10 | |
| No. 1 | 0.7 | 2.8 | 2.6 | 4.3 | 3.3 | 1.4 | 0.0 | -- | -- | -- | 15.2 |
| No. 2 | 2.9 | 1.3 | 4.2 | 8.6 | 4.9 | 2.6 | 2.3 | 2.3 | -- | -- | 29.1 |
| No. 3 | 2.8 | 2.6 | 0.4 | 9.4 | 3.9 | 0.4 | 3.0 | 0.7 | -- | 0.0 | 23.1 |
| No. 4 | 4.0 | 3.0 | 5.2 | -- | 3.5 | 1.3 | 2.0 | 1.8 | -- | -- | 20.9 |
| No. 5 | 8.2 | 13.2 | 7.8 | 14.0 | 3.3 | 1.6 | 4.9 | 0.4 | -- | 0.0 | 53.5 |
| No. 6 | 10.3 | 9.4 | 5.0 | 10.9 | 2.4 | 2.4 | 4.1 | 6.2 | -- | -- | 50.7 |
| No. 7 | 3.7 | 4.0 | 4.7 | 4.4 | 2.3 | 4.7 | -- | 1.4 | -- | -- | 25.1 |
| No. 8 | 3.8 | 5.9 | 1.3 | 4.2 | -- | 7.5 | 5.9 | -- | -- | -- | 28.5 |
| No. 9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| No. 10 | -- | 10.3 | -- | 20.7 | -- | -- | -- | -- | -- | -- | 31.0 |
| Total | 4.1 | 4.4 | 3.9 | 5.6 | 3.2 | 2.2 | 2.3 | 1.6 | -- | 0.6 | 27.9 |

*Source: SEWRPC.*

to eliminate the need for transfers between these routes, or to other routes with significant transfer movement, is not warranted at this time, because it may inconvenience a large number of existing riders.

## SUMMARY

This chapter has evaluated the performance of the City of Racine Belle Urban System. The performance evaluation was conducted at two levels, using specific performance measures related to the attainment of key transit system objectives and standards.

At the first level, an assessment of the performance was made on a systemwide basis. This assessment examined the extent to which the transit system served the existing land use pattern, potential transit trip generators, and the general and transit dependant population of the City of Racine and environs; the conformity of the City's existing specialized transportation service for disabled persons to current Federal regulations; the overall ridership and financial performance of the transit system compared to that for similar-sized urban bus systems within Wisconsin; and the transit system's contribution to the efficiency of the total transportation system. The conclusions reached from this systemwide performance assessment include:

1. The existing transit system provides excellent areal coverage of the existing residential areas and employment concentrations within the City of Racine, together with good coverage of the most densely populated residential areas and significant employment concentrations located adjacent to the City within the Towns of Caledonia and Mt. Pleasant and the Village of Sturtevant. In this respect, the transit system service area included virtually all of the resident population and jobs within the City and about 84 and 80 percent of the total study area population and jobs, respectively.

2. The transit system also provides good coverage of the existing major land use trip generators in the study area, serving 135 of the 157 centers identified.

3. The transit system provides good areal coverage of the residential concentrations of transit-dependent population groups identified through 1990 U. S. Census data and of the major transit-dependent population trip generators identified in the study area, serving 67 of the 73 facilities identified. Disabled persons unable to use the existing fixed-route transit service are also provided with specialized door-to-door transportation service through the paratransit service provided by the transit system through the Racine County Human Services Department.

4. Concerning conformance with the paratransit service requirements of current Federal regulations implementing the Americans with Disabilities Act of 1990, the existing specialized transportation service provided by the transit system for individuals unable to use fixed-route transit service was found to be in conformance with all Federal requirements.

5. In terms of ridership and financial performance, the Belle Urban System compares favorably to other urban bus systems within Wisconsin. In this respect, the ridership and effectiveness levels of the Belle Urban System were found to be average to above average when compared to that for a group of urban bus systems within Wisconsin during the period 1986 through 1990. The trends observed for the Belle Urban System with respect to operating expenses per vehicle mile and per vehicle hour and farebox recovery rates were also found to compare favorably with the trends observed for the Statewide group of urban bus systems during this period. The trends observed for the Belle Urban System with respect to operating costs and deficits per passenger were, however, somewhat below those observed for the Statewide group of bus systems principally because of more substantial ridership declines for the Belle Urban System over the period than for the Statewide group as a whole.

6. The overall energy efficiency of the City transit system in serving travel on an average weekday within the Racine area is higher than that of the private automobile. Consequently, the transit service provided by the system does reduce the use of petroleum-based motor fuel by Racine area residents on a daily basis.

7. The transit system contributes to efficiency of the transportation system by reducing peak-hour automobile traffic and the potential for congestion on streets within the Racine central business district.

The second part of the performance evaluation was an assessment of the performance of the regular routes of the transit system on the basis of their ridership, productivity, and financial performance. Further analyses of each route were then conducted to identify the productive and nonproductive route segments, the operating headways and peak passenger loading characteristics, any problems with schedule adherence, the directness of route alignments, and the ability to accommodate transfers. The following conclusions were drawn from this assessment of route performance:

1. Certain regular bus routes have weekday performance levels consistently above the specified minimum performance standard of 80 percent of systemwide average effectiveness levels. These routes included Routes No. 1, 2, 3, 4, 5, 7, and 8. Based solely on their ridership and financial performance, these routes should continue to be operated without change.

2. Three routes, including Routes No. 6, 9, and 10, have weekday performance levels consistently below the specified performance standard. Of the 25 least productive route segments identified on the system, 17 were accounted for by these three routes, including all 12 segments on Route No. 10. Changes to these three routes should be considered to increase efficiency.

3. While Route No. 10 had the most unproductive route segments, at least one unproductive route segment was also found on each of the other routes of the system, with the exception of Routes No. 3 and 4, which had no unproductive route segments. This information should be viewed as an indicator of where routing changes should be considered in the current route structure.

4. As some bus routes must pass through areas of little residential development or few major trip generators in order to reach other residential areas or trip generators, such bus routes must be expected to perform at somewhat lower levels of than other bus routes if the transit system is to continue to provide extensive areal coverage of the City of Racine and environs.

5. With the exception of Routes No. 5 and 8, the same regular routes perform above or below the specified minimum performance levels on Saturdays as on weekdays. The failure of these routes to achieve the specified minimum performance levels on Saturdays was attributed to the absence of student ridership on Route No. 5 on Saturdays and the generally lower level of ridership generated by the various land uses and trip generators served by Route No. 8 on Saturdays.

6. The existing headways operated on the regular routes of the transit system are capable of accommodating existing levels of passenger demand at the recommended load standards and headway reductions are not needed on any routes. In only one case, Route No. 7 during the morning peak period, did the observed passenger loads result in load factors exceeding the maximums specified in the transit service standards. The next highest load factors, 1.12 and 1.07, were found on Routes No. 3 and 4, respectively, during the afternoon peak period. All other observed load factors were below 1.00.

7. An analysis of the potential impacts of eliminating the additional peak-hour bus service on Routes No. 3, 4, and 7, thereby increasing headways on these routes from 20 to 30 minutes during peak periods, indicated that peak-period passenger loads and load factors would probably increase by an average of about 30 percent on these routes if headways were increased and passengers shifted to other bus runs. Under these conditions, load factors on the vast majority of peak-period bus trips would probably not exceed the specified maximums and the City could possibly consider eliminating some or all of the additional peak-period bus trips on these routes as a cost-saving measure. However, before taking any action to reduce or eliminate peak-period bus trips on Routes No. 3, 4, and 7, the actual change in ridership on Route No. 2 which occurred after the elimination of the additional peak-period bus trips on this route in September 1992 should be considered. In this respect, based on passenger counts taken on Route No. 2 before and after the service change, it would appear that the passengers using the peak-hour bus trips which were eliminated did not shift to other bus trips on the route, as might be assumed, but rather were lost from the route ridership.

8. On the basis of spot-checks of schedule adherence, the on-time performance of the existing transit system was found to be somewhat below the recommended performance on-time level of 95 percent set forth under the transit service objectives and standards. Problems with schedule adherence were found to be almost equally divided between early and late departures at bus stops. To correct such problems, the scheduled running time between timepoints along each route should be periodically reviewed and, possibly, modified to reflect different passenger loading and traffic conditions which occur throughout the day and which affect actual running time between stops.

9. The existing alignments of the bus routes of the transit system are relatively direct and result in only a minor amount of inconvenient travel for short trips as well as most longer crosstown trips. However, the existing alignments of Routes No. 3 and 6 have sections can result in a significant amount of inconvenience in travel for longer crosstown trips. In addition, the large one-way loop routing used to operate Route No. 10 results in inconvenient trips for passengers traveling between points along the loop. Routes No. 3 and 6 should be reviewed to determine if it is possible to provide for more direct crosstown routing. Consideration should be given to restructuring Route No. 10 to provide for more lineal two-way routing over the most productive route segments in order to reduce the inconvenience to passengers traveling along the existing loop segments.

10. The most significant transfer movements were found to occur on both weekdays and Saturdays between Routes No. 3 and 4, and on weekdays between Routes No. 1 and 5, 2 and 5, 2 and 3, and 2 and 4. However, the number of passengers making these transfer movements was found to represent a relatively small proportion of the total ridership on the specified routes. Consequently, changes which would combine portions or segments of one route with a different route were not found to be warranted.

The analyses documented in this chapter indicated that changes in some bus routes should be considered to improve their performance as well as the overall performance of the transit system. Alternative and recommended changes to the transit system are described in Chapter VI of this report.

# Chapter VI

# RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN

## INTRODUCTION

Previous chapters of this report have described the existing land use and travel patterns of the Racine transit planning study area and have evaluated the effectiveness with which the existing public transit system serves those patterns. In addition, an extensive evaluation of the operation of each route of the City of Racine's Belle Urban System was conducted. All of this information is intended to be used in the development of a new five-year transit system development plan for the City of Racine transit system.

The findings of the system evaluation indicated that the existing transit system performs extremely well in meeting the transit service objectives and performance standards established to help identify areas of efficient and inefficient system operation and needed areas of improvement. The evaluation of several alternative transit system plans which would entail significant changes to the system design was, therefore, not considered to be warranted. Rather, a program of recommended modest routing and service changes was developed, which, if implemented, should serve to improve the performance of the affected routes and the transit system overall. The recommended changes would also provide for expansion of transit service into areas which may be expected to be developed for urban use by the end of the planning period.

This chapter describes the recommended transit system development plan for the City of Racine Belle Urban System for the five-year period from 1993 through 1997. The first section of the chapter describes the recommended transit services, including changes in fixed-route transit service proposed for immediate implementation in 1993 and changes proposed to be made by the end of the planning period in 1997. Included in this section are detailed descriptions of the recommended routing changes for 1993 and 1997, along with a description of the projected system service levels and ridership. This section also describes the City program for providing specialized transportation service to disabled persons within the area served by the City's regular fixed-route transit services. The second section presents a summary of the financial requirements entailed in implementing the recommended plan. The final section of the chapter identifies the actions required by various agencies to achieve plan implementation.

## RECOMMENDED TRANSIT SERVICE

### Recommended 1993 Routing and Service Changes

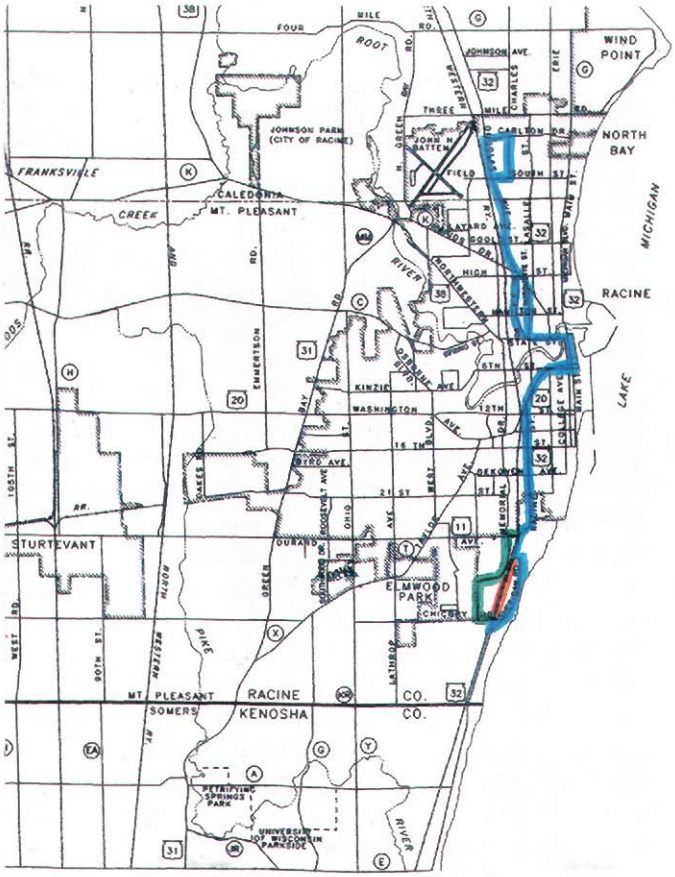
Although the evaluation of the existing transit system documented in the previous chapter indicated that the current route configuration and service schedules meet the majority of the transit service objectives and standards established for the system, there are certain changes to the existing system which, if implemented, could improve upon the efficiency and effectiveness of the transit service provided by certain routes, as well as by the system as a whole. The recommended plan, consequently, calls for a number of changes in existing route alignments and schedules which are proposed to be implemented as soon as possible in 1993. The recommended changes are intended to eliminate or reduce service on existing route segments and bus trips with low ridership in order to serve existing travel demand better and to increase service area coverage modestly.

Route Realignment and Service Changes: Routing and/or service changes are recommended to be implemented in 1993 for Routes No. 1, 2, 3, 4, 6, 9, and 10. The specific routing changes which are proposed for these bus routes are shown on Map 28. The routing change proposed for Route No. 1 is intended to extend service to an industrial park in the City of Racine and Town of Mt. Pleasant by eliminating service over an unproductive route segment. The routing changes proposed for routes No. 2, 3, 4, and 6 are intended to eliminate unproductive route segments in the Town of Mt. Pleasant and to provide for a north-south, east-west grid of bus routes serving the west side of the City of Racine. The changes in Routes No. 2, 3, and 4 should also allow for a more logical westward extension of these routes to serve areas which are expected to develop by the end of the planning period. The service change proposed

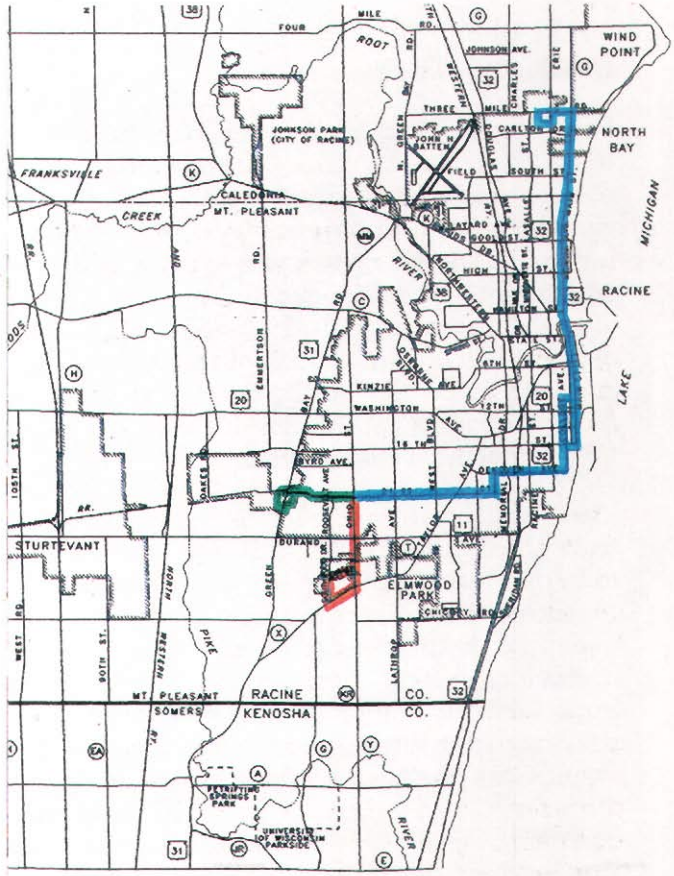
## Map 28

## RECOMMENDED ROUTING CHANGES FOR THE BELLE URBAN SYSTEM BUS ROUTES RECOMMENDED TO IMPLEMENTATION IN 1993

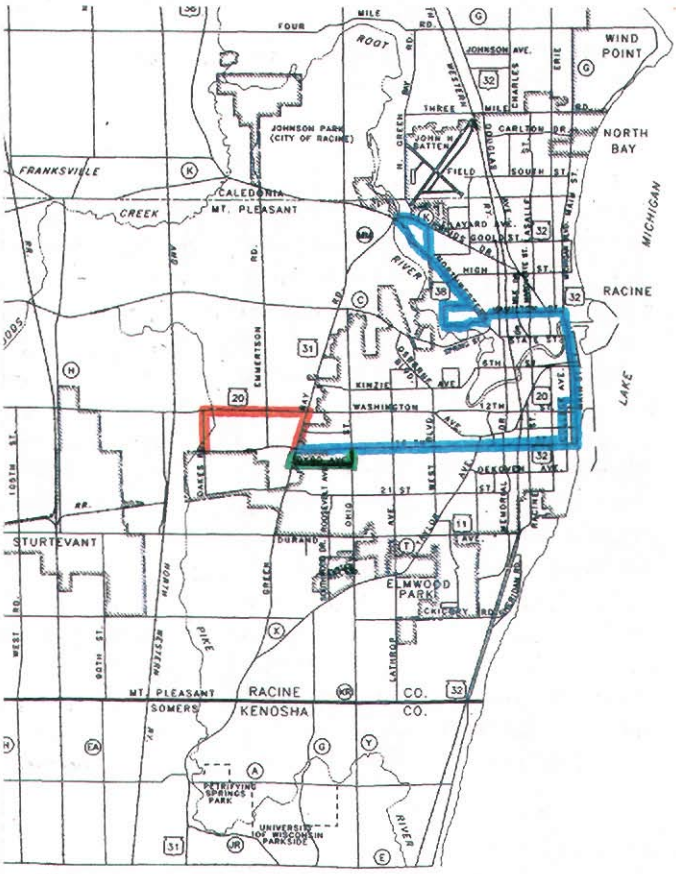
ROUTE NO. 1




ROUTE NO. 2




ROUTE NO. 3




LEGEND

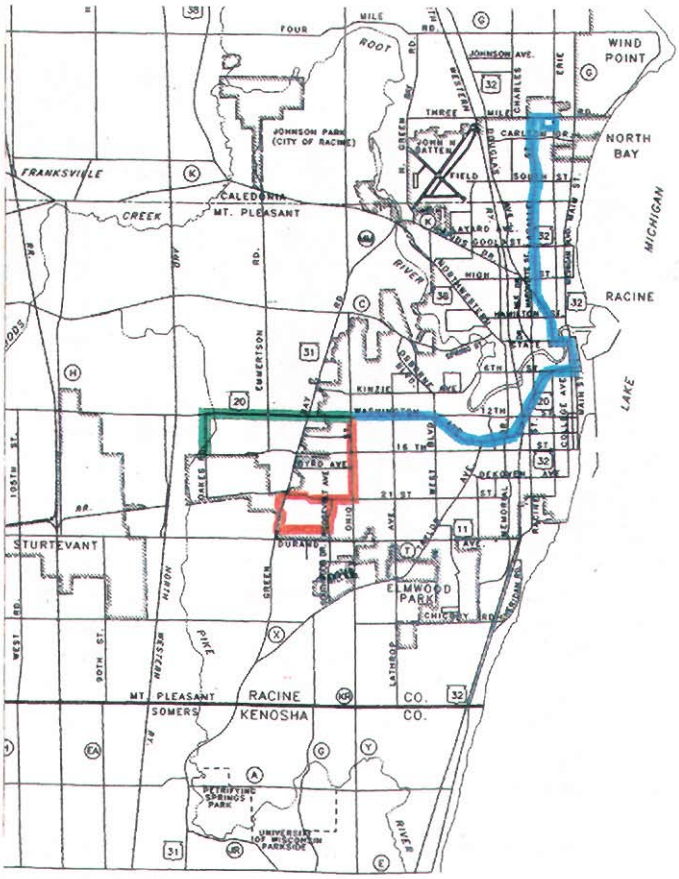
- EXISTING SEGMENTS TO BE RETAINED
- EXISTING SEGMENTS TO BE DROPPED
- NEW SEGMENTS TO BE ADDED

GRAPHIC SCALE

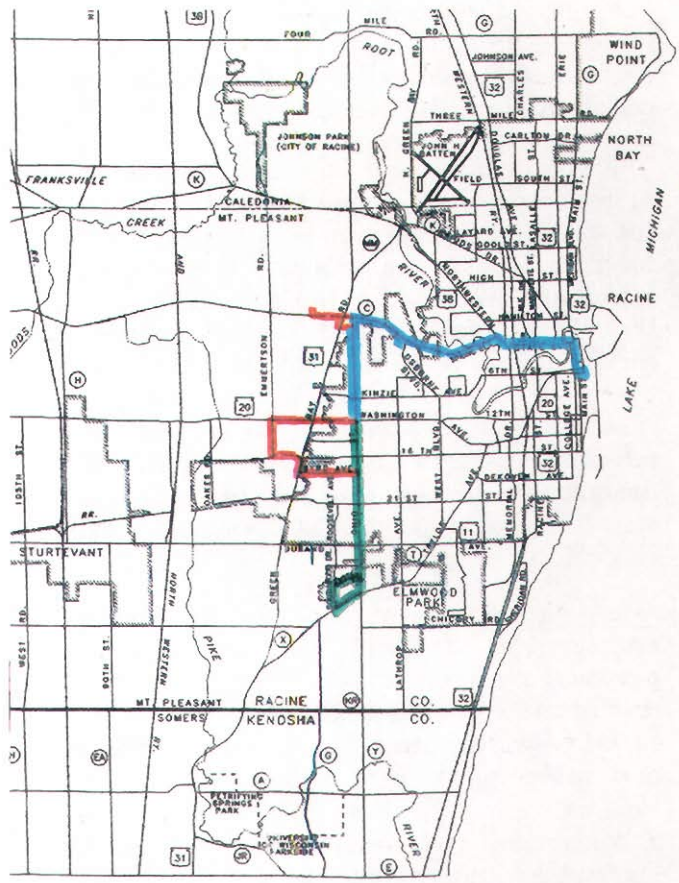
0 2000 4000 6000 8000 FEET

## Map 28 (continued)

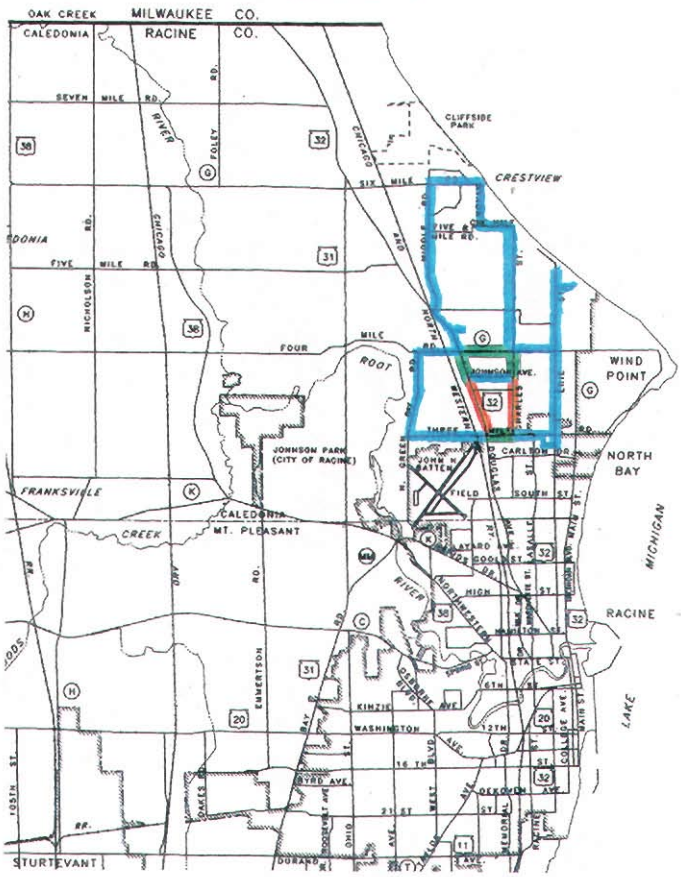
ROUTE NO. 4




ROUTE NO. 6




ROUTE NO. 10




LEGEND

- EXISTING SEGMENTS TO BE RETAINED
- EXISTING SEGMENTS TO BE DROPPED
- NEW SEGMENTS TO BE ADDED


*Source: SEWRPC.*

for Route No. 9 is intended to improve route performance by reducing service during the midday off-peak period. Finally, the changes proposed for Route No. 10 are intended to increase the amount of service provided during high-ridership periods and to improve transfer coordination with other City bus routes.

The alignments of all bus routes in the system, along with the recommended 1993 changes and the extent of service area coverage, are shown in Map 29. Table 50 summarizes the basic operating characteristics for the transit system with the recommended 1993 route structure and service levels. More detailed information on the operating characteristics of each route of the transit system is presented in Appendix F. The following paragraphs provide a more detailed description of the routing adjustments and scheduling changes proposed to be implemented in 1993.

*Route No. 1*: It is recommended that the southern segment of Route No. 1 be rerouted. The proposed realignment would entail the elimination of the route segment operating over Racine Street between Larson Street and Chickory Road and replacing it with a segment that would follow Chickory Road west to S. Memorial Drive, S. Memorial Drive north to Durand Avenue, and Durand Avenue east to Racine Street. This new alignment would allow access to the developing Racine-Mt. Pleasant Industrial Park on S. Memorial Drive. The segment over STH 32 to be eliminated has no bus stops and serves no passengers. The recommended routing change would increase the round-trip route miles for Route No. 1 from 14.35 miles to 15.1 miles, an increase of 0.75 miles.

*Route No. 2*: It is recommended that the southwestern segment of Route No. 2 be rerouted to provide direct service between the Racine central business district and the north side of the Racine-West commercial area around the intersection of 21st Street and Green Bay Road. Service to this commercial area would be provided by extending Route No. 2 westward on 21st Street from Ohio Street to Green Bay Road, where it would circulate through the Regency Plaza and High Ridge Mall shopping centers. This realignment would require the elimination of Route No. 2 over Ohio Street south of 21st Street to Taylor Avenue and the Georgetown area of Racine. Service over this portion of Route No. 2 would be replaced by service provided over Route No. 6, as described below. The recommended routing change would decrease the round-trip route miles for Route No. 2 from 18.3 to 17.7 miles, a decrease of 0.6 miles.

*Route No. 3*: Routing changes are recommended for the western portion of Route No. 3. The existing portion of the route extending along Green Bay Road, Washington Avenue, and Oakes Road to serve J. I. Case High School would be eliminated. The existing alignment for Route No. 3 is somewhat indirect to serve the High School. In addition, the segment routed over Green Bay Road between 16th Street and Washington Avenue serves few passengers. It is proposed that Route No. 3 be cut back at Green Bay Road and operate over a one-way loop comprised of Ohio Street, Byrd Avenue, Green Bay Road, and 16th Street. Service to J. I. Case High School would be replaced by service provided over Route No. 4. The recommended routing change would decrease the round-trip miles for Route No. 3 from approximately 20.95 to 17.25 miles, a decrease of 3.7 miles. The shorter route would also reduce the number of vehicles needed to provide weekday peak-hour service at 20-minute headways over the route by one vehicle, from five to four.

The proposed routing changes for Route No. 3 would replace the two-way bus service currently provided over 16th Street and Byrd Avenue by Routes No. 3 and 6, respectively, with one-way loop bus service over Route No. 3. As an alternative to the proposed one-way loop at the southern end of Route No. 3, the City could eliminate the proposed route segment over Ohio Street between Byrd Avenue and 16th Street, operating two-way bus service over 16th Street, Green Bay Road, and Byrd Avenue. With this routing alignment, the round-trip route miles for Route No. 3 would still decrease by about 2.4 miles, from approximately 20.95 to 18.55 miles. However, the route would continue to require five vehicles for operation, with weekday peak-hour service at 20-minute headways. While this alternative alignment would have the advantage of allowing two-way bus service over 16th Street and Byrd Avenue to continue, it would be more costly to operate than the recommended alignment, which would require only four vehicles to provide weekday peak-hour service.

*Route No. 4*: It is recommended that the southern portion of Route No. 4 be rerouted to eliminate the existing route segments from

## Table 50

## BASIC OPERATING CHARACTERISTICS OF THE CITY OF RACINE BELLE URBAN SYSTEM: EXISTING 1992 AND WITH RECOMMENDED CHANGES FOR 1993-1997

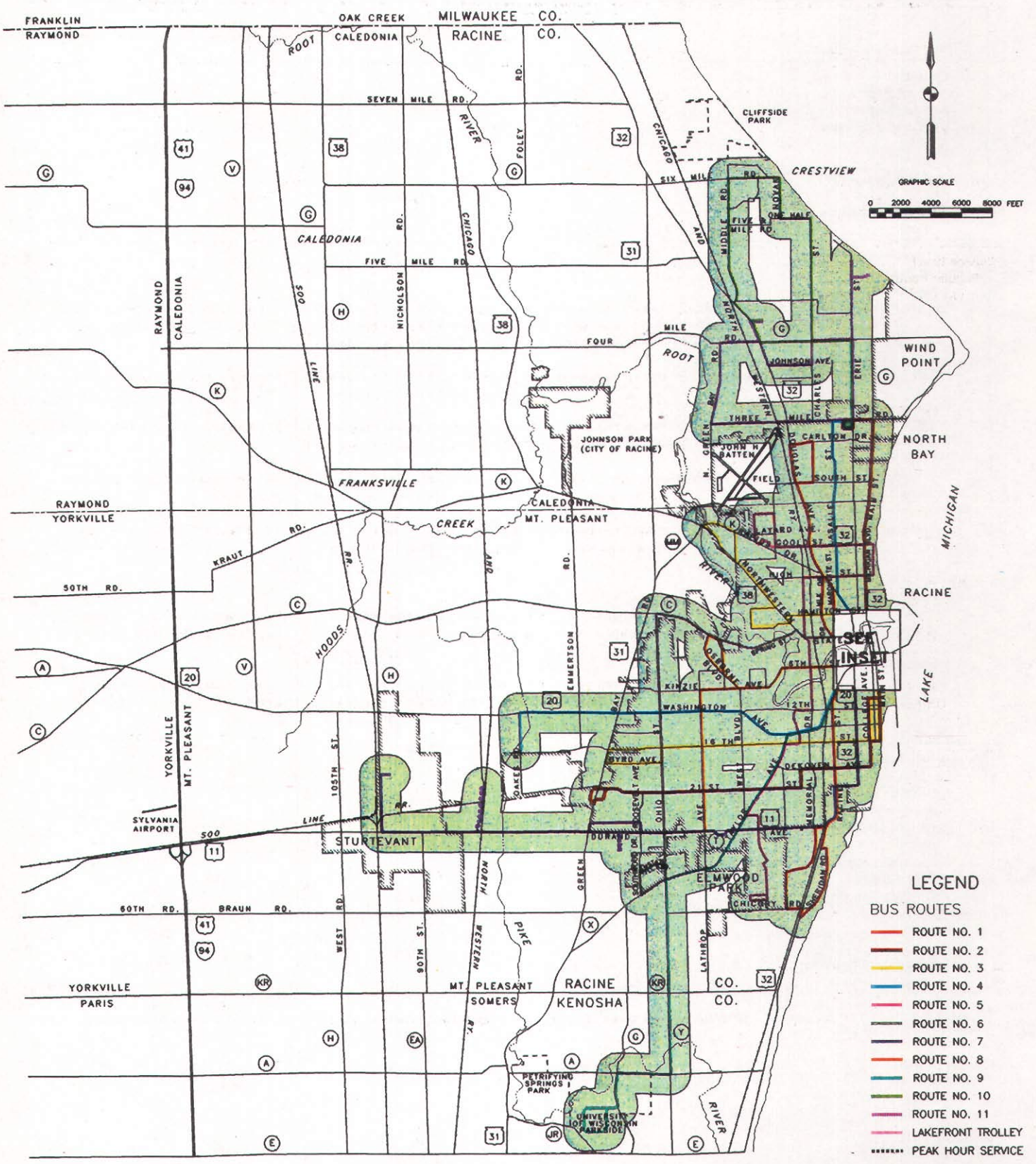
| Operating Characteristics | Existing 1992 | With Recommended Service Changes[a] | |
|---|---|---|---|
| | | 1993 | 1997 |
| Route Information | | | |
| Number of Routes | | | |
| Regular Routes | 9 | 10 | 9 |
| UW-Parkside Service | 1 | 1 | 1 |
| Total | 10 | 11 | 10 |
| Round Trip Route Miles | | | |
| Regular Routes | 154.2 | 151.0 | 169.1 |
| UW-Parkside Service | 17.0 | 17.0 | 17.0 |
| Total | 171.2 | 168.0 | 186.1 |
| Service Levels | | | |
| Regular Routes | | | |
| Weekdays: School-Year | | | |
| Peak Periods | 3 routes with 20-minute headways<br>5 routes with 30-minute headways<br>1 route with 45-minute headway | 3 routes with 20-minute headways<br>5 routes with 30-minute headways<br>2 routes with 60-minute headways | 3 routes with 20-minute headways<br>6 routes with 30-minute headways |
| Off-Peak Periods | 8 routes with 30-minute headways | 8 routes with 30-minute headways<br>2 routes with 60-minute headways | 9 routes with 30-minute headways |
| Weekdays: Summer | | | |
| Peak Periods | 8 routes with 30-minute headways<br>1 route with 45-minute headway | 8 routes with 30-minute headways<br>2 routes with 60-minute headways | 9 routes with 30-minute headways |
| Off-Peak Periods | 8 routes with 30-minute headways | 8 routes with 30-minute headways<br>2 routes with 60-minute headways | 9 routes with 30-minute headways |
| Saturdays | 8 routes with 30-minute headways<br>1 route with 45-minute headway | 8 routes with 30-minute headways<br>2 routes with 60-minute headways | 9 routes with 30-minute headways |
| UW-Parkside Service | | | |
| Weekdays: School-Year | | | |
| Peak Periods | 1 route with 30-minute headway | 1 route with 30-minute headway | 1 route with 30-minute headway |
| Off-Peak Periods | 1 route with 30-minute headway | 1 route with 60-minute headway | 1 route with 30-minute headway |
| Weekdays: Summer | | | |
| Peak Periods | 1 route with 60-minute headway | 1 route with 60-minute headway | 1 route with 60-minute headway |
| Off-Peak Periods | 1 route with 60-minute headway | 1 route with 60-minute headway | 1 route with 60-minute headway |
| Saturdays | -- | -- | 1 route with 60-minute headway |
| Vehicle Requirements for System Operation | | | |
| Weekdays: School-Year | | | |
| Peak Periods | 31 | 30 | 32 |
| Off-Peak Periods | 25 | 25 | 26 |
| Weekdays: Summer | | | |
| Peak Periods | 25 | 25 | 26 |
| Off-Peak Periods | 25 | 25 | 26 |
| Saturdays | 24 | 24 | 26 |
| Total Fleet (including spare buses) | 42 | 42 | 37 |

[a] *Detailed information on the specific changes in operating characteristics proposed for each route of the transit system from the existing 1992 system is presented in Appendix F.*

*Source: SEWRPC.*

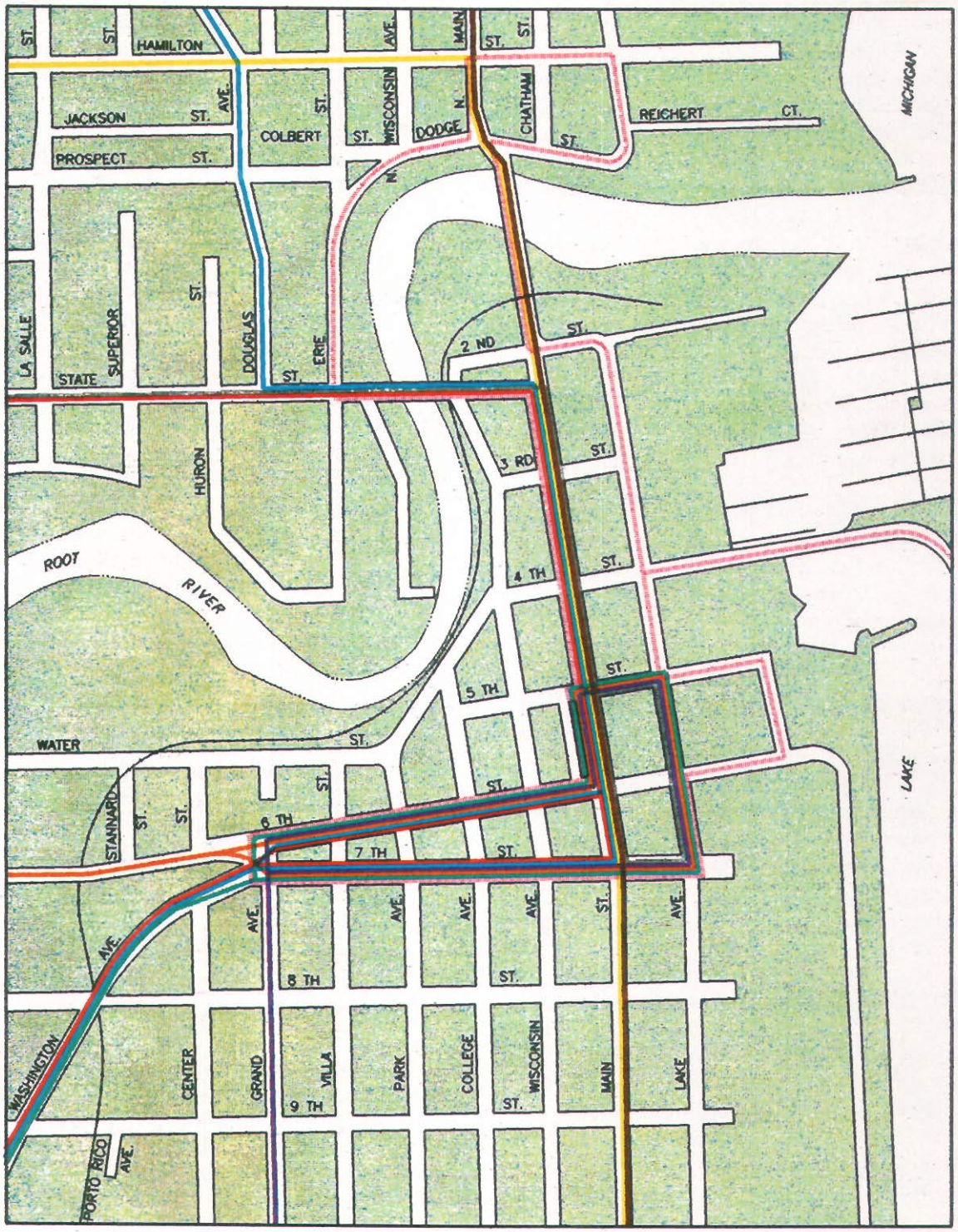
## Map 29

## RECOMMENDED ROUTE STRUCTURE FOR THE BELLE URBAN SYSTEM: 1993




*Source: City of Racine Department of Transportation and SEWRPC.*

Inset to Map 29




INSET GRAPHIC SCALE

0 400 800 FEET

Washington Avenue and Ohio Street to the south over Ohio Street, 21st Street, and Green Bay Road to serve the Racine-West commercial area, including the Regency Mall and Regency Plaza shopping centers. In place of the existing alignment, the route would be extended westward over Washington Avenue from Ohio Street to J. I. Case High School. This alignment would allow more direct service between the Racine central business district and the rapidly developing commercial areas along Washington Road west of Ohio Street and would replace the bus service to J. I. Case High School currently provided by Route No. 3. Service provided over Ohio Street by Route No. 4 would be replaced by service over Route No. 6 and service to the Racine-West commercial area would be provided by Route No. 2, as described above, as well as by Route No. 7. The recommended routing changes would decrease the round-trip miles for Route No. 4 from approximately 17.85 to 17.65 miles, a decrease of 0.2 miles.

It should be noted that with the above routing changes, Route No. 4 would no longer provide service to the Regency Mall Shopping Center. Direct service to the shopping center would be provided by only one route, Route No. 7. Passenger counts conducted by the Commission staff during April 1991 indicated that approximately 600 passengers per day used Routes No. 4 and 7 to travel to or from the Regency Mall on the weekdays when counts were taken. In light of the high transit ridership generated by the Regency Mall Shopping Center, alternative routing changes for Routes No. 2, 3 and 6, which would replace the bus service currently provided to the Regency Mall Shopping Center by Route No. 4, were considered in developing the 1993 routing changes.

The alternative routing considered for Route No. 2 would have expanded the proposed one-way loop at the southern end of Route No. 2 to include a stop at an entrance to the Regency Mall Shopping Center located on the north side of the Mall. However, it was considered doubtful that the stop location would be approved by Regency Mall management since both Routes No. 4 and 7 currently stop on the south side of the Mall, where concrete waiting pads have been installed to eliminate potential pavement damage which could be caused by buses. In addition, expansion of the proposed one-way loop at the end of Route No. 2 would limit the ability of the route to be extended to the west to serve future development along 21st Street and Oakes Road. Such a route extension has been identified, in a later section of this chapter, as potentially needed by 1997.

The alternative routing considered for Route No. 3 would have extended Route No. 3 from 16th Street and Green Bay Road south over Green Bay Road to a one-way loop through the Regency Mall Shopping Center identical to the loop currently operated by Route No. 7. This alternative routing would, however, eliminate any potential operating cost savings for Route No. 3, because it would require five vehicles to provide service over the route during weekday peak periods, compared with four vehicles for the recommended alignment for Route No. 3 discussed above. In addition, this routing change, in combination with the recommended routing change for Route No. 6, would result in the elimination of all bus service over Byrd Avenue. Finally, this alternative alignment for Route No. 3 would, in all likelihood, eliminate the possibility of extending the route to the west over 16th Street and Oakes Road to serve the J. I. Case High School and the adjacent residential and commercial development. Such a route extension has been identified in a later section of the chapter as potentially needed by 1997.

The alternative routing considered for Route No. 6 would have modified the recommended routing alignment discussed below and shown on Map 28. Instead of operating south over Ohio Street from Ohio Street and 21st Street to serve the Georgetown area of the City currently served by Route No. 2, Route No. 6 would have been extended to the west over 21st Street and the existing alignment for Route No. 4 to the Regency Mall Shopping Center. This alignment for Route No. 6 would require Route No. 2 to continue to serve the Georgetown area of the City and would, therefore, not provide for the direct east-west routing over 21st Street and the improved service through the Regency Plaza and High Ridge Mall Shopping Centers which would be provided with the recommended alignment for Route No. 2. In addition, this alignment for Route No. 6 would not allow for extension of the route to the west along 21st Street and Oakes Road to serve future development in these areas.

City staff have indicated that Route No. 7 should be able to serve the demand generated by the Regency Mall Shopping Center adequately.

However, the City would consider providing additional bus service to the shopping center should it be determined that Route No. 7 cannot adequately accommodate passenger demand or if comments received on the plan indicate strong public support for bus service by more than one route to the Mall.

*Route No. 6*: It is recommended that the western portion of Route No. 6 be rerouted to eliminate unproductive route segments in the Town of Mt. Pleasant and to extend the route over Ohio Street to replace service currently provided to the Georgetown area of the City of Racine by Route No. 2. The route segments to be eliminated would include the segment operated over Spring Street between Ohio Street and Newman Road and the segments operated over Washington Avenue, Emmertson Road, 16th Street, Green Bay Road, and Byrd Avenue. In addition to serving few passengers, these route segments were also identified as segments which result in indirect travel for route passengers. The extension of service to the Georgetown area would entail extending the route to the south from Washington Avenue and Ohio Street over Ohio Street to Taylor Avenue and the current one-way loop for Route No. 2. Service currently provided by Route No. 6 over Byrd Avenue would be replaced by service over Route No. 3. The new alignment of Route No. 6 would provide for direct north-south service on the west side of the City and allow for improved transfer opportunities between Route No. 6 and the other routes which intersect Ohio Street. The recommended routing change would result in a decrease of round-trip mileage from 17.55 to 14.55 miles, a decrease of 3.0 miles.

*Route No. 9*: No routing changes are recommended for Route No. 9. However, it is recommended that service on Route No. 9 be reduced during the weekday midday off-peak period to improve the effectiveness and efficiency of this route. In this respect, bus service is currently provided over the route at 30-minute headways on weekdays during the fall and spring semesters at the University of Wisconsin-Parkside, and at 60-minute headways throughout the service day on weekdays during summer school. It is recommended that headways on the route be reduced from 30 to 60 minutes during the midday off-peak period during the fall and spring semesters by eliminating four round-trip bus trips between the Racine central business district and the University of Wisconsin-Parkside between 10:00 a.m. and 2:00 p.m. This service change would reduce the total weekday bus trips provided over the route during the fall and spring semesters from 23 to 19 round trips. It should be noted, however, that if providing service rather than service efficiency is the primary concern of the University of Wisconsin-Parkside, which contracts for and financially supports the operation of this route, the University may not want to change the operating headways of the route. Consequently, the University of Wisconsin-Parkside should be consulted prior to the implementation of this recommendation for Route No. 9.

*Route No. 10*: The recommended changes for Route No. 10 entail dividing the existing route in two individual routes, Route No. 10 and Route No. 11. One route, Route No. 10, will primarily serve the northern portion of the existing Route No. 10 including the Crestview residential area. The second route, Route No. 11, will primarily serve the southern portion of the existing Route No. 10 service area, including the Olympia Brown School and the Western Publishing Company along Erie Street north of Four Mile Road. The two routes would continue to focus on the Shorecrest Shopping Center, operating as two paired routes with a single vehicle used to provide service over both routes. Both routes would also continue to serve the Green Tree Centre Shopping Center, located just north of the intersection of Four Mile Road on Green Bay Avenue.

The proposed routing change would reduce the amount of indirect travel and travel times for passengers on the route, most of whom either board or alight at the Shorecrest Shopping Center. In this respect, the total time required to traverse each of the new routes would be approximately 25 minutes, compared with 40 minutes to traverse the single loop comprising the existing Route No. 10. The single vehicle assigned to the routes would alternate between operating over the northern route and the southern route, stopping at the Shorecrest Shopping Center before starting on the opposite route. Because the time to complete one circuit over both proposed new routes would be approximately 60 minutes, including layover time, it would be necessary to change the current 45-minute headway to a 60-minute headway. However, because the shorter round-trip travel time on each of the new routes would result in

either route arriving or departing from the Shorecrest Shopping Center at 30-minute intervals, transfer opportunities with Routes No. 2 and 4 at the Shorecrest Shopping Center would be greatly improved. In this respect, Route No. 2 is operated with 30-minute headways at all times of operation, and Route No. 4 is operated at 30-minute headways on weekdays during the summer months and all day on Saturday. The schedules for the new Route No. 10 and Route No. 11 could, therefore, be directly coordinated with the service provided over Route 2 and 4. The more direct service and improved transfer coordination would be expected to more than offset the effects of the proposed headway reduction of 45 to 60 minutes.

It is also proposed that the hours of service for Routes No. 10 and 11 be revised from the current hours of operation for Route No. 10 to provide for more service during the weekday midday period. It is recommended that service hours for the new Routes No. 10 and 11 be from approximately 6:30 a.m. until 11:30 a.m. and from 2:00 p.m. until 5:30 p.m. on weekdays and from approximately 9:30 a.m. until 5:00 p.m. on Saturdays. This would compare with the service hours for the existing Route No. 10 of from 5:45 a.m. until 10:10 a.m. and from 2:30 p.m. until 6:10 p.m. on weekdays and from 9:30 a.m. until 5:00 p.m. on Saturdays. The revised weekday service hours for the new Routes No. 10 and 11 essentially reflect moving the first bus trip in the morning and the last bus trip in the afternoon on the existing Route No. 10 service, trips which have had very little passenger activity, into the midday service period.

With the recommended routing change, the round-trip route miles for the new Routes No. 10 and 11 would total approximately 17.75 miles, 9.35 miles for the new Route No. 10 and 8.4 miles for the new Route No. 11. This would be an increase of about 3.65 miles over the 14.1 round-trip route miles for the existing Route No. 10. The change in operating headways would also slightly reduce the number of bus trips operated over the new Routes No. 10 and 11, compared with that operated over the existing Route No. 10 from 11, to nine round trips on weekdays and from 10 to eight round trips on Saturdays.

An additional service change, which could be considered as desirable for Route No. 10, would be adding bus service during weekday middays to eliminate the current gap in service on the route. In this respect, even with the recommended changes to service hours, no bus service would be provided over the route for the approximately two and one-half hours between 11:30 a.m. and 2:00 p.m. The gap in service during weekday middays has been cited in the past by both City and Town officials as generating complaints from transit system passengers who are left "stranded" with no transportation during weekday middays. The Town of Caledonia may, consequently, find it desirable to add service in the immediate future to fill in this service gap. With the recommended routing alignments for Routes No. 10 and 11, adding midday service would require adding a total of five bus trips over Route No. 10 and 11. It is estimated that this would increase the weekday total vehicle miles operated over the route and average weekday operating costs by approximately 15 to 20 percent.

1993 Operating Profile: A comparison of the existing 1992 and proposed 1993 basic operating characteristics for the City of Racine Belle Urban System is presented in Table 50. As can be seen from this table, adjustments to the alignments of the existing routes of the transit system would result in a decrease in the round-trip route miles for the system, decreasing from the 171.2 miles currently operated to approximately 168.0 miles for the system with the recommended 1993 routing changes. With the exception of Routes No. 9 and 10, no changes from the existing operating headways have been proposed. As noted above, operating headways on Route No. 9 would be reduced from 30 to 60 minutes during weekday midday off-peak periods; headways on the new Routes No. 10 and 11 would be increased from 45 to 60 minutes. Headways on the other system routes would remain at 20 to 30 minutes during weekday peak periods and 30 minutes during weekday off-peak periods and on Saturdays. Implementation of the recommended routing and service changes will also reduce the peak vehicle requirements for the system by one vehicle, from 31 to 30 vehicles.

Recommended 1997
Routing and Service Changes

The recommended plan also recognizes that further routing and service changes may be warranted over the planning period if development in the study area continues to occur as envisioned at this time. Specific areas which are envisioned by City staff to have strong potential

to be fully developed by the end of the planning period and possibly warrant transit service include along Washington Avenue between Oakes Road and CTH H and along 21st Street between Green Bay Road and Oakes Road. If the recent growth trends continue, significant commercial, office, and industrial development may occur in the Town of Mt. Pleasant along Washington Avenue; significant industrial development may occur in the City of Racine along 21st Street. Additional commercial development may also occur in the Town of Caledonia in the vicinity of Green Bay Road and Four Mile Road. Depending upon the speed at which these areas are developed and upon the nature and extent of development, extension of transit service into these areas may be warranted by 1997. Such service extensions could occur as extensions of regular routes or through special shuttle routes and may initially be operated only during peak hours.

It is important to note that, while the recommended plan proposes routing changes to extend transit service to these areas, service to these areas would be warranted only if recent development trends in the study area continue and the areas are deemed to warrant transit service by local officials. Should development of these areas occur at a slower pace than currently envisioned, the additional service changes proposed for implementation by 1997 should not be implemented. The recommended 1993 transit system would then continue to be operated in these areas.

The following sections provide a more detailed description of the routing adjustments and scheduling changes which may be warranted by 1997. The proposed 1997 alignments and service area for the routes of the Belle Urban System are shown in Map 30. All service changes are described relative to the proposed 1993 transit system.

Routes No. 1, 2, 10 and 11: It is proposed that Route No. 11 be eliminated and that Routes No. 1 and 2 be extended into the Town of Caledonia to provide service over the most productive segments of Route No. 11. Route No. 1 would be extended from Douglas Avenue and Carlton Drive northward along Douglas Avenue to the Green Tree Centre Shopping Center in the Town of Caledonia. A one-way loop over Johnson Avenue, Charles Street, Four Mile Road, and Douglas Avenue would be established at the end of the route. Service would be provided over Route No. 1 between approximately 7:00 a.m. and 5:00 p.m. on weekdays and 8:00 a.m. and 5:00 p.m. on Saturdays. The proposed route extension would increase the round-trip route miles for Route No. 1 from 15.1 miles to approximately 19.7 miles, an increase of about 4.65 miles.

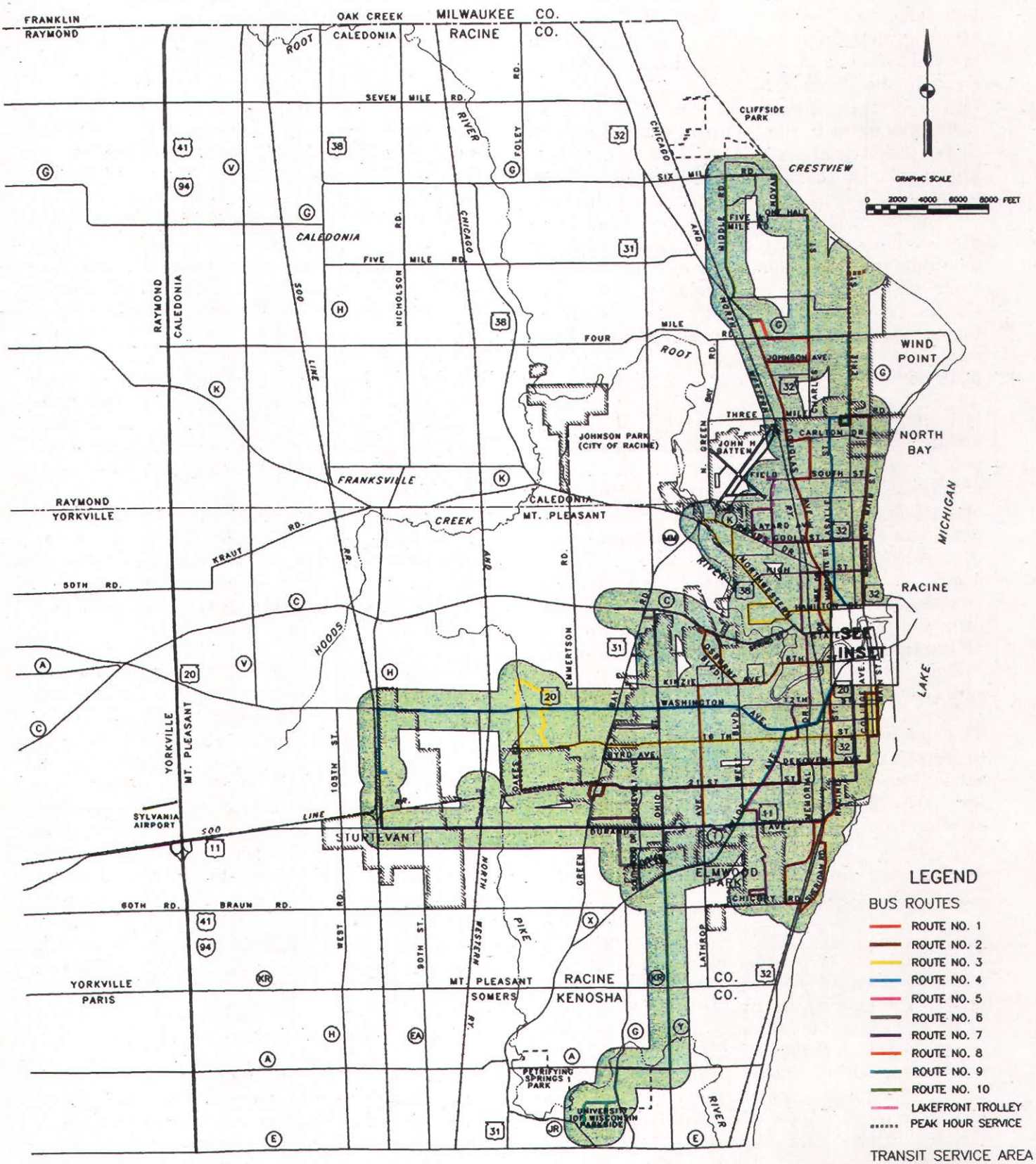
Route No. 2 would also be extended into the Town of Caledonia to replace service provided along Erie Street by Route No. 11 between the Shorecrest Shopping Center and the Olympia Brown School and the Western Publishing Company. The route would also be extended from its southern terminus at the Regency Point Shopping Center westward over 21st Street, then north over Oakes Road to 16th Street. Service would be provided at 30-minute headways over both route extensions, but only during the morning and afternoon weekday peak periods. No service would be provided over this route extension during weekday off-peak periods or on Saturdays. Service over Erie Street during these off-peak periods would be available over Route No. 10 between the Shorecrest Shopping Center and Four Mile Road. The proposed route extensions would increase round-trip route miles over Route No. 2 from 17.7 miles to 24.9 miles, an increase of 7.2 miles. The route extensions would also increase the number of vehicles required to operate Route No. 2 during weekday peak periods by one vehicle, from three to four.

The extension of Routes No. 1 and 2 into the Town of Caledonia would replace service over the most productive segments of Route No. 11, which would, therefore, be eliminated. No routing changes would be made to Route No. 10, which would continue to operate between the Shorecrest Shopping Center and the Crestview residential area and serve the Green Tree Shopping Center. However, the single vehicle which would cycle between Routes No. 10 and 11 at 60-minute intervals would now operate only over Route No. 10, with the resulting service being provided with 30-minute headways. It is also proposed that service be provided over Route No. 10 on weekdays for the entire period between 6:30 a.m. and 5:30 p.m. with no break in service during the midday period.

Routes No. 3, 4 and 7: It is proposed that Route No. 3 be extended to the west over 16th Street from Green Bay Road to Oakes Road, then north on Oakes Road to serve the J. I. Case High School and the adjacent residential and commer-

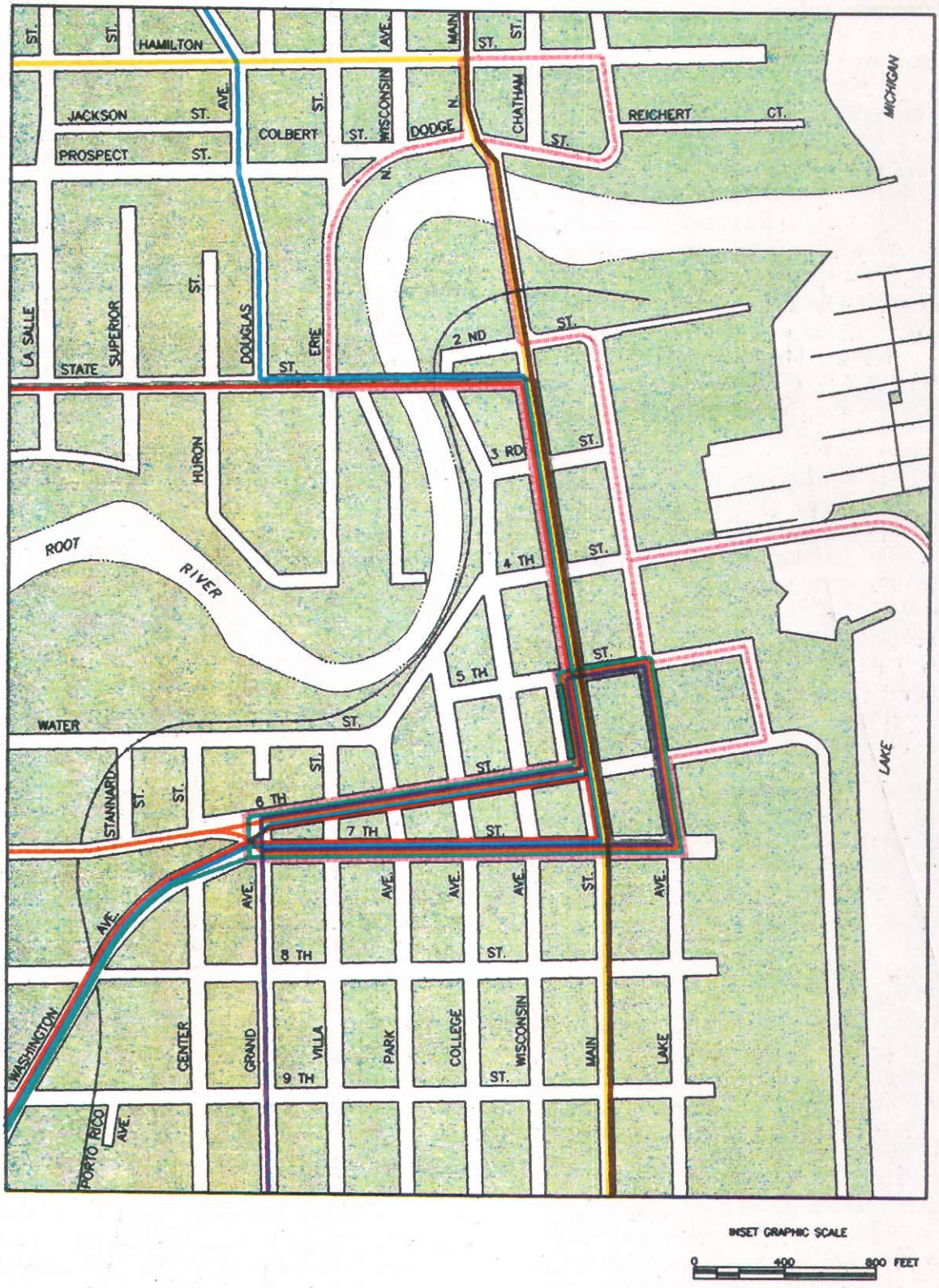
## Map 30

## RECOMMENDED ROUTE STRUCTURE FOR THE BELLE URBAN SYSTEM: 1997




*Source: City of Racine Department of Transportation and SEWRPC.*

## Inset to Map 30



cial development immediately east of Oakes Road and both north and south of Washington Avenue. Route No. 4 would be extended to the west over Washington Avenue from Oakes Road to CTH H, then south to the State Correctional Facility in Sturtevant. With the extension of Route No. 4 to the State facility, service over CTH H provided by Route No. 7 would be cut back to the Amtrak station. The proposed routing changes would increase route miles for Route No. 3 from 17.25 miles to 20.25 miles, an increase of three miles; increase round-trip route miles for Route No. 4 from 17.55 miles to 22.55 miles, an increase of five miles; and decrease round-trip route miles for Route No. 7 from 22.05 miles to 20.85 miles, a decrease of 1.2 miles. The routing extensions would also increase the weekday peak-period vehicle requirements for Route No. 3 by one vehicle, from four to five, and increase the weekday off-peak vehicle requirements for Route No. 4 by one vehicle, from three to four.

Route No. 5: It is proposed that Route No. 5 be extended north along Mt. Pleasant Street from Williams Street to South Street, then west along South Street to its terminus in a cul-de-sac to serve the industrial employers in this area. Service over the extension would be limited to approximately six round trips during weekday peak hours. The proposed routing change would result in an increase of round-trip route miles for Route No. 5 from 16.1 miles to 17.8 miles, an increase of 1.7 miles.

Route No. 6: It is proposed that Route No. 6 be adjusted to replace service provided over Byrd Avenue by Route No. 3, which is proposed to be extended to the west to serve J. I. Case High School. The routing change would entail eliminating service over Ohio Street between Wright Street and Byrd Avenue and instead operating the route over Wright Street, Green Bay Road, and Byrd Avenue. In addition, the one-way loop at the southern end of Route No. 6 which provides service to the Georgetown area of the City of Racine would be expanded to provide service over Wood Road and Durand Avenue in order to serve the Racine County Ridgewood Care Center directly. The route would also be extended west on Spring Street from Ohio Road to Newman Road to serve residential and commercial development in that area. The proposed routing changes would result in an increase in the round-trip route miles for Route No. 6 from 14.55 miles to 20.65 miles, an increase of 6.1 miles.

Route No. 9: It is proposed that the extent of service provided over Route No. 9 be made more comparable to that provided by the other regular routes of the Belle Urban System. This would entail adding service on those weekdays which fall outside the fall, spring, and summer-school sessions at the University of Wisconsin-Parkside and on Saturdays. Route No. 9 currently does not operate on these days. The expanded service on Route No. 9 would benefit employees on and around the University campus and students desiring to use campus facilities on weekends. In addition, the expanded service would also benefit individuals who desire to travel by transit between the Cities of Racine and Kenosha, who need to transfer between the separate Racine and Kenosha transit systems at the University of Wisconsin-Parkside. It is proposed that the additional weekday and Saturday service which would be provided over the route be provided at 60-minute headways, using the same schedules that are operated during summer school, when service is available between approximately 7:30 a.m. and 5:50 p.m.

1997 Operating Profile: A summary of the basic operating characteristics for the City of Racine Belle Urban System with the proposed 1997 routing and service changes in presented in Table 50. More detailed route information is provided in Appendix F. Adjustments to the alignments to the routes of the transit system would result in an increase in the route miles for the system from the approximately 168.0 miles proposed with the recommended 1993 transit system to approximately 186.1 miles. With the exception of Route No. 10, no changes from the proposed 1993 operating headways have been proposed by 1997. As noted above, operating headways on Route No. 10 would be reduced from 60 to 30 minutes during all times of operation. In addition, the extent of service provided over Route No. 9 would be more comparable to the other regular routes of the Belle Urban System by providing for route operation on those weekdays when classes are not in session at the University of Wisconsin-Parkside, as well as on Saturdays. Implementation of the recommended routing and service changes will also increase the vehicle requirements for the system by two vehicles during weekday peak periods, from 30 to 32 vehicles; by one vehicle during weekday off-peak periods, from 25 to 26 vehicles; and by two vehicles on Saturday, from 24 to 26.

Specialized Transportation Service for Disabled Persons

In addition to providing fixed-route transit service for the general public, the Belle Urban System also provides transit services which are designed to be used by disabled persons. These services were described in Chapter II of this report and consist of a specialized door-to-door transportation service provided throughout the transit system service area by the Racine County Human Services Department. To provide the service, the Racine County Human Services Department contracts with Laidlaw-Jelco, Inc.

The Belle Urban transit system has provided such public transportation services for disabled persons since 1975 to comply with Federal regulations. The current City program of transit services for the disabled was developed in response to regulations issued by the U. S. Department of Transportation, Federal Transit Administration (FTA), on September 6, 1991. Those regulations were promulgated to implement the Americans with Disabilities Act (ADA) of 1990, which requires that all public entities provide fixed-route transit service, such as the City of Racine, also provide complementary paratransit service to disabled individuals unable to use the entity's fixed-route transit service. The complementary paratransit service must be comparable to the fixed-route transit service available to the general public with respect to specific service criteria.

A report presenting the City of Racine's proposed plan for providing paratransit service to disabled persons was completed by the Regional Planning Commission staff at the request of the City of Racine and transmitted to the FTA on January 26, 1992.[1] The City's plan was subsequently approved by the FTA in October 1992. A recent paratransit plan update submitted in January 1993 has documented that the City is now in full compliance with the ADA paratransit service requirements.[2] No significant changes to the City's public transit services for disabled persons are envisioned to be needed as a result of the routing service changes recommended for the Belle Urban fixed-route transit system.

The City will, however, be able to begin providing accessible mainline bus service over the bus routes of the transit system as vehicles in the transit system bus fleet become equipped with wheelchair lifts or ramps either through the remanufacture of older vehicles in the bus fleet or the purchase of new vehicles. The City will need to take this action, which will make the transit system bus fleet accessible to persons in wheelchairs to comply with a second major provision of the Americans with Disabilities Act of 1990, which requires that buses acquired after August 26, 1990, for use in providing fixed-route transit service must be accessible to disabled individuals, including those using wheelchairs. Eight 1976-model buses will be remanufactured with wheelchair lifts during 1993; three new buses equipped with wheelchair lifts or ramps are expected to be acquired during 1994. The City anticipates that when these first accessible buses are available, one accessible bus will be assigned to each route in the transit system to provide an initial level of accessible mainline bus service across the entire transit system. Additional accessible buses will be added to the transit system fleet under the bus fleet replacement and remanufacture program for the recommended transit system development plan, as described in a later section of this chapter. By the end of the planning period, the plan calls for between 26 and 28 buses in the fleet for the recommended transit system to be equipped with wheelchair lifts or ramps. This number of accessible buses should be sufficient to enable the transit system to provide regularly scheduled bus service using all accessible vehicles during weekday off-peak periods and on Saturdays over all bus routes and over about one-half of its routes during weekday peak periods.

Preceding the implementation of accessible bus service on the regular bus routes, it is recommended that the City initiate a program both to inform disabled individuals of the availability of the accessible bus service and to educate potential disabled users on how to use the service. This informational and educational process should include the use of media, including

[1] *See SEWRPC Memorandum Report No. 60, A Paratransit Service Plan for Disabled Persons—City of Racine Transit System, January 1992.*

[2] *See SEWRPC Memorandum Report No. 75, A Paratransit Service Plan for Disabled Persons—1993 Update/City of Racine Transit System, January 1993.*

Table 51

PROJECTED ANNUAL SERVICE LEVELS AND RIDERSHIP FOR THE CITY OF RACINE BELLE URBAN SYSTEM UNDER THE RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN: 1992-1997

| Operating Characteristic | Actual 1992 | Projected[a] 1993 | 1994 | 1995 | 1996 | 1997 |
|---|---|---|---|---|---|---|
| Annual Service Provided | | | | | | |
| Revenue Vehicle Hours | 103,900 | 102,000 | 101,300 | 103,500 | 105,800 | 108,000 |
| Revenue Vehicle Miles | 1,257,300 | 1,220,200 | 1,177,000 | 1,240,000 | 1,302,900 | 1,366,100 |
| Annual Ridership | | | | | | |
| Total Revenue Passengers[b] | 1,820,600 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Per Revenue Vehicle Hour | 17.5 | 18.0 | 17.7 | 18.2 | 17.5 | 17.5 |
| Per Revenue Vehicle Mile | 1.45 | 1.51 | 1.53 | 1.52 | 1.42 | 1.38 |
| Per Capita[c] | 16.2 | 16.4 | 16.0 | 16.7 | 16.5 | 16.8 |

[a] *Information on the incremental change for the recommended transit system from projections for the operation of the existing 1992 transit system over the period is presented in Appendix F.*

[b] *Includes ridership on specialized transportation services provided for disabled persons who are unable to use regular fixed-route transit service.*

[c] *Based on total service area population of 112,300 persons.*

*Source: SEWRPC.*

newspaper advertisements and radio announcement, as well as direct contact with schools and public and private agencies and organizations providing services to disabled individuals. In addition to advertising and announcing the service, efforts could be made to coordinate with agencies providing services to disabled individuals to hold training sessions on using accessible bus service. It is recommended that accessible buses be made available to disabled groups or organizations to allow potential users to familiarize themselves with the vehicles in familiar surroundings. In addition, it is recommended that the Belle Urban System consider offering reduced fares to disabled users of the mainline accessible bus service so as to encourage regular ridership on the fixed-route bus service as opposed to the more expensive paratransit service funded by the City.

Ridership Projections

The projections of ridership and service productivity for the recommended transit system over the period 1993 through 1997 are presented in Table 51. Information on the incremental changes for the recommended transit system from the projections for operation of the existing 1992 transit system over the period is presented in Appendix F. The projections assume that the proposed 1993 service changes would be implemented with the change to school-year schedules on the day after Labor Day 1993. The projections also assume that all the proposed 1997 routing changes would be warranted and gradually implemented between 1995 and 1997. The ridership projections also assume that passenger fares would be increased modestly over the planning period, with the adult cash fare being increased from the current $0.60 per one-way trip to $0.70 per one-way trip in 1994, and to $0.80 per one-way trip in 1996. The proposed changes in passenger fares are described in a later section of this chapter.

The changes to the transit system recommended for implementation in fall 1993 may be expected to decrease revenue vehicle miles of service in 1993 and 1994 from the levels operated in 1992. In 1994, the first full year of system operation with the proposed 1993 service changes, revenue vehicle miles of service would decrease by about 6 percent to about 1,177,000 revenue vehicle

miles from the 1,257,000 revenue vehicle miles operated in 1992. By 1997, revenue vehicle miles of service would be expected to increase by about 6 percent over 1994 levels to about 1,366,000 revenue vehicle miles as service is expanded within the study area. The transit system would be expected to generate an annual ridership of about 1,796,000 revenue passengers in 1994, which would be about 1 percent below the 1992 ridership level of about 1,821,000 revenue passengers. The lower ridership would result principally from the fare increase implemented in 1994. By 1997, ridership on the recommended transit system would be expected to increase to about 1,887,000 revenue passengers, or by about 5 percent over 1994 levels. Vehicle productivity may be expected to remain relatively stable over the planning period at about 18 passengers per revenue vehicle hour and about 1.5 passengers per revenue vehicle mile. Total annual ridership per capita may also be expected to remain stable at between 16 and 17 revenue passengers per capita.

## FINANCIAL COMMITMENT

Public funds will be required to subsidize the annual operation of the recommended transit system. Both the available State and Federal funds are recommended to be drawn upon to reduce the local communities' financial contributions toward the annual operating costs of the transit system and the costs of acquiring necessary operating capital equipment. This section of the chapter identifies the financial commitment required to carry out the recommended plan over the planning period and suggests how this requirement might be shared among available funding sources. An analysis of the capacity of available funding sources to provide the required funding over the planning period is presented in Appendix G of this report.

### Financial Performance

Table 52 presents information on the ridership and financial performance of the City transit system with the recommended service changes for the period 1993 through 1997. Information on the incremental changes for the recommended transit system from the projections for operation of the existing 1992 transit system over the period is presented in Appendix F. The projections of ridership, expenses, revenues, and public subsidies assume that all service changes recommended for implementation in 1993 will be implemented with the change to school-year schedules after Labor Day 1993 and that all the proposed 1997 service changes are fully implemented. The financial projections in this table include projections made in constant 1993 dollars, which assume no inflationary changes in transit system operating expenses over the planning period. Under these projections, operating revenues and levels of Federal transit assistance have been adjusted downward to reflect the declining value which would be expected given the continuation of general price inflation at levels experienced in the recent past. Financial projections for the recommended transit system are also presented in projected "year of expenditure" dollars, which reflect the assumed impacts which the continuation of general price inflation at recent levels could be expected to have over the planning period. In this respect, both passenger fares and transit system operating expenses would be assumed to increase modestly over the planning period and Federal transit system operating assistance funds would be assumed to remain stable at 1993 levels. These three factors could be expected to have a significant impact on the projected operating deficits for the recommended transit system.

With the implementation of all the recommended service changes, total system vehicle miles of service may be expected to increase by about 12 percent between 1993 and 1997. Operating expenses for the transit system in constant 1993 dollars may also be expected to increase by about 6 percent over the same period, from about $3,850,000 in 1993 to about $4,070,000 in 1997, because of the increase in service provided. Operating revenues in constant 1993 dollars would be expected to increase by only about 2 percent over this period, from about $884,000 in 1993 to about $900,000 by 1997, reflecting increases in ridership as well as in passenger fares. As a result, the total system operating deficit in constant 1993 dollars would be expected to increase by about 7 percent, from about $2,967,000 in 1993 to about $3,170,000 in 1997. The total local operating subsidy for the transit system in constant 1993 dollars would be expected to increase by about 45 percent over the period, from about $519,000 in 1993 to about $750,000 in 1997. The increase in both the total operating deficit and the local share of the operating deficit reflects an assumption that

Table 52

## PROJECTED ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE FOR THE CITY OF RACINE BELLE URBAN SYSTEM UNDER THE RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN: 1993-1997

| Operating Characteristic | Estimated 1992 | Projected in Constant 1993 Dollars[a] | | | | |
|---|---|---|---|---|---|---|
| | | 1993 | 1994 | 1995 | 1996 | 1997 |
| Annual Service Provided | | | | | | |
| Total Vehicle Hours | 114,000 | 109,200 | 108,600 | 110,900 | 113,100 | 115,400 |
| Total Vehicle Miles | 1,346,400 | 1,305,900 | 1,264,000 | 1,328,000 | 1,392,100 | 1,456,300 |
| Annual Ridership | | | | | | |
| Total Revenue Passengers | 1,821,000 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Service Cost | | | | | | |
| Total Annual Operating Expenses | $3,713,400 | $3,850,400 | $3,812,800 | $3,898,300 | $3,984,600 | $4,070,300 |
| Total Annual Operating Revenue | 874,100 | 883,800 | 895,400 | 900,900 | 918,000 | 900,300 |
| Total Annual Operating Deficit | 2,839,300 | 2,966,600 | 2,917,400 | 2,997,400 | 3,066,600 | 3,170,000 |
| Sources of Required Public Funds | | | | | | |
| Federal Operating Assistance | $ 907,200 | $ 830,800 | $ 798,800 | $ 768,100 | $ 738,600 | $ 710,200 |
| State Operating Assistance | 1,559,600 | 1,617,200 | 1,601,400 | 1,637,300 | 1,673,500 | 1,709,500 |
| Local Operating Assistance | 372,500 | 518,600 | 517,200 | 592,000 | 654,500 | 750,300 |
| Service Effectiveness | | | | | | |
| Total Expense per Passenger | $2.04 | $2.09 | $2.12 | $2.07 | $2.15 | $2.16 |
| Total Revenue per Passenger | 0.48 | 0.48 | 0.50 | 0.47 | 0.49 | 0.48 |
| Total Deficit per Passenger | 1.56 | 1.61 | 1.62 | 1.60 | 1.66 | 1.68 |
| Percent of Expenses Recovered through Operating Revenues | 23.5 | 23.0 | 23.5 | 23.1 | 23.0 | 22.1 |
| Passenger Fares | | | | | | |
| Base Adult Cash Fare | $0.60 | $0.60 | $0.67 | $0.65 | $0.71 | $0.68 |
| Average Fare per Trip | 0.48 | 0.48 | 0.50 | 0.48 | 0.50 | 0.48 |

| Operating Characteristic | Estimated 1992 | Projected in Year of Expenditure Dollars[b] | | | | |
|---|---|---|---|---|---|---|
| | | 1993 | 1994 | 1995 | 1996 | 1997 |
| Annual Service Provided | | | | | | |
| Total Vehicle Hours | 114,000 | 109,200 | 108,600 | 110,900 | 113,100 | 115,400 |
| Total Vehicle Miles | 1,346,400 | 1,305,900 | 1,264,000 | 1,328,000 | 1,392,100 | 1,456,300 |
| Annual Ridership | | | | | | |
| Total Revenue Passengers | 1,821,000 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Service Cost | | | | | | |
| Total Annual Operating Expenses | $3,713,400 | $3,850,400 | $3,959,600 | $4,204,700 | $4,464,200 | $4,737,200 |
| Total Annual Operating Revenue | 874,100 | 883,800 | 931,200 | 974,400 | 1,032,600 | 1,053,200 |
| Total Annual Operating Deficit | 2,839,300 | 2,966,600 | 3,028,400 | 3,230,300 | 3,431,600 | 3,684,000 |
| Sources of Required Public Funds | | | | | | |
| Federal Operating Assistance | $ 907,200 | $ 830,800 | $ 830,800 | $ 830,800 | $ 830,800 | $ 830,800 |
| State Operating Assistance | 1,559,600 | 1,617,200 | 1,663,000 | 1,766,000 | 1,875,000 | 1,989,600 |
| Local Operating Assistance | 372,500 | 518,600 | 534,600 | 633,500 | 725,800 | 863,600 |
| Service Effectiveness | | | | | | |
| Total Expense per Passenger | $2.04 | $2.09 | $2.20 | $2.24 | $2.41 | $2.51 |
| Total Revenue per Passenger | 0.48 | 0.48 | 0.51 | 0.52 | 0.56 | 0.56 |
| Total Deficit per Passenger | 1.56 | 1.61 | 1.69 | 1.72 | 1.85 | 1.95 |
| Percent of Expenses Recovered through Operating Revenues | 23.5 | 23.0 | 23.5 | 23.2 | 23.1 | 22.2 |
| Passenger Fares | | | | | | |
| Base Adult Cash Fare | $0.60 | $0.60 | $0.70 | $0.70 | $0.80 | $0.80 |
| Average Fare per Trip | 0.48 | 0.48 | 0.52 | 0.52 | 0.56 | 0.56 |

[a] *Assumes no inflationary increases in operating expenses over the planning period. Passenger fares have been assumed to increase modestly, and federal transit operating assistance levels have been assumed to remain stable over the planning period. However, the amounts of passenger revenues and federal aid have been adjusted to reflect a decrease in the future value of the funds based upon the impacts which general price inflation has had in the past on transit system operating costs, total operating deficits, and local funding requirements. Information in constant 1993 dollars on the incremental change for the recommended transit system from projections for the operation of the existing 1992 transit system over the period is presented in Appendix F.*

[b] *Assumes increases in operating expenses of 4 percent per year per unit of service. Passenger fares have also been assumed to increase modestly, and federal transit operating assistance levels have been assumed to remain stable over the planning period. Information in projected year of expenditure dollars on the incremental change for the recommended transit system from projections for the operation of the existing 1992 transit system over the period is presented in Appendix F.*

*Source: SEWRPC.*

even if passenger fares are increased and Federal aid levels remain stable at 1993 levels over the planning period, their actual dollar values will decline, given the historical differential impact which general price inflation has had on transit operating costs, total system deficits, and local funding requirements.

Operating expenses for the recommended transit system in projected year of expenditure dollars may be expected to increase by about 23 percent by 1997, from about $3,850,000 in 1993 to about $4,737,000 in 1997, because of the increase in service provided and the effects of general price inflation. Operating revenues for the transit system may be expected to increase by about 19 percent over the planning period, from about $884,000 in 1993 to about $1,053,000 in 1997. As a result, the total operating deficit in estimated year of expenditure dollars may be expected to be about 24 percent higher by 1997 than in 1993, increasing from about $2,967,000 to about $3,684,000. Assuming Federal transit operating assistance funds remain stable at the 1993 level over the period and State operating assistance funds continue to fund 42 percent of eligible operating expenses through 1997, the total local operating subsidy for the transit system may be expected to increase from about $518,000 in 1993 to about $864,000 by 1997, or by about 67 percent.

Fares

Over the past five years, the Belle Urban System has implemented two increases in passenger fares: in 1988, when the base adult cash fare was raised from $0.35 to $0.50 per one-way trip, and in 1991, when the base adult cash fare was raised to $0.60 per one-way trip. Ridership on the transit system declined in these and the immediately following years, largely as a result of these increases in passenger fares. However, local officials considered the fare increases necessary to generate additional passenger revenue and maintain tolerable increases in the annual local public funding requirement for transit system operations caused by increasing transit system operating expenses and decreasing levels of Federal transit operating assistance. For similar reasons, additional increases in passenger fares are recommended to be implemented over the planning period.

It is proposed that the transit system implement fare increases in 1994 and in 1996 to raise the base adult cash fare by $0.10 per one-way trip in each of those years. As a result, base adult cash fares for the transit system would increase from the current $0.60 per one-way trip to $0.80 per one-way trip by the end of the planning period, an increase of about 33 percent. Fares in other fare categories should also be increased by similar proportions. The proposed fare increases for the transit system will be needed in order for fares to keep pace with anticipated increases in operating expenses, thereby maintaining a stable farebox recovery rate. During 1993, the transit system is projected to recover approximately 23 percent of its annual operating expenses through passenger and other operating revenues which is similar to the farebox recovery rate for the transit system during 1992. By 1997, the recommended transit system is expected to recover about 22 percent of its operating expenses from operating revenues, which is slightly less than the 1993 level. However, the recommended transit system would recover only about 19 percent of operating expenses from operating revenues in 1997 if none of the proposed fare increases were implemented.

It is also recommended that the transit system consider offering special student fares to the Racine Unified School District to encourage the school district to increase its use of the Belle Urban System to provide transportation for its students. Currently, the school district relies upon the Belle Urban System to provide daily transportation for approximately 70 students. By comparison, about 1,000 students within the school district relied upon the Belle Urban System for school transportation during the transit system's high-ridership years in the early 1980s. It is proposed that the special student fare structure offered by the transit system incorporate a price structure which would reflect different discounts from the regular fare based on the number of students who are issued passes or tokens by the school district. For example, if the school district used the Belle Urban System to provide daily school transportation for 500 or fewer students, the school district could be charged at the rate of $0.50 per one-way student trip; for between 500 and 1,000 students, the per trip rate could decrease to $0.45; and for over 1,000 students, the per trip rate could decrease to $0.40. This type of pricing structure for students could encourage the Racine Unified School District to utilize the Belle Urban System for more of its transportation needs.

In addition to the discounted fare structure proposed to be offered by the transit system to the Racine Unified School District for students who are eligible for free school transportation provided by the District, it is also recommended that the Belle Urban System consider creating a student fare category in its regular fare structure. The new student fare category would be directed at students who reside less than two miles from the school they are entitled to attend and are thus not eligible for school transportation provided by the District. Such students currently pay the regular adult fare. Based on the current adult cash fare of $0.60 per one-way trip, it is proposed that a student fare of $0.45 per one-way trip be established initially. This student fare would be 75 percent of the regular adult fare and comparable to student fares offered on similar-sized Wisconsin transit systems. The student fares could be offered as regular cash fares, through the sale of tickets or tokens, or through the sale of a special student punch pass which would be valid for a fixed number of trips over a set period of time. Use of the student fares could also be limited to students presenting valid student identification. The reduced fares for students will become more important to retaining or generating student trips with the recommended increases in adult fares in 1994 and 1996.

Capital Project Expenditures

Implementation of the recommended transit system development plan will require that several capital improvement projects be undertaken for the transit system between 1993 and 1997. These will include replacement or remanufacture of vehicles in the existing bus fleet; acquisition of equipment for, and making needed modifications to, the Kentucky Street operating garage; replacement and upgrading of existing computer equipment and software; and acquisition of other operating and service equipment. Table 53 lists the capital improvement projects, together with estimated project costs.

Bus Replacement and Remanufacture: The most significant capital improvement project to be undertaken by the transit system over the next five years is the replacement or remanufacture of the oldest vehicles in the Belle Urban System bus fleet, including 25 General Motors Corporation (GMC) "New Look" buses purchased by the City of Racine in 1976 and eight GMC "RTS" advanced-design buses purchased by the City in 1982. Assuming a maximum service life of 12 years, the 25 buses purchased in 1976 are overdue for replacement or remanufacture and the eight buses purchased in 1982 will reach the end of their useful life in 1994. The remaining nine buses in the transit system's total vehicle fleet of 42 buses were purchased in 1989 and should not need replacement or remanufacture until at least 2001.

With the recommended 1993 service changes, the transit system will need 30 vehicles to provide weekday peak-hour service and a total bus fleet, including spares, of 35 vehicles. If all the proposed 1997 service improvements are implemented, the transit system will require 32 buses for peak-period operation and a total fleet of 37 buses. The transit system will thus need to replace or remanufacture between 26 and 28 of the 33 1976- and 1982-model buses in its existing fleet.

The City has programmed Federal and local funds for the remanufacture of eight of the 1976-model buses during 1993. The City also anticipates receiving Federal funds during 1993 for the purchase of three new buses in 1994 to replace three more 1976-model buses. In the light of the age of the remaining 1976-model buses, it is proposed that the City program the purchase of between seven and nine additional new buses over the planning period to replace a like number of the 1976-model buses. Rather than replace the 1982-model buses with new vehicles, it is proposed that the City program the remanufacture of these vehicles for sometime between 1995 and 1997.

Because the recommended transit system development plan calls for a reduction in the total vehicle fleet for the transit system from 42 buses to between 35 and 37 buses, between five and seven of the 1976-model buses will not need to be replaced or remanufactured. The transit system may chose to keep these vehicles as additional spare buses while the 1982-model buses are being remanufactured or for spare parts, or may chose to dispose of them outright.

Modifications to, and Equipment for, Kentucky Street Operating Facility: Several improvements are needed at the Kentucky Street operating garage, in particular for that portion of the facility which was purchased from the private transit operator by the City in 1975. The repairs and improvements will include replacement of a

Table 53

CAPITAL PROJECT EXPENDITURES REQUIRED FOR THE CITY OF RACINE BELLE URBAN SYSTEM UNDER THE RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN: 1993-1997

| Quantity | Capital Equipment or Project Description | Unit Cost[a] | Total Cost[a] |
|---|---|---|---|
| 8 | Remanufactured 1976 GMC "New Look" urban transit coaches, including addition of wheelchair lifts | $125,000 | $1,000,000 |
| 10-12 | New 35-foot-long, air-conditioned urban transit coaches equipped with wheelchair lifts or ramps | 220,000 | 2,200,000-2,640,000 |
| 8 | Remanufactured 1982 GMC "RTS" urban transit coaches, including addition of wheelchair lifts | 125,000 | 1,000,000 |
| 26-28 | Registering electric locked-vault fareboxes | 5,000 | 130,000-140,000 |
| 26-28 | Mobile radio units | 3,200 | 83,200-89,600 |
| 1 | Accessible minivan | 30,000 | 30,000 |
| 1 | Service truck | 12,000 | 12,000 |
| 1 | TDD/text telephone | 700 | 700 |
| - - | Replace/upgrade computer hardware and software | - - | 10,000 |
| | Kentucky Street Operating Garage Modifications and Equipment | | |
| - - | Removal and replacement of underground storage tanks | - - | 80,000 |
| - - | Replacement of maintenance hoist | - - | 25,000 |
| - - | Replacement of garage doors | - - | 35,000 |
| - - | Lighting improvements for bus maintenance facility | - - | 10,000 |
| - - | Replacement of bus washer and cleaner | - - | 100,000 |
| - - | Automatic security gate for yard entrance | - - | 5,000 |
| - - | Site improvements | - - | 60,000 |
| - - | Subtotal | - - | $ 315,000 |
| Total Capital Project Costs | | $4,780,900 - $4,922,300 | |
| Federal Share of Costs[b] | | $3,824,700 - $3,937,800 | |
| Local Share of Costs[c] | | $956,200 - $984,500 | |

[a] *Costs are expressed in constant 1993 dollars and include contingency and project administration costs which were estimated at 7.5 percent of total acquisition and construction costs.*

[b] *Assumes 80 percent of eligible capital costs could be funded through the Federal Transit Administration Section 3 discretionary or Section 9 formula grant programs.*

[c] *Includes the 20 percent local matching funds required under the Federal Transit Administration grant programs.*

*Source: City of Racine Department of Transportation and SEWRPC.*

maintenance hoist installed in 1977 and now determined to be unrepairable, replacement of one-half of the overhead doors on the bus maintenance facility and all the doors on the bus storage building, replacement of the bus washer and cleaner system which was original equipment at the maintenance facility when the City bought it in 1975, installation of improved lighting for the bus maintenance facility, and removal and replacement of two underground storage tanks which the transit system has determined to be leaking. The transit system is also proposing installation of an automatic security gate in the fence surrounding the garage complex to enable bus drivers to open and close the gate without leaving their vehicles. Finally, the transit system is proposing site improvements at the complex including grading

and leveling and landscaping the portion of the property which was formerly railroad right-of-way, located behind the maintenance building. Following the removal and replacement of the leaking underground storage tanks, approximately three-fourths of the paved yard area will also need to be resurfaced.

Replacement and Upgrading of Computer Equipment and Software: The City also needs to replace and upgrade the microcomputer equipment and software which is used by the transit system. Most of this equipment was acquired in the early 1980s, when microcomputer equipment and technology was still relatively new. The City envisions the need to replace two or three of the old microcomputers and to add new software to assist the system in monitoring maintenance and operations information.

Other Operating Equipment: Other operating equipment related to the vehicle fleet would also have to be acquired over the planning period. Specifically, between 26 and 28 new fareboxes and mobile radios will be needed for the 10 to 12 new buses which are recommended to be purchased and the 16 buses which are proposed to be remanufactured over the planning period. The purchase of a new service truck and a vehicle for the transit system supervisor will also be needed to replace existing vehicles, which have accumulated in excess of 100,000 miles. It is proposed that the City acquire an accessible minivan to replace the automobile currently used by the transit system supervisor. The accessible van could be used as a backup for the accessible buses to be acquired over the planning period by the transit system to provide transportation for disabled individuals if the wheelchair lift on an accessible bus malfunctions. Finally, the transit system must acquire and install a TDD/text telephone at the Kentucky Street operating garage to enable the Belle Urban System telephone information service to provide information to individuals with hearing or speech impairments.

Costs of Capital Improvements: The total capital expenditures associated with implementing the recommended transit system are estimated at between $4,781,000 and $4,922,000. These expenditures would be required for projects necessary to maintain the existing transit system over the period and for implementing the recommended transit service changes. Of the total costs between $3,825,000 and $3,938,000, or 80 percent, could be funded through the Federal Transit Administration Section 3 discretionary or Section 9 formula transit assistance programs. The remaining 20 percent of total capital costs, amounting to between $956,000 and $984,000, would have to be funded by the City of Racine.

Sources of Funding

The distribution of the projected annual operating deficit for the recommended transit system was previously presented, in Table 52. There are currently two major nonlocal sources of funds which could be drawn upon to reduce the local financial commitment required for the implementation and subsequent operation of the recommended transit system: the U. S. Department of Transportation, Federal Transit Administration (FTA), and the Wisconsin Department of Transportation. It is recommended that the transit assistance funds available under the various programs offered by these governmental agencies continue to be sought by the City of Racine as they have in the past.

More specifically, it is also recommended that Federal transit formula assistance funds continue to be sought to defray a portion of the annual operating deficit of the Belle Urban System. The current source of such funds is the FTA Section 9 formula transit assistance program, which makes Federal transit assistance available to designated recipients within urbanized areas for planning, capital improvement, and operating assistance projects. The amount of Federal transit operating assistance funds available to the Belle Urban System over the planning period was assumed to decline in terms of constant 1993 base-year dollars from the 1993 level of approximately $831,000 to about $710,000 by 1997, or by almost 15 percent. In estimated year of expenditure dollars, Federal funds were assumed to remain stable at the 1993 level over the entire period. This amount would be sufficient to cover from about 22 percent of total system operating expenses in 1993 to about 18 percent of total system operating expenses in 1997.

It is also recommended that the City of Racine continue to use funds from the State urban mass transit operating assistance program administered by the Wisconsin Department of Transpor-

tation to offset a portion of the operating deficit. This program, authorized under Section 85.20 of the Wisconsin Statutes, provides operating assistance to all communities with a resident population of 2,500 or more persons and with publicly supported transit systems. Operating assistance levels under this program currently provide State funds equal to 42 percent of total operating expenses. The State funds available to the Belle Urban System over the planning period were consequently assumed to range from about $1,617,000 in 1993 to about $1,710,000 in 1997 in constant 1993 base-year dollars, and to about $1,990,000 in 1997 in estimated year of expenditure dollars.

The total local share of the operating deficit for the recommended transit system may be expected to range from the 1993 level of about $518,000 to a 1997 level of about $750,000 in constant 1993 base-year dollars, and about $864,000 in estimated year of expenditure dollars, or between 13 and 18 percent of the total transit system operating expenses over this period. At the present time, the total local portion of the operating deficit is shared among the City of Racine and the local governmental units and agencies which contract for fixed-route transit service from the Belle Urban System, including the Towns of Caledonia and Mt. Pleasant, the Village of Sturtevant, and the University of Wisconsin-Parkside. The recommended transit system, like the existing transit system, will continue to include routes which serve major traffic generators and areas of development outside of the corporate limits of the City of Racine, including areas of residential, commercial, and industrial development in the Towns of Mt. Pleasant and Caledonia and the Village of Sturtevant and University of Wisconsin-Parkside in the Kenosha County Town of Somers. Based upon the significant increase in the total local share of the transit system operating deficit projected for the recommended transit services, local financial assistance from the Towns of Mt. Pleasant and Caledonia, the Village of Sturtevant, and the University of Wisconsin-Parkside will continue to be needed in the future to insure the implementation and continued operation of the recommended transit services.

It is also recommended that the City seek Federal funds to offset a portion of the costs incurred in purchasing necessary capital equipment for the implementation of the recommended transit system. The principal source of these funds would be either the FTA Section 3 discretionary capital assistance program or the FTA Section 9 formula transit assistance program, both of which would provide assistance up to 80 percent of eligible project costs. The Federal capital assistance funds available from these two programs could cover some $3,825,000 to $3,938,000 of the total capital expenditures of between $4,780,000 and $4,922,000.

The availability of Federal transit capital assistance for the recommended transit system from either of these programs, however, cannot be guaranteed. Grants under the FTA Section 3 program are made at the discretion of the Secretary of the U. S. Department of Transportation. Competition for the limited amount of Section 3 funds available nationwide for projects such as those proposed for the City of Racine is intense. The limited amount of FTA Section 9 funds currently allocated to the State of Wisconsin also makes the availability of funding under this program uncertain. The current policy of the Wisconsin Department of Transportation in allocating the Section 9 funds available to the State to the transit properties eligible for such funds is to maximize the use of available funds for operating assistance. Only those funds not needed for, or not eligible to be used as, operating assistance being made available for capital assistance projects. At present, the amount of FTA Section 9 funds available in the State is not sufficient to fund the full 50 percent of operating deficits allowed under the Section 9 program. Consequently, the only funds which are currently made available for capital assistance projects under the Section 9 program are those which cannot be used for operating assistance. In the past, such capital assistance funds have fallen far below the Statewide need. The use of the Section 9 program to fund the recommended capital projects for the Belle Urban System would, therefore, require either a significant increase in the annual allocation of FTA Section 9 formula assistance funds to the State of Wisconsin or a change in the current administrative policy of the Wisconsin Department of Transportation concerning the annual allocation of Section 9 funds for transit projects within the State.

There is also some potential for the City of Racine to utilize other Federal funding programs authorized under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) to provide funding for the recommended capital improvements for the Belle Urban System. In addition to providing authorizations for funding of highways, highway safety, and public transit for Federal fiscal years 1992 through 1997, ISTEA also established new funding programs which allow for the flexibility of use of Federal highway and transit program funds for either highway or transit programs. The principal programs authorized under ISTEA which could be viewed as sources of Federal funds for transit capital projects for the City include the Surface Transportation Program, which provides funding for a broad range of highway and transit capital projects, and the Congestion Mitigation and Air Quality Improvement Program, which provides funding for highway and transit projects aimed at reducing congestion and improving air quality in ozone and carbon monoxide nonattainment areas classified by the Clean Air Act of 1990. However, the availability of Federal transit capital assistance from these programs for the City's transit system also cannot be guaranteed because of competition for the limited amount of such funds available Statewide for potentially eligible highway and transit projects. If transit capital projects submitted by the City are awarded funds under these programs, they would be eligible for the same level of Federal funding as under the FTA Section 3 or 9 grant programs.

The limitations associated with the Federal programs identified above could require the Belle Urban System to delay implementation of some of the recommended capital projects, modify the scope of the projects, or, possibly, to increase its local funding for the recommended capital projects. One modification which may need to be considered by the City of Racine if Federal capital assistance continues to be as limited as it has in the recent past would be to alter the scope of the proposed bus replacement program. Thus, the City could forego buying new buses to replace the 1976-model buses in its fleet and, instead, undertake the remanufacture of these buses. Such a decision will have to consider the condition of these buses, which were now 17 years old in 1993, five years beyond their expected normal useful life, and whether remanufacture of the buses would be economically viable, considering the work entailed.

The limited levels of Federal transit assistance projected to be available over the planning period and the operating and capital costs associated with the recommended transit system development plan may also require the City of Racine to consider generating additional local revenues from sources other than property taxes. A number of non-property tax revenue sources that could be used to support transportation services in Southeastern Wisconsin were examined under a separate study conducted by the Regional Planning Commission examining the feasibility of creating a Regional Transportation Authority for Southeastern Wisconsin.[3] The additional revenue sources which were found by the advisory committee overseeing that study to be most feasible included additional taxes on the sale of motor fuel; additional taxes on the sale of motor vehicles; an increase in the general sales tax; a tax on motor vehicle registrations, or a "wheel tax"; and a payroll tax. The advisory committee guiding that study concluded that if such user fees were to be enacted to generate additional revenue for transportation projects, the preferred revenue sources would be a motor fuel sales tax, a motor vehicle sales tax, or a wheel tax. In addition, the feasibility study advisory committee also recommended that the State establish a 50 percent matching capital grant program to support the capital needs of local transit systems. At the present time, there does not appear to be sufficient local support for the creation of a regional transportation authority in Southeastern Wisconsin. However, the City of Racine could consider implementing a wheel tax to generate additional local revenues for the City transit system. Implementing a wheel tax is now permitted under State legislation, whereas the other alternative taxes would require new State legislation.

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[3]*See SEWRPC Memorandum Report No. 38, A Regional Transportation Authority Feasibility Study for Southeastern Wisconsin, November 1990.*

## PLAN IMPLEMENTATION

The operating characteristics and the financial requirements of the recommended transit system have been described in the previous sections of this chapter. In a practical sense, however, the plan is not complete until the steps required for implementation have been specified. Full implementation of the recommended plan will depend upon the coordinated actions of several agencies of government, including the City of Racine Common Council, the Village of Sturtevant, the Towns of Mt. Pleasant and Caledonia, Racine County, the University of Wisconsin-Parkside, the Southeastern Wisconsin Regional Planning Commission, the Wisconsin Department of Transportation, and Federal Transit Administration of the U. S. Department of Transportation. These public bodies have vital roles in providing the necessary endorsement and operational and financial support required to achieve plan implementation.

### The City of Racine

The City will have the primary responsibility for the actions necessary to implement the recommended transit system development plan, since the City both owns the transit equipment and is responsible for the administration of the transit system. Accordingly, it is recommended that the City adopt the transit system development plan set forth herein and use it as a guide in taking the actions needed to make the recommended service changes, including refining the recommended routing and service changes affecting transit service within the City of Racine.

The City will also be responsible for satisfying all Federal administrative regulations associated with the use of Federal funds. While the City is currently in compliance with all such regulations, the regulations will require the City to schedule and hold a public hearing prior to the implementation of the recommended routing changes. The City must also continue to work with the Towns of Mt. Pleasant and Caledonia, the Village of Sturtevant, and the University of Wisconsin-Parkside, to determine the share of the total local operating deficit which each should provide for the transit service provided by the City transit system to the major traffic generators and residential development within each jurisdiction.

### The Village of Sturtevant, the Town of Caledonia, the Town of Mt. Pleasant, and the University of Wisconsin-Parkside

The recommended plan proposes the operation of bus routes extending beyond the City of Racine corporate limits to serve major traffic generators and residential areas within the Village of Sturtevant, the Town of Caledonia, the Town of Mt. Pleasant, and the University of Wisconsin-Parkside. It is recommended that these four government agencies work with the City of Racine to refine the recommended routing and service changes affecting each entity in order that these service changes can be implemented in a timely manner. As the transit services which have been proposed to serve each of these entities are an integral part of the recommended transit system plan, it is also recommended that these governmental units continue to provide the local funds necessary to operate the transit service for their respective areas.

### The County of Racine

The Racine County Board of Supervisors, through the Racine County Human Services Department, provides a specialized transportation service for the transportation of disabled persons which has been partially subsidized by the City in order to satisfy the City's Federal obligation to provide paratransit service to disabled persons. It is recommended that the County continue to provide the City with the option of contracting for paratransit service from the County program, as long as the City is willing to contribute a fair share toward the total public subsidy of the service.

### The Southeastern Wisconsin Regional Planning Commission

The Southeastern Wisconsin Regional Planning Commission has the statutory authority required to carry out the continuing, comprehensive, and cooperative areawide land use and transportation planning process in the seven-county Southeastern Wisconsin Region as required by Federal regulations. The Commission has regularly prepared short- and long-range transportation plans, consistent with Federal laws and regulations, for the Region. Under such regulations the Commission is responsible for developing and annually updating a transportation improvement program for the Region which identifies both highway- and transit-related improvement projects for an upcoming five-year period; pro-

vides for the staging of improvements over the five-year program period, including estimates of the costs and revenues over the program period; and relates the improvements recommended in the program to the adopted transportation system plan for the Region.

In order for the City of Racine to receive the Federal transit assistance funds necessary to implement fully the recommended transit plan, operating assistance and capital projects for the recommended transit system must be included in the transportation improvement program annually submitted by the Commission to the U. S. Department of Transportation. Accordingly, it is recommended that the Southeastern Wisconsin Regional Planning Commission adopt the City transit system development plan and, at the specific request of the City of Racine, include the recommended operating and capital projects for the City transit system in the transportation improvement program for the Southeastern Wisconsin Region.

U. S. Department of Transportation, Federal Transit Administration; and the Wisconsin Department of Transportation

Both the U. S. Department of Transportation, Federal Transit Administration; and the Wisconsin Department of Transportation administer programs which provide financial assistance to public transit systems. It is recommended that the City of Racine continue to make use of funds available under such programs to minimize the local public costs of the recommended transit plan. It is also recommended that both the State and Federal agencies concerned endorse the recommendations of the transit plan as a guide for the programming, administration, and granting of Federal and State assistance funds in support of the City public transportation program.

Subsequent Plan Adjustment

No plan can be permanent in all its aspects. Monitoring changing conditions and the effectiveness of implemented plan recommendations is essential if the validity and viability of the adopted plan are to be maintained. It is recommended that the City of Racine, with the assistance of the Regional Planning Commission, assume responsibility for periodically reviewing and updating the adopted plan as new urban development occurs and travel patterns and trip-making characteristics change and as data on the effectiveness of implemented service changes become available. The plan updating will require the same close cooperation among local and State agencies that was evident in the preparation of the transit system development plan itself. To achieve this necessary coordination and, therefore, the timely implementation and updating of the plan, it is recommended that the City of Racine Transit Planning Advisory Committee remain active and meet at the specific request of the City of Racine to address any problems which may develop in the implementation of plan recommendations.

## SUMMARY

The recommended plan for the City of Racine's fixed-route transit service calls for a number of changes in the existing route alignments and schedules of the Belle Urban System to be implemented as soon as possible in 1993. The changes would eliminate or reduce service on existing route segments and bus trips with low ridership, provide better serve existing travel demand, and modestly increase service area coverage.

The recommended plan proposes modifications to six of the 10 existing regular routes in the transit system plus the addition of a second route to provide service in the Town of Caledonia. The routing change proposed for Route No. 1 will extend service to an industrial park in the City of Racine and the Town of Mt. Pleasant by eliminating service over an unproductive route segment operated over STH 32. The routing changes proposed for Routes No. 2, 3, 4, and 6 will eliminate unproductive route segments over these routes in the Town of Mt. Pleasant and will provide for a north-south/east-west grid of bus routes serving the west side of the City of Racine. The changes to Routes No. 2, 3, and 4 should also allow for a more logical westward extension of these routes to serve areas which are expected to develop by the end of the planning period. A reduction in off-peak headways, from 30 to 60 minutes, proposed for Route No. 9 should improve route performance by reducing service during lower-ridership periods. Finally, by separating the existing Route No. 10 into two separate routes, a new Route No. 10 and No. 11, transfer coordination with other city bus routes at the Shorecrest Shopping Center can be

improved and the amount of service provided during midday periods can be increased.

The recommended plan also identifies additional routing adjustments and scheduling changes which may be warranted by 1997 if development in the study area continues to occur as envisioned at this time by City staff. The routing changes which may need to be considered by 1997 include the extension of Route No. 1 into the Town of Caledonia to serve the area around the Green Tree Centre Shopping Center, extensions of Route No. 2 to the north into the Town of Caledonia to serve the Olympia Brown School and Western Publishing Company along Erie Street and to the west along 21st Street and Oakes Road to serve an area of potential industrial development, the extension of Route No. 3 to the west over 6th Street to serve J. I. Case High School and adjacent residential and commercial areas, and the extension of Route No. 4 to the west over Washington Avenue and CTH H to serve the commercial office and industrial development which is expected to occur within this corridor. In addition, minor routing adjustments would be proposed for Routes No. 5 and 6 to compensate for routing changes made in Routes No. 1 and 3, and Route No. 11 in the Town of Caledonia would be eliminated as its most productive route segments would now be served by Routes No. 1 and 2 of the transit system. Finally, it was proposed to make the service provided over Routes No. 9 and 10 more comparable to the service provided over the other routes of the transit system by extending days of operation for Route No. 9 to include weekdays outside of the fall, spring and summer class sessions at the University of Wisconsin-Parkside, along with Saturdays, and to extend the weekday hours of operation for Route No. 10 to include the weekday midday period.

The recommended plan does not suggest any significant changes to the City's current public transit services for disabled persons are proposed to be made as a result of the routing and service changes recommended for the City's fixed-route transit system. The City will, however, be able to begin providing mainline accessible bus service over the bus routes of the transit system as vehicles in its bus fleet become equipped with wheelchair lifts through either the remanufacture of older vehicles in the bus fleet or the purchase of new vehicles as called for under the recommended program of capital projects.

For the purposes of preparing projections of ridership and financial requirements for the recommended transit system, it was assumed that the proposed 1993 routing and service changes would be implemented with the change to school-year schedules in fall 1993 and that continued development within the study area would warrant the implementation of all of the proposed service changes identified as potentially needed by 1997. With the implementation of all of the recommended transit service changes over the planning period, revenue vehicle miles of service would be expected to increase from about 1,221,000 revenue vehicle miles in 1993 to about 1,366,000 revenue vehicle miles in 1997, or by about 12 percent. Ridership levels on the transit system by 1997 would be expected to reach approximately 1,887,000 revenue passengers, an increase of about 3 percent over the projected 1993 level of 1,840,000 revenue passengers. The small change in ridership is attributable to proposed increases in passenger fares over the period, which would increase the base adult cash fare from $0.60 per one-way trip in 1993 to $0.70 per one-way trip in 1994 and to $0.80 per one-way trip in 1996. While operating revenues would also be expected to increase in 1997 from about $884,000 in 1993 to approximately $1,053,000 in 1997, an increase of about 19 percent, total operating expenses for the transit system would be expected to increase by about 23 percent over the same period, from about $3,850,000 in 1992 to about $4,737,000 in 1997. As a result, the total 1997 operating deficit for the transit system of about $3,684,000 would be expected to be about 24 percent higher than the total 1993 operating deficit of about $2,967,000.

It is recommended that Federal and State funds be drawn upon to reduce the local financial commitment required for the implementation of the recommended service improvements and subsequent annual operation of the transit system. It is recommended that Federal transit operating assistance funds through the FTA Section 9 formula transit assistance program continue to be applied to a portion of the annual operating deficit of the City of Racine transit system. Assuming that the amount of Federal transit operating assistance funds available to the City of Racine would remain stable at the current 1993 level of approximately $831,000, Federal operating assistance would be sufficient to cover from about 28 percent of the total system operating deficit in 1993 to about

23 percent of the total system operating deficit in 1997. The State funds available to the Belle Urban System would be expected to be increase from the 1993 amount of $1,617,000 to about $1,990,000 in 1997, representing about 55 and 54 percent of the total system operating deficit in 1993 and 1997, respectively. The use of available Federal and State operating assistance funds would result in a total local funding requirement for the recommended transit system which would range from about $519,000 in 1993 to about $864,000 in 1997, an increase of from about 17 percent of the total system operating deficit in 1993, to approximately 23 percent of the operating deficit in 1997.

It is also recommended that Federal transit assistance be obtained to offset a portion of the total expenditures for capital improvements recommended for the recommended transit system during the planning period. The cost of the recommended capital projects was estimated at between $4,781,000 and $4,922,300. Of this amount, some $3,825,000 to $3,938,000, or 80 percent, could be funded through the Federal programs providing transit capital assistance such the Federal Transit Administration Section 3 discretionary or Section 9 Formula transit assistance programs or other flexible funding programs authorized under the Intermodal Surface Transportation Efficiency Act of 1991. The remaining 20 percent of the total capital project costs, amounting to between $956,000 and $984,000, would need to be funded by the City of Racine.

The City of Racine would bear most of the responsibility for implementation of the recommended transit plan. Such responsibility will include refining the recommended routing and service changes, determining the amount of funds from other local governments and public agencies which are served by the routes of the transit system will be required, applying for Federal and State transit assistance funds, and satisfying the various administrative regulations associated with the receipt and use of Federal transit assistance funds. The local governmental units and agencies which contract for transit service from the Belle Urban System, including the Towns of Mt. Pleasant and Caledonia, the Village of Sturtevant, and the University of Wisconsin-Parkside, should continue to provide local funds for the contract transit services to assume their continued operation. Racine County will also have to continue to provide the City of Racine with the option of providing paratransit service for disabled persons through the Racine County Human Services Department specialized transportation program. Finally, plan implementation actions will be required from the Southeastern Wisconsin Regional Planning Commission, from the U. S. Department of Transportation Federal Transit Administration, and from the Wisconsin Department of Transportation to ensure that Federal and State funds are available to support the implementation and subsequent annual operation of the recommended transit system.

# Chapter VII

# SUMMARY AND CONCLUSIONS

## INTRODUCTION

This report sets forth a transit system development plan for the Belle Urban System. The new plan is intended to update the previous transit system development plan prepared by the Regional Planning Commission covering the period 1984 through 1988, completed in 1984. This new plan was prepared by the Regional Planning Commission at the request of the City of Racine.

The Racine transit system development plan is a short-range action plan, covering a period of five years. The plan is based upon a thorough evaluation of the performance of the existing transit system, upon an analysis of the person travel habits and patterns of the residents of the City and the transportation needs associated with the existing land use pattern, and, upon a careful evaluation of alternative service options. It recommends a coordinated set of service and capital improvements which, if implemented, should provide efficient and effective public transit service consistent with available financial resources. The transit system development plan includes a five-year staging plan for transit improvements and identifies the financial commitment and actions required by the various levels and units of government involved in implementation of the plan. It has been prepared in sufficient detail for the first year of the five-year program to provide an operational plan that is immediately implementable.

## PURPOSE OF THE TRANSIT SYSTEM DEVELOPMENT PLAN

The study leading to the new transit system plan was intended to serve four purposes: first, to evaluate the effectiveness of the existing transit system routes in serving the population, major trip generators, and travel patterns within the City; second, to evaluate the financial performance of the existing transit system with respect to operating costs, passenger revenues, operating deficit, and proportion of operating costs recovered from passenger revenues; third, to recommend potential changes to the existing transit services with respect to operations and areas served; and fourth, to provide a sound basis for monitoring the implementation status of the plan and the updating required to maintain a valid plan throughout the five-year planning period.

## STUDY ORGANIZATION

The preparation of this transit system development plan was a joint effort by the staffs of the City of Racine and of the Southeastern Wisconsin Regional Planning Commission. Additional staff assistance was obtained as necessary from certain other agencies concerned with transit development in the Racine area, including the Wisconsin Department of Transportation.

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 development of transit service policies and improvement proposals, the City of Racine acted in May 1991 to create the Racine Public Transit Planning Advisory Committee. The full membership of this Committee is listed on the inside front cover of this report.

## EXISTING TRANSIT SYSTEM

During 1992, the major supplier of local public transit service in the Racine area was the City of Racine, which has operated the Belle Urban system since July 1975. The City of Racine owns the facilities and equipment for the fixed-route transit system but contracts with a private management firm to oversee the day-to-day operation of the transit system. Under this arrangement, the transit system is operated with employees of the private management firm under the direction of the City Department of Transportation. The policy making body of the transit system is the Racine Transit and Parking Commission. However, the Racine Common Council has the ultimate responsibility for review and approval of certain important matters, including the annual program budget.

### Fixed-Route and Specialized Transit Services

During 1992, the City of Racine Belle Urban System consisted of 10 regular bus routes and

one lakefront shuttle route. The alignments of these bus routes are shown on Map 2 in Chapter II.

The Belle Urban System primarily serves the City of Racine. However, the Towns of Mt. Pleasant and Caledonia, the Village of Sturtevant, and the University of Wisconsin-Parkside in Kenosha County also are provided transit service on a contract basis through the extension of regular city routes or the operation of special contract bus routes. Of the 10 existing regular routes operated by the Belle Urban System, five, Routes No. 1 through 5, are crosstown in nature, with Route Nos. 1 through 4 traveling through the Racine central business district. Four additional routes, Routes No. 6 through 9, are oriented toward, or centered on, the central business district. The schedules of all eight routes which serve the central business district are designed so that buses from each route meet within approximately 10 minutes of each other, thereby allowing for convenient transfers. The remaining route in the system, Route No. 10, serves the Town of Caledonia and is operated as a large one-way loop which connects with Routes No. 2 and 4 at a transfer point at the Shorecrest Shopping Center in the northern part of the City of Racine.

Eight of the 10 regular bus routes, Routes No. 1 through 8, operate throughout the normal weekday and Saturday service day, which is from 5:30 a.m. until 7:00 p.m. on weekdays and from 7:00 a.m. until 6:00 p.m. on Saturdays. Route No. 9, which serves the University of Wisconsin-Parkside in the Town of Somers in Kenosha County, is operated between approximately 7:15 a.m. and 6:50 p.m. only on those weekdays when classes are in session at the University. Route No. 10, which serves the Town of Caledonia, is operated on weekdays from 5:45 a.m. until 10:10 a.m. and from 2:30 p.m. until 6:10 p.m. and on Saturdays from 9:30 a.m. until 5:00 p.m. Headways are 20 to 45 minutes on the regular bus routes during weekday morning and afternoon peak periods and 30 to 45 minutes during weekday off-peak periods and all day Saturday.

Another component of the Belle Urban System, the Lakefront Trolley shuttle bus, serves the central business district and the adjacent marina area between Memorial Day and Labor Day between 10:00 a.m. and 5:30 p.m. Monday through Friday, and 9:00 a.m. until 5:30 p.m. on Saturdays and Sundays,. The trolley is operated with 20-minute headways on weekdays and 10-minute headways on weekends. The trolley also operates between nine local restaurants on Thursday, Friday, and Saturday nights from 5:30 p.m. to midnight.

In addition to the standard fixed-route transit service, the transit system also provides a specialized transportation service designed to serve any disabled person who is unable to use the City's regular bus service due to the nature of a physical disability. The City of Racine provides funds to a specialized transportation program administered by the Racine County Human Services Department. To provide the service, the Racine County Human Services Department contracts with Laidlaw-Jelco, Inc.

Ridership

The Belle Urban System experienced steadily increasing transit ridership each year for the years 1975 through 1981. These increases may be attributed to new and expanded transit services, new operating equipment, stable passenger fares, and to the substantial increases in gasoline prices which occurred during this period. The transit system generally experienced a decline in ridership between 1982 and 1983. This decline may be attributed to increases in passenger fares, imposed because of the reductions in the number of students using the transit system, and a severe economic recession which resulted in high unemployment levels within the Racine area. Since 1984, ridership on the transit system has continued to decline steadily so that during 1992 the transit system carried about 1,821,000 revenue passengers, about 598,000, or about 25 percent, less than the 2,419,000 revenue passengers carried in 1981, the year in which system ridership peaked. Currently, Routes No. 1, 3, 4, and 7 are the most heavily used of the 10 regular routes in the transit system. The transit system operated about 1,257,000 revenue vehicle miles of service during 1992, about 232,000, 23 percent, more than the 1,025,000 revenue vehicle miles operated in the high-ridership year of 1981.

Financial Performance

Between 1987 and 1992, the total annual operating expenses for the transit system have increased by about 22 percent, from about $3,044,000 in 1987 to about $3,713,000 in 1992, and operating revenues have increased by about 24 percent, from about $703,000 in 1987 to approximately $874,000 in 1992. The operating

deficit has also increased substantially since 1987, from about $2,342,000 in 1987 to about $2,839,000 in 1992, an increase of about 21 percent. The City of Racine has managed to minimize the public funding requirement by using available Federal and State transit assistance funds. During 1992 about 24 percent of the transit system operating expenses were obtained from operating revenues, about 24 percent were obtained from the Federal transit operating assistance program, about 42 percent were obtained from the State transit assistance program, and the remaining 10 percent were obtained from the local units of government served by the transit system, including the City of Racine, the Village of Sturtevant, the Towns of Caledonia and Mt. Pleasant, and the University of Wisconsin-Parkside. The availability of Federal, State, and local funds from other public agencies has enabled the City to implement substantially the recommendations of the previous transit system development plan, completed in 1984.

Other Transit Services

In addition to the public transit services provided by the City of Racine, there are also other transit services provided within the study area or connecting with the Belle Urban System outside the study area. Local bus service connecting with the Belle Urban System outside the study area is provided by the City of Kenosha, which extends one route of its transit system to serve the University of Wisconsin-Parkside, where connections can be made to Route No. 9 of the Belle Urban System. Intercity bus service is provided through the study area principally by two private carriers, Wisconsin Coach Lines, Inc., and Greyhound Lines, Inc., which operate routes connecting Racine with Milwaukee, Kenosha, and Chicago. Through railway passenger service between Milwaukee and Chicago is also provided by the National Railway Passenger Corporation (Amtrak), with a stop in the Village of Sturtevant. The Racine Unified School District provides special school transportation for regular education within the study area to pupils who either reside within the School District two miles or more from the school they are entitled to attend or who would otherwise face hazardous walking conditions on their way to and from school. Also, several specialized transportation services intended to serve the needs of elderly and/or disabled individuals are provided within the study area, the principal sponsor of which is the Racine County Human Services Department, which contracts with Laidlaw-Jelco., Inc., to provide the specialized transportation services.

## LAND USE, SOCIO-ECONOMIC, AND TRAVEL CHARACTERISTICS OF THE STUDY AREA

Study Area

The study area considered in this report comprises the eastern portion of Racine County and includes the entire City of Racine, the Village of Sturtevant, and the Towns of Caledonia and Mt. Pleasant. Also included is the eastern one-third of the Towns of Raymond and Yorkville. The location of the study area within the Southeastern Wisconsin Region is shown on Map 1 in Chapter I. The study area includes the entire area served by the fixed-route bus system operated by the City of Racine in 1992.

Land Use

With respect to land use, historic urban development in the study area generally occurred in relatively tight, concentric rings outward from the center of the City of Racine until about 1950. After 1950, urban development became discontinuous and diffused throughout much of the study area. As shown on Map 7 in Chapter III, much of the land within the study area at the present time is still in open land uses, with substantial areas of high- and medium-density land uses capable of supporting traditional fixed-route transit services located primarily in the City of Racine and the Village of Sturtevant.

Population

The results of the 1990 Federal Census of Population indicate that the resident population of the City of Racine and of the study area has again begun to increase after experiencing a period of decline from 1970 until 1985. The resident population of the City and of the study area in 1985 was about 81,500 persons and 130,800 persons, respectively. By 1990, the resident populations for the City and the study area were estimated to have increased to 84,700 persons and 134,600 persons, respectively. While population levels within the City and the study area declined between 1970 and 1985, the number of households actually increased. The number of households within the City and the study area in 1990 was estimated at 31,800 households and 49,500 households, respectively.

Six population groups which typically exhibit high dependence on public transportation for mobility were identified within the study area: school-age children, the elderly, low-income families, minorities, the disabled, and persons residing in households with limited automobile availability. Identification of the place of residence of these groups within the study area from Federal census data indicated that except for school-age children, the highest concentrations were principally located within the older, intensively developed portions of the City of Racine, making this area one of high need for transit service.

Employment Characteristics

The estimated 1990 employment level in the study area was 67,500 jobs. About 36,800 jobs, or about 55 percent of the study area total, were located within the City of Racine. Employment in the study area increased significantly between 1970 and 1985 with employment increasing from about 56,300 to about 62,100 jobs, or by about 10 percent. In the City of Racine, however, employment actually decreased dramatically during this period, from about 40,600 to 32,900 jobs, or by about 19 percent. Between 1985 and 1990 employment in the City again increased by about 12 percent while employment in the study area increased by almost 9 percent.

The density of employment in the study area in 1990 is shown on Map 9 in Chapter III. Within the study area the most significant major concentrations in employment in 1990 were located in the City of Racine within areas containing one or more of the largest employment centers.

Major Traffic Generators

Also identified were the locations of major potential transit trip generators in the study area, including transit-dependent-population trip generators and major land use trip generators. The transit-dependent-population trip generators included facilities specifically serving, or frequently used by, elderly and/or disabled persons and persons residing in low income households. A high proportion of the person trips generated by such facilities would be expected to be made using public transit service if it is available. The major land use trip generators included six specific land uses: major retail and office centers, educational institutions, hospitals and medical centers, governmental and public institutional centers, major employment centers, and recreational areas. Such land uses attract a relatively large number of person trips and, therefore, have the potential to attract a relatively large number of transit trips. Identification of the locations of these potential transit trip generators indicates that the vast majority are concentrated in the densely developed eastern portion of the study area, primarily within the City of Racine.

Travel Habits and Patterns

Total Person Travel Characteristics: It is estimated that 515,000 person trips were made on an average weekday in 1991 to, or from, points internal to the study area. The greatest concentrations of internal trip ends were found within the Racine central business district and the Racine-West shopping area, which includes the Regency Mall, Regency Point, and High Ridge Mall shopping centers. The number of person trips using the City transit system on an average weekday in 1991, however, represented only about 6,400 of these trips, accounting for about 1.6 percent of all internal person trips within the study area.

Transit Person Travel Characteristics

An on-board bus survey was conducted on the Belle Urban System bus routes by the Regional Planning Commission on April 16 through 18, 1991, to ascertain the socio-economic and travel characteristics of the users of the City's transit system. The survey data collected indicated that the current transit users were predominantly female, 18 years of age and under, and without a valid driver's license. Transit riders were also found to come predominantly from households having three or more persons, with no automobile or only one automobile available and an annual income of less than $10,000. Similar survey data concerning the trip characteristics of the transit passengers indicated that the plurality of trips made on the transit system were school-based and home-based work trips, with about 32 and 25 percent, respectively, of all transit trips made for these two purposes. Some comments and suggestions were also received calling for expansion of the days and hours of transit system operation, reduction of operating headways, and improved on-time performance.

## TRANSIT SERVICE OBJECTIVES AND STANDARDS

A set of transit service objectives was developed to provide criteria in which the performance of the existing transit system could be assessed, alternative service options and plans could be designed and evaluated, and improvements could be recommended. Complementing each of the objectives is a planning principle and a set of service and design standards. Each set of standards is directly related to an objective and serves to facilitate quantitative application of the objectives in the evaluation of the performance of the existing transit system, to provide guidelines for the consideration of new or improved services, and to provide warrants for capital projects.

The specific objectives which were developed basically envision a transit system which will effectively serve the City while minimizing costs. More specifically, the following five objectives were adopted by the Racine Public Transit Planning Advisory Committee:

1. Public transit should be provided to those areas of the City and its immediate environs which can be efficiently served. This includes those areas which are fully developed to medium or high densities, and, in particular, areas with transit-dependent populations.

2. Specialized transportation service should be available within the transit service area to meet the transportation needs of those portions of the disabled population unable to avail themselves of fixed-route transit service.

3. The public transit system should promote effective utilization of public transit services and provide for user convenience, comfort, and safety.

4. The public transit system should promote efficiency in the total transportation system.

5. The transit system should be economical and efficient, meeting all other objectives at the lowest possible cost.

## TRANSIT SYSTEM PERFORMANCE EVALUATION

A performance evaluation of the Belle Urban System was conducted at two levels, using specific performance measures related to the attainment of key transit system objectives and standards. The two levels are systemwide performance evaluation and route performance evaluation.

### Systemwide Performance Evaluation

At the first level, an assessment of performance was made on a systemwide basis. This assessment examined the extent to which the transit system served the existing land use pattern and resident population of the City of Racine and environs, the overall ridership and financial performance of the transit system, and the transit system's contribution to the efficiency of the total transportation system. The conclusions reached from this systemwide performance assessment included:

1. The existing transit system provides excellent areal coverage of the existing residential areas and employment concentrations within the City of Racine, together with good coverage of the most densely populated residential areas and significant employment concentrations located adjacent to the City within the Towns of Caledonia and Mt. Pleasant and the Village of Sturtevant. In this respect, the transit system service area included virtually all of the resident population and jobs within the City, and about 84 and 80 percent of the total study area population and jobs, respectively.

2. The transit system provides good coverage of the existing major land use trip generators in the study area, serving 135 of the 157 trip generators identified. Of the 22 generators not considered as served, 19 are located outside the City of Racine, and, therefore, outside the primary service area of the transit system.

3. The transit system provides good areal coverage of the residential concentrations of transit-dependent population groups identified through 1990 U. S. Census data

and of the major transit-dependent-population trip generators identified in the study area, serving 67 of the 73 facilities identified. Disabled persons unable to use the existing fixed-route transit service are also provided with specialized door-to-door transportation service through the para-transit service provided by the transit system through the Racine County Human Services Department.

4. Concerning conformance with the para-transit service requirements of current Federal regulations implementing the Americans with Disabilities Act of 1990, the existing specialized transportation service provided by the transit system for individuals unable to use fixed-route transit service was found to be in conformance with all Federal requirements.

5. In terms of ridership and financial performance, the Belle Urban System compares favorably to other urban bus systems within Wisconsin. In this respect, the ridership and effectiveness levels of the Belle Urban System were found to be average to above average when compared to that for a comparable group of urban bus systems within Wisconsin during the period 1986 through 1990. The trends observed for the Belle Urban System with respect to operating expenses per vehicle mile and per vehicle hour, and farebox recovery rates also were found to compare favorably with the trends observed for the Statewide group of urban bus systems during this period. The trends observed for the Belle Urban System with respect to operating costs and deficits per passenger were, however, somewhat below those observed for the Statewide group of bus systems principally because of more substantial ridership declines experienced by the Belle Urban System over the period than for the Statewide group as a whole.

6. The overall energy efficiency of the City transit system in serving travel on an average weekday within the Racine area is higher than that of the private automobile. Consequently, the transit service provided by the system does reduce the use of petroleum-based motor fuel by Racine area residents on a daily basis.

7. The transit system contributes to efficiency of the transportation system by reducing peak-hour automobile traffic and the potential for congestion on streets within the Racine central business district.

Evaluation of Route Performance

The second part of the performance evaluation was an assessment of the performance of the regular routes of the transit system on the basis of their ridership, productivity, and financial performance. Further analyses of each route were then conducted to identify: the productive and nonproductive route segments, the operating headways and peak passenger loading characteristics, any problems with schedule adherence, the directness of route alignments, and the ability to conveniently accommodate transfers. The following conclusions were drawn from this assessment of route performance:

1. Seven of the 10 regular routes, Routes No. 1, 2, 3, 4, 5, 7, and 8, have weekday performance levels consistently above the specified minimum performance standard. The minimum performance standard is an average effectiveness level which is at least 80 percent of that for all regular routes. Based solely on their ridership and financial performance, these routes should continue to be operated without change.

2. Three of the 10 regular routes, Routes No. 6, 9, and 10, have weekday performance levels consistently below the specified performance standard. Service changes on these routes should be considered to increase efficiency.

3. At least one unproductive route segment was found on eight of the 10 regular bus routes. Of the 25 least productive route segments identified in the system, 17 were accounted for by Routes No. 6, 9, and 10, including all 12 segments on Route No. 10. This information should be viewed as an indicator of where routing changes should be considered in the current route structure. The two routes which did not contain any unproductive route segments were Routes No. 3 and 4.

4. As some bus routes must pass through areas of little residential development or few major trip generators in order to reach other residential areas or trip generators,

such bus routes must be expected to perform at somewhat lower levels of efficiency than other bus routes if the transit system is to continue to provide extensive areal coverage of the City of Racine and environs.

5. With the exception of Routes No. 5 and 8, the same regular routes perform above or below the specified minimum performance levels on Saturdays as on weekdays. The failure of Route No. 5 to achieve the specified minimum performance levels on Saturdays may be attributed to the significant numbers of route riders which uses Route No. 5 for school-related travel on weekdays and not on Saturdays. For Route No. 8, this would appear to be attributable to generally lower levels of Saturday ridership being generated by the land uses served by the route.

6. The existing headways operated on the regular routes of the transit system are capable of accommodating existing levels of passenger demand at the recommended load standards of 1.25 during peak periods and 1.00 during all other times. Headway reductions are, therefore, not needed on any routes. In only one case, Route No. 7 during the morning peak period, did the observed passenger loads result in load factors exceeding the maximum specified in the transit service standards. The next highest load factors, 1.12 and 1.07, were found on Routes No. 3 and 4, respectively, during the afternoon peak period. All other observed load factors were below 1.00.

7. An analysis of the potential impacts of eliminating the additional peak hour bus service on Routes No. 3, 4, and 7, thereby increasing headways on these routes from 20 to 30 minutes during peak periods, indicated that peak-period passenger loads and load factors could increase by an average of about 30 percent on these routes if headways were increased and passengers shifted to using other bus trips. Under these conditions, load factors on the vast majority of peak-period bus trips would probably not exceed the specified maximums and the City could possibly consider eliminating some or all of the additional peak-hour bus trips on these routes as an economy measure. However, before taking any action to reduce or eliminate peak-period bus trips on Routes No. 3, 4, and 7, the actual change in ridership on Route No. 2 which occurred after the elimination of the additional peak-period bus trips on this route in September 1992 should be considered. In this case, on the basis of passenger counts taken on Route No. 2 before and after the service change, it would appear that the passengers using the peak-hour bus trips which were eliminated did not shift to other bus trips on that route, as might be assumed, but rather were lost from the route ridership.

8. On the basis of random spot-checks of schedule adherence, the on-time performance of the existing transit system was found to be below the recommended performance level of 95 percent. To correct observed problems, the scheduled running time between stops should be reviewed, and possibly modified, to reflect the different passenger loading and traffic conditions which occur throughout the day and affect actual running time between stops.

9. The existing alignments of the bus routes of the transit system are relatively direct and result in only a minor amount of inconvenient travel for short trips, as well as most longer crosstown trips. However, the existing alignments of Routes No. 3 and 6 have sections that can result in a significant amount of inconvenience in travel for longer crosstown trips. In addition, the large one-way loop routing of Route No. 10 results in inconvenience for passengers traveling between points along the loop. Routes No. 3 and 6 should be reviewed to determine if it is possible to provide for more direct crosstown routing. Consideration should be given to restructuring Route No. 10 to provide for more lineal, two-way, routing over the most-productive route segments in order to reduce the inconvenience to passengers traveling along the existing loop segments.

10. Significant transfer movements were found to occur on weekdays between Routes No. 3 and 4, 1 and 5, 2 and 5, 2 and 3, and 2 and 4 and on Saturdays between Routes No. 3 and 4. However, the number of passengers making these transfer move-

ments were found to represent a relatively small proportion of the total ridership on the specified routes. Consequently, changes which would combine portions or segments of one route with portions or the whole of a different route were not found to be warranted.

Conclusions

The performance evaluation indicated that the existing transit system provides good areal coverage of the existing residential areas major trip generators and employment concentrations within the study area. The Belle Urban System was also found to compare favorably with similar transit systems in Wisconsin in terms of ridership and financial performance. However, the analyses indicated that changes in some bus routes should be considered to improve their individual performance as well as the overall performance of the transit system.

## THE RECOMMENDED TRANSIT SYSTEM DEVELOPMENT PLAN

### Recommended Fixed-Route and Paratransit Service

The recommended plan for the City of Racine's fixed-route transit service calls for a number of changes in the existing route alignments and schedules of the Belle Urban System, to be implemented as soon as possible in 1993. The recommended changes would eliminate or reduce service on existing route segments and bus trips with low ridership to better serve existing travel demand, and to modestly increase service area coverage. The recommended routing changes for 1993 and the resulting route structure were shown on Maps 28 and 29, respectively, in Chapter VI.

The recommended plan proposes that modifications to six of the 10 existing regular routes in the transit system plus the addition of a second route to provide service in the Town of Caledonia be implemented in 1993. The routing change proposed for Route No. 1 will extend service to an industrial park in the City of Racine and the Town of Mt. Pleasant by eliminating service over an unproductive route segment operated over STH 32. The routing changes proposed for Routes No. 2, 3, 4, and 6 will eliminate unproductive route segments over these routes in the Town of Mt. Pleasant and will provide for a north-south/east-west grid of bus routes serving the west side of the City of Racine. The changes to Routes No. 2, 3, and 4 should also allow for a more logical westward extension of these routes to serve areas which are expected to develop by the end of the planning period. A reduction in off-peak headways, from 30 to 60 minutes, proposed for Route No. 9 should improve route performance by reducing service during lower-ridership periods. Finally, by separating the existing Route No. 10 into two separate routes, a new Routes No. 10 and No. 11, transfer coordination with other city bus routes at the Shorecrest Shopping Center can be improved and the amount of service provided during midday periods can be increased.

The recommended plan also identifies additional routing adjustments and scheduling changes which may be warranted by 1997 if development in the study area continues to occur as envisioned by City staff at this time. The proposed 1997 route structure for the Belle Urban System was shown on Map 30 in Chapter VI. The major routing changes which may need to be considered by 1997 include: the extension of Route No. 1 into the Town of Caledonia to serve the area around the Green Tree Shopping Center; extensions of Route No. 2 to the north into the Town of Caledonia to serve the Olympia Brown School and Western Publishing Company along Erie Street, and to the west along 21st Street and Oakes Road to serve an area of potential industrial development; the extension of Route No. 3 to the west over 16th Street to serve J. I. Case High School and adjacent residential and commercial areas; and the extension of Route No. 4 westward over Washington Avenue and CTH H to serve the commercial office and industrial development which is expected to occur within this corridor. In addition, minor routing adjustments would be proposed for Routes No. 5 and 6 to compensate for routing changes made in Routes No. 1 and 3. Route No. 11 in the Town of Caledonia would be eliminated, since its most productive route segments would now be served by Routes No. 1 and 2 of the transit system. It was also proposed to make the service provided over Routes No. 9 and 10 more comparable to the service provided over the other routes of the transit system by extending days of operation for Route No. 9 to include weekdays outside of the fall, spring, and summer class sessions at the University of Wisconsin-Parkside. Finally, it was proposed to extend the weekday hours of operation for Route No. 10 to include the weekday midday period.

It is important to note while the 1997 element of the recommended plan proposes routing changes to extend transit service to developing areas, service to these areas would be warranted only if recent development trends in the study area continue and the areas are deemed to warrant transit service by local officials. Should development of these areas occur at a slower pace than currently envisioned, the additional service changes proposed for implementation by 1997 should not be implemented. The recommended 1993 transit system would then continue to be operated in these areas.

The recommended plan does not suggest any significant changes, as a result of the routing and service changes recommended for the City's fixed-route transit system, to the City's current public transit services for disabled persons. The City will, however, be able to begin providing mainline accessible bus service over the bus routes of the transit system as vehicles in its bus fleet become equipped with wheelchair lifts through either the remanufacture of older vehicles in the bus fleet or the purchase of new vehicles as called for under the recommended program of capital projects.

Projected Ridership

Projections of ridership and service levels for the recommended transit system over the period 1993 through 1997 were set forth in Table 51 in Chapter VI. For the purposes of preparing projections of ridership and financial requirements for the recommended transit system, it was assumed that the proposed 1993 routing and service changes would be implemented by the fall of 1993 and that continued development within the study area would warrant the implementation of all of the proposed service changes identified as potentially needed by 1997. With the implementation of all of the recommended transit service changes over the planning period, revenue vehicle miles of service would be expected to increase from about 1,221,000 revenue vehicle miles in 1993 to about 1,366,000 revenue vehicle miles in 1997, or by about 12 percent. Ridership levels on the transit system by 1997 would be expected to reach approximately 1,887,000 revenue passengers, an increase of about 3 percent over the projected 1993 level of 1,840,000 revenue passengers. The small change in ridership is attributable to proposed increases in passenger fares over the period, increasing the base adult cash fare from $0.60 per one-way trip in 1993 to $0.70 per one-way trip in 1994 and to $0.80 per one-way trip in 1996. Vehicle productivity may be expected to remain relatively stable over the planning period at about 18 passengers per revenue vehicle hour and about 1.5 passengers per revenue vehicle mile. Total annual ridership per capita may also be expected to remain stable at between 16 and 17 revenue passengers per capita.

Financial Projections and Sources of Funding

Projections of the operating expenses, revenues, deficits, and sources of subsidies for the recommended transit system were set forth in Table 52 in Chapter VI. Operating expenses for the recommended transit system in projected year of expenditure dollars[1] may be expected to increase

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[1] *The financial projections in year of expenditure dollars assume modest inflationary increases of about 4 percent annually in the unit cost of providing transit service, modest increases in passenger fares, and stable levels of Federal and State operating assistance. Financial projections for the recommended transit system were also prepared in constant 1993 dollars. These projections also assumed modest inflationary increases in operating expenses over the planning period, modest increases in passenger fares, and stable levels of Federal and State operating assistance funds. However, rather than inflating the operating expenses for the transit service, the constant dollar projections of transit system operating expenses were based on the projected 1993 unit costs of service for the entire planning period. The projected passenger revenues and Federal aid levels were reduced at the assumed rate of inflation to reflect a decrease in their actual dollar value in relation to the expenses which would be expected given the historic differential impact which general price inflation has had in the past on transit system operating expenses, total operating deficits, and local funding requirements. Under these assumptions, operating expenses for the recommended transit system would be expected to increase by about 6 percent over the period, from about $3,850,000 in 1993 to about $4,070,000 in 1997, because of the recommended increases in transit service. Operating revenues would be expected to increase by only about 2 percent over this period, from about $884,000 in 1993 to about $900,000 in 1997. As a result, the total system operating deficit would be expected to increase by about 7 percent, from about $2,967,000 in 1993 to about $3,170,000 in 1997. The total local operating subsidy for the transit system would be expected to increase by about 45 percent over the planning period, from about $519,000 in 1993 to about $750,000 in 1997.*

from about $3,850,000 in 1993 to about $4,737,000 in 1997, or by about 23 percent, because of the increase in service provided and the effects of general price inflation. Operating revenues of the transit system may be expected to increase by about 19 percent over the planning period, from about $884,000 in 1993 to about $1,053,000 in 1997, reflecting both the projected increases in ridership and in passenger fares. As a result, the total operating deficit for the recommended transit system may be expected to be about 24 percent higher by 1997 than in 1993, increasing from about $2,967,000 to about $3,684,000. The total local operating subsidy for the transit system may be expected to increase from about $518,000 in 1993 to about $864,000 by 1997, or by about 67 percent.

It is recommended that Federal and State funds be drawn upon to reduce the local financial commitment required for the implementation of the recommended service improvements and subsequent annual operation of the transit system. It is recommended that the City continue to use Federal transit operating assistance available under the FTA Section 9 formula transit assistance program to offset a portion of the annual operating deficit of the City of Racine Belle Urban System. Assuming that the amount of Federal transit operating assistance funds available to the City of Racine would remain stable at the current 1993 level of approximately $831,000, Federal operating assistance would be sufficient to cover about 28 percent of the total system operating deficit in 1993 and about 23 percent of the total system operating deficit in 1997. Assuming that the State transit operating assistance programs would continue to fund 42 percent of transit system operating expenses over the period, the State funds available to the Belle Urban System would be expected to increase from the 1993 level of $1,617,000 to about $1,990,000 in 1997, or about 55 and 54 percent of the total system operating deficit in 1993 and 1997, respectively. The use of available Federal and State operating assistance funds would result in a total local funding requirement for the recommended transit system which would range from about $519,000 in 1993 to about $864,000 in 1997, an increase of from about 17 percent of the total system operating deficit in 1993 to approximately 23 percent of the operating deficit in 1997.

It is also recommended that Federal transit assistance be obtained to offset a portion of the total expenditures for capital improvements identified for the recommended transit system during the planning period. The capital improvement projects required to fully implement the recommended plan were set forth in Table 53 in Chapter VI. The required capital improvement projects will include the replacement or remanufacture of between 26 and 28 of the 42 buses in the existing bus fleet; the acquisition of equipment for, and making needed modifications to, the Kentucky Street operating garage; the replacement and upgrading of existing computer equipment and software; and the acquisition of other operating and service equipment. The total cost of all recommended capital projects was estimated at between $4,781,000 and $4,922,300. Of this amount, some $3,825,000 to $3,938,000, or 80 percent, could potentially be funded through the Federal programs such as the Federal Transit Administration Section 3 discretionary or Section 9 Formula transit assistance programs or other flexible highway/transit funding programs authorized under the Intermodal Surface Transportation Efficiency Act of 1991. The remaining 20 percent of the total capital project costs, amounting to between $956,000 and $984,000, would have to be funded by the City of Racine. It should be noted that the availability of Federal transit capital assistance from these programs for the recommended transit system cannot be guaranteed. Limitations associated with these Federal transit capital assistance programs could require the Belle Urban System to delay implementation of some of the recommended capital projects, to modify the scope of the projects, or, possibly, to increase its local funding for the recommended capital projects.

Plan Implementation

The City of Racine would bear most of the responsibility for implementation of the recommended transit plan. Such responsibility would include: refining the recommended routing and service changes, determining the amount of funds from other local governments and public agencies served by the routes of the transit system which will be required, applying for Federal and State transit assistance funds, and satisfying the various administrative regulations associated with the receipt and use of

Federal transit assistance funds. Accordingly, it is recommended that the City adopt this transit system development plan and use it as a guide in formulating the actions needed for the plan's implementation.

The local governmental units and agencies which contract for transit service from the Belle Urban System, including the Towns of Mt. Pleasant and Caledonia, the Village of Sturtevant, and the University of Wisconsin-Parkside, must continue to provide local funds for the contract transit services to assure their continued operation. Racine County will also need to continue to provide the City of Racine with the option of providing paratransit service for disabled persons through the Racine County Human Services Department specialized transportation program. Finally, plan implementation actions will be required from the Southeastern Wisconsin Regional Planning Commission, from the U. S. Department of Transportation Federal Transit Administration, and from the Wisconsin Department of Transportation to ensure that Federal and State funds are available to support the implementation, and subsequent annual operation, of the recommended transit system.

## CONCLUSION

If adopted, the new transit system development plan for the Belle Urban System can serve as a valuable guide to the City for the upcoming five-year period. During this period, the transit system will have to be responsive to the changing development patterns and service needs of the City, while at the same time improving the effectiveness and efficiency of the public transit services provided. The plan is based upon extensive inventories and analyses of the socio-economic and land use characteristics of the Racine area, of the travel habits and patterns of the resident population, and of the operating and performance characteristics of the existing public transit system. The plan identifies existing problem areas on the public transit system as evidenced by low performance routes and unproductive route segments. The plan also recommends specific transit service improvement actions designed to be responsive to changing service needs within the City, while emphasizing the most cost-effective means of system operation. Implementation of the recommended transit system would concentrate available resources and capabilities on actions which will have the most significant positive impact on transit system performance, thus assuring the most effective use of limited public financial resources.

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# APPENDICES

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# Appendix A

## POPULATION CHARACTERISTICS FOR THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA FROM THE 1990 U. S. CENSUS

### Table A-1

### SELECTED POPULATION CHARACTERISTICS OF THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA AS APPROXIMATED BY CENSUS BLOCK GROUP

| Census Tract Number | Census Block Group Number | Total Block Group Population | Transit-Dependent Population[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | School-Age Children[b] | | Elderly[c] | | Minorities | | | | Persons in Low-Income Households[f] | |
| | | | | | | | Nonwhite[d] | | Hispanic[e] | | | |
| | | | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population |
| 1 | 1 | 475 | 36 | 7.6 | 167 | 35.2* | 113 | 23.8* | 19 | 4.0 | 174 | 36.6* |
| 2 | 3 | 1,226 | 201 | 16.4 | 165 | 13.5* | 390 | 31.8* | 57 | 4.6 | 213 | 17.4* |
| | 4 | 1,003 | 314 | 31.3* | 38 | 3.8 | 439 | 43.8* | 120 | 12.0* | 312 | 31.1* |
| | 5 | 1,096 | 85 | 7.8 | 38 | 3.5 | 537 | 49.0* | 73 | 6.7* | 189 | 17.2* |
| | 6 | 839 | 237 | 28.2* | 43 | 5.1 | 397 | 47.3* | 77 | 9.2* | 182 | 21.7* |
| | 7 | 1,102 | 324 | 29.4* | 31 | 2.8 | 628 | 57.0* | 172 | 15.6* | 466 | 42.3* |
| | 8 | 776 | 74 | 9.5 | 81 | 10.4 | 151 | 19.5* | 58 | 7.5* | 276 | 35.6* |
| 3 | 1 | 537 | 94 | 17.5 | 29 | 5.4 | 310 | 57.7* | 53 | 9.9* | 188 | 35.0* |
| | 2 | 1,177 | 404 | 34.3* | 50 | 4.2 | 1,047 | 89.0* | 56 | 4.8 | 683 | 58.0* |
| | 3 | 447 | 131 | 29.3* | 47 | 10.5 | 377 | 84.3* | 79 | 17.7* | 177 | 39.6* |
| | 5 | 968 | 280 | 28.9* | 42 | 4.3 | 874 | 90.3* | 156 | 16.1* | 509 | 52.6* |
| | 6 | 845 | 176 | 20.8* | 100 | 11.8 | 785 | 92.9* | 252 | 29.8* | 218 | 25.8* |
| 4 | 1 | 863 | 187 | 21.7* | 71 | 8.2 | 207 | 24.0* | 129 | 14.9* | 225 | 26.1* |
| | 2 | 181 | 66 | 36.5* | 14 | 7.7 | 174 | 96.1* | -- | -- | 58 | 32.0* |
| | 4 | 984 | 212 | 21.5* | 75 | 7.6 | 389 | 39.5* | 237 | 24.1* | 192 | 19.5* |
| | 5 | 1,355 | 370 | 27.3* | 71 | 5.2 | 975 | 72.0* | 267 | 19.7* | 645 | 47.6* |
| | 6 | 897 | 309 | 34.4* | 84 | 9.4 | 399 | 44.5* | 259 | 28.9* | 350 | 39.0* |
| | 7 | 681 | 225 | 33.0* | 32 | 4.7 | 596 | 87.5* | 272 | 39.9* | 359 | 52.7* |
| 5 | 3 | 992 | 247 | 24.9* | 116 | 11.7 | 838 | 84.5* | 115 | 11.6* | 245 | 24.7* |
| | 5 | 961 | 344 | 35.8* | 30 | 3.1 | 660 | 68.7* | 346 | 36.0* | 372 | 38.7* |
| | 6 | 1,236 | 251 | 20.3* | 68 | 5.5 | 934 | 75.6* | 64 | 5.2 | 477 | 38.6* |
| | 7 | 1,113 | 387 | 34.8* | 41 | 3.7 | 762 | 68.5* | 106 | 9.5* | 612 | 55.0* |
| | 8 | 918 | 258 | 28.1* | 57 | 6.2 | 711 | 77.5* | 144 | 15.7* | 293 | 31.9* |
| | 9 | 1,156 | 214 | 18.5 | 85 | 7.4 | 514 | 44.5* | 256 | 22.1* | 228 | 19.7* |
| 6 | 4 | 914 | 62 | 6.8 | 198 | 21.7* | 28 | 3.1 | 22 | 2.4 | 104 | 11.4* |
| | 5 | 1,042 | 244 | 23.4* | 99 | 9.5 | 46 | 4.4 | 23 | 2.2 | 75 | 7.2 |
| | 6 | 873 | 204 | 23.4* | 33 | 3.8 | 71 | 8.1 | 67 | 7.7* | 24 | 2.7 |
| | 7 | 533 | 24 | 4.5 | 132 | 24.8* | 37 | 6.9 | 16 | 3.0 | 67 | 12.6* |
| | 8 | 1,155 | 288 | 24.9* | 100 | 8.7 | 109 | 9.4 | 109 | 9.4* | 41 | 3.5 |
| | 9 | 1,451 | 360 | 24.8* | 77 | 5.3 | 111 | 7.6 | 62 | 4.3 | 163 | 11.2* |
| 7 | 1 | 1,268 | 266 | 21.0* | 178 | 14.0* | 168 | 13.2 | 91 | 7.2* | 110 | 8.7 |
| | 2 | 536 | 97 | 18.1 | 154 | 28.7* | 48 | 9.0 | 8 | 1.5 | 44 | 8.2 |
| | 3 | 1,310 | 141 | 10.8 | 299 | 22.8* | 154 | 11.8 | -- | -- | 28 | 2.1 |
| | 6 | 1,053 | 148 | 14.1 | 62 | 5.9 | 39 | 3.7 | 16 | 1.5 | 97 | 9.2 |
| | 7 | 918 | 183 | 19.9 | 105 | 11.4 | 103 | 11.2 | 111 | 12.1* | 43 | 4.7 |
| | 8 | 725 | 128 | 17.7 | 179 | 24.7* | 14 | 1.9 | 14 | 1.9 | 45 | 6.2 |
| 8 | 4 | 765 | 173 | 22.6* | 57 | 7.5 | 566 | 74.0* | 219 | 28.6* | 308 | 40.3* |
| | 5 | 861 | 129 | 15.0 | 155 | 18.0* | -- | -- | 5 | 0.6 | 11 | 1.3 |
| | 6 | 710 | 157 | 22.1* | 45 | 6.3 | 98 | 13.8 | 233 | 32.8* | 54 | 7.6 |
| | 7 | 815 | 121 | 14.8 | 146 | 17.9* | 123 | 15.1 | 99 | 12.1* | 32 | 3.9 |
| | 8 | 710 | 145 | 20.4* | 171 | 24.1* | 82 | 11.5 | 49 | 6.9* | 35 | 4.9 |
| | 9 | 792 | 152 | 19.2 | 67 | 8.5 | 236 | 29.8* | 21 | 2.7 | 26 | 3.3 |
| 9.01 | 1 | 1,288 | 328 | 25.5* | 145 | 11.3 | 208 | 16.1 | 148 | 11.5* | 98 | 7.6 |
| | 2 | 1,177 | 223 | 18.9 | 192 | 16.3* | 50 | 4.2 | 34 | 2.9 | 20 | 1.7 |
| | 4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 5 | 1,559 | 297 | 19.1 | 159 | 10.2 | 127 | 8.1 | 53 | 3.4 | 74 | 4.7 |
| 9.03 | 1 | 1,210 | 261 | 21.6* | 174 | 14.4* | 62 | 5.1 | 7 | 0.6 | 49 | 4.0 |
| | 2 | 1,108 | 250 | 22.6* | 159 | 14.4* | 396 | 35.7* | 108 | 9.7* | 228 | 20.6* |
| | 3 | 828 | 160 | 19.3 | 119 | 14.4* | 27 | 3.3 | 22 | 2.7 | -- | -- |
| | 4 | 918 | 135 | 14.7 | 88 | 9.6 | 28 | 3.1 | 7 | 0.8 | 16 | 1.7 |
| 9.04 | 1 | 1,188 | 288 | 24.2* | 61 | 5.1 | 239 | 20.1* | 10 | 0.8 | 42 | 3.5 |
| | 2 | 638 | 113 | 17.7 | 68 | 10.7 | 118 | 18.5* | 53 | 8.3* | 102 | 16.0* |
| | 3 | 1,216 | 183 | 15.0 | 281 | 23.1* | 102 | 8.4 | 10 | 0.8 | -- | -- |
| | 4 | 1,133 | 186 | 16.4 | 114 | 10.1 | 124 | 10.9 | -- | -- | 12 | 1.1 |

## Table A-1 (continued)

| Census Tract Number | Census Block Group Number | Total Block Group Population | Transit-Dependent Population[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | School-Age Children[b] | | Elderly[c] | | Minorities | | | | Persons in Low-Income Households[f] | |
| | | | | | | | Nonwhite[d] | | Hispanic[e] | | | |
| | | | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population |
| 10.01 | 1 | 811 | 179 | 22.1* | 169 | 20.8* | 8 | 1.0 | -- | -- | 82 | 10.1 |
| | 2 | 986 | 178 | 18.1 | 389 | 39.5* | 171 | 17.3* | -- | -- | 7 | 0.7 |
| | 3 | 1,078 | 169 | 15.7 | 134 | 12.4 | 444 | 41.2* | 40 | 3.7 | 351 | 32.6* |
| 10.02 | 1 | 732 | 95 | 13.0 | 85 | 11.6 | 75 | 10.2 | -- | -- | 56 | 7.7 |
| | 4 | 1,154 | 186 | 16.1 | 158 | 13.7* | 177 | 15.3 | 146 | 12.7* | 97 | 8.4 |
| | 5 | 1,065 | 184 | 17.3 | 173 | 16.2* | 52 | 4.9 | 47 | 4.4 | 99 | 9.3 |
| 10.03 | 2 | 1,751 | 340 | 19.4 | 250 | 14.3* | 48 | 2.7 | 19 | 1.1 | 54 | 3.1 |
| | 3 | 604 | 96 | 15.9 | 107 | 17.7* | 23 | 3.8 | 15 | 2.5 | 29 | 4.8 |
| | 4 | 743 | 157 | 21.1* | 102 | 13.7* | 29 | 3.9 | 17 | 2.3 | 23 | 3.1 |
| | 5 | 896 | 194 | 21.7* | 68 | 7.6 | 66 | 7.4 | 89 | 9.9* | 150 | 16.7* |
| 11 | 1 | 659 | 100 | 15.2 | 231 | 35.1* | 47 | 7.1 | 15 | 2.3 | 57 | 8.6 |
| | 3 | 1,142 | 194 | 17.0 | 254 | 22.2* | 29 | 2.5 | -- | -- | 18 | 1.6 |
| | 4 | 1,325 | 204 | 15.4 | 223 | 16.8* | 67 | 5.1 | 100 | 7.5* | -- | -- |
| | 6 | 998 | 217 | 21.7* | 134 | 13.4* | 26 | 2.6 | -- | -- | 8 | 0.8 |
| | 7 | 819 | 173 | 21.1* | 56 | 6.8 | 15 | 1.8 | -- | -- | 18 | 2.2 |
| | 8 | 842 | 132 | 15.7 | 93 | 11.0 | 73 | 8.7 | 6 | 0.7 | 32 | 3.8 |
| | 9 | 1,180 | 199 | 16.9 | 181 | 15.3* | 91 | 7.7 | 76 | 6.4* | 17 | 1.4 |
| 12.01 | 1 | 1,679 | 310 | 18.5 | 136 | 8.1 | 217 | 12.9 | 77 | 4.6 | 252 | 15.0* |
| | 2 | 777 | 88 | 11.3 | 66 | 8.5 | 146 | 18.8* | 54 | 6.9* | 149 | 19.2* |
| | 3 | 647 | 77 | 11.9 | 179 | 27.7* | 171 | 26.4* | 53 | 8.2* | 238 | 36.8* |
| | 4 | 728 | 157 | 21.6* | 67 | 9.2 | 7 | 1.0 | 7 | 1.0 | 12 | 1.6 |
| 12.02 | 1 | 798 | 179 | 22.4* | 87 | 10.9 | 48 | 6.0 | 7 | 0.9 | 21 | 2.6 |
| | 2 | 708 | 90 | 12.7 | 87 | 12.3 | 24 | 3.4 | 22 | 3.1 | 20 | 2.8 |
| | 3 | 1,140 | 236 | 20.7* | 66 | 5.8 | 380 | 33.3* | 258 | 22.6* | 376 | 33.0* |
| | 4 | 650 | 103 | 15.8 | 138 | 21.2* | 60 | 9.2 | -- | -- | 33 | 5.1 |
| | 5 | 326 | 54 | 16.6 | 43 | 13.2* | 36 | 11.0 | 49 | 15.0* | 11 | 3.4 |
| | 6 | 1,421 | 298 | 21.0* | 387 | 27.2* | 68 | 4.8 | 50 | 3.5 | 98 | 6.9 |
| | 7 | 1,279 | 285 | 22.3* | 258 | 20.2* | 19 | 1.5 | 73 | 5.7* | 14 | 1.1 |
| 13.01 | 1 | 1,055 | 146 | 13.8 | 197 | 18.7* | 16 | 1.5 | 5 | 0.5 | 30 | 2.8 |
| | 2 | 924 | 150 | 16.2 | 208 | 22.5* | -- | -- | 36 | 3.9 | 7 | 0.8 |
| | 3 | 732 | 163 | 22.3* | 67 | 9.2 | 57 | 7.8 | 6 | 0.8 | 91 | 12.4* |
| | 4 | 1,054 | 159 | 15.1 | 179 | 17.0* | 11 | 1.0 | 38 | 3.6 | 35 | 3.3 |
| 13.02 | 1 | 724 | 98 | 13.5 | 170 | 23.5* | 14 | 1.9 | -- | -- | -- | -- |
| | 2 | 846 | 163 | 19.3 | 59 | 7.0 | -- | -- | 26 | 3.1 | 89 | 10.5 |
| | 3 | 1,366 | 327 | 23.9* | 102 | 7.5 | 543 | 39.8* | 271 | 19.8* | 305 | 22.3* |
| | 4 | 733 | 137 | 18.7 | 143 | 19.5* | 78 | 10.6 | 24 | 3.3 | 168 | 22.9* |
| | 5 | 879 | 176 | 20.0 | 71 | 8.1 | 52 | 5.9 | 47 | 5.3 | 105 | 11.9* |
| 14 | 1 | 1,185 | 174 | 14.7 | 370 | 31.2* | 29 | 2.4 | 23 | 1.9 | 139 | 11.7* |
| | 2 | 634 | 132 | 20.8* | 102 | 16.1* | -- | -- | 35 | 5.5 | 8 | 1.3 |
| | 3 | 884 | 164 | 18.6 | 131 | 14.8* | 63 | 7.1 | 29 | 3.3 | 32 | 3.6 |
| | 5 | 1,078 | 272 | 25.2* | 115 | 10.7 | 113 | 10.5 | 17 | 1.6 | 130 | 12.1* |
| | 6 | 640 | 105 | 16.4 | 129 | 20.2* | 28 | 4.4 | -- | -- | 5 | 0.8 |
| | 7 | 767 | 64 | 8.3 | 231 | 30.1* | 12 | 1.6 | 16 | 2.1 | -- | -- |
| | 8 | 1,085 | 252 | 23.2* | 178 | 16.4* | -- | -- | -- | -- | 54 | 5.0 |
| | 9 | 933 | 114 | 12.2 | 170 | 18.2* | 112 | 12.0 | 25 | 2.7 | 35 | 3.8 |
| 15.01 | 1 | 1,376 | 350 | 25.4* | 42 | 3.1 | 25 | 1.8 | 20 | 1.5 | 6 | 0.4 |
| | 2 | 640 | 140 | 21.9* | 61 | 9.5 | 22 | 3.4 | 17 | 2.7 | 34 | 5.3 |
| | 3 | 1,815 | 515 | 28.4* | 10 | 0.6 | 19 | 1.0 | 33 | 1.8 | 18 | 1.0 |
| 15.02 | 1 | 816 | 139 | 17.0 | 135 | 16.5* | 12 | 1.5 | 16 | 2.0 | 15 | 1.8 |
| | 2 | 1,175 | 178 | 15.1 | 188 | 16.0* | 48 | 4.1 | 12 | 1.0 | 84 | 7.1 |
| | 3 | 1,211 | 219 | 18.1 | 87 | 7.2 | 15 | 1.2 | 25 | 2.1 | 32 | 2.6 |
| | 9 | 2,082 | 488 | 23.4* | 154 | 7.4 | 118 | 5.7 | 110 | 5.3 | 119 | 5.7 |
| 15.03 | 1 | 1,517 | 350 | 23.1* | 106 | 7.0 | 21 | 1.4 | -- | -- | 8 | 0.5 |
| | 4 | 1,122 | 184 | 16.4 | 265 | 23.6* | 38 | 3.4 | 11 | 1.0 | 173 | 15.4* |
| | 5 | 1,695 | 354 | 20.9* | 122 | 7.2 | 36 | 2.1 | 19 | 1.1 | 23 | 1.4 |
| | 6 | 1,359 | 298 | 21.9* | 199 | 14.6* | 522 | 38.4* | 134 | 9.9* | 372 | 27.4* |
| | 7 | 1,272 | 239 | 18.8 | 204 | 16.0* | 152 | 11.9 | 55 | 4.3 | 147 | 11.6* |

## Table A-1 (continued)

| Census Tract Number | Census Block Group Number | Total Block Group Population | Transit-Dependent Population[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | School-Age Children[b] | | Elderly[c] | | Minorities | | | | Persons in Low-Income Households[f] | |
| | | | | | | | Nonwhite[d] | | Hispanic[e] | | | |
| | | | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population | Number | Percent of Block Group Population |
| 16.01 | 1 | 526 | 126 | 24.0* | 71 | 13.5* | 18 | 3.4 | 17 | 3.2 | 40 | 7.6 |
| | 2 | 964 | 141 | 14.6 | 112 | 11.6 | -- | -- | 18 | 1.9 | 90 | 9.3 |
| | 3 | 504 | 55 | 10.9 | 70 | 13.9* | -- | -- | -- | -- | 9 | 1.8 |
| | 4 | 838 | 134 | 16.0 | 73 | 8.7 | 15 | 1.8 | -- | -- | 53 | 6.3 |
| | 5 | 1,242 | 208 | 16.7 | 71 | 5.7 | 47 | 3.8 | 48 | 3.9 | 8 | 0.6 |
| | 6 | 477 | 100 | 21.0* | 37 | 7.8 | 6 | 1.3 | -- | -- | 14 | 2.9 |
| | 7 | 553 | 136 | 24.6* | 34 | 6.1 | -- | -- | -- | -- | -- | -- |
| 16.02 | 1 | 1,375 | 312 | 22.7* | 108 | 7.9 | 23 | 1.7 | -- | -- | -- | -- |
| | 2 | 1,128 | 250 | 22.2* | 70 | 6.2 | 48 | 4.3 | 3 | 0.3 | 21 | 1.9 |
| 17.02 | 2 | 772 | 188 | 24.4* | 29 | 3.8 | 35 | 4.5 | 33 | 4.3 | 9 | 1.2 |
| | 4 | 1,128 | 219 | 19.4 | 95 | 8.4 | 22 | 2.0 | 36 | 3.2 | 83 | 7.4 |
| | 5 | 829 | 171 | 20.6* | 47 | 5.7 | 11 | 1.3 | 21 | 2.5 | 16 | 1.9 |
| | 9 | 1,257 | 302 | 24.0* | 107 | 8.5 | 45 | 3.6 | 43 | 3.4 | 76 | 6.0 |
| 17.03 | 3 | 427 | 75 | 17.6 | 105 | 24.6* | 5 | 1.2 | 5 | 1.2 | 17 | 4.0 |
| | 4 | 462 | 57 | 12.3 | 42 | 9.1 | -- | -- | 11 | 2.4 | 25 | 5.4 |
| | 5 | 826 | 256 | 31.0* | 33 | 4.0 | 5 | 0.6 | -- | -- | 30 | 3.6 |
| | 6 | 1,256 | 203 | 16.2 | 147 | 11.7 | 7 | 0.6 | -- | -- | -- | -- |
| 17.04 | 1 | 2,698 | 380 | 14.1 | 642 | 23.8* | 249 | 9.2 | 45 | 1.7 | 259 | 9.6 |
| | 2 | 1,258 | 232 | 18.4 | 88 | 7.0 | 57 | 4.5 | 57 | 4.5 | 51 | 4.1 |
| | 3 | 1,676 | 381 | 22.7* | 174 | 10.4 | 54 | 3.2 | -- | -- | -- | -- |
| | 4 | 1,713 | 221 | 12.9 | 368 | 21.5* | 55 | 3.2 | -- | -- | -- | -- |
| | 5 | 621 | 104 | 16.7 | 69 | 11.1 | -- | -- | 23 | 3.7 | -- | -- |
| | 8 | 331 | 66 | 19.9 | 40 | 12.1 | 25 | 7.6 | -- | -- | -- | -- |
| 18[g] | 1 | 531 | 104 | 19.6 | 41 | 7.7 | 10 | 1.9 | 0 | -- | 8 | 1.5 |
| | 2 | 519 | 107 | 20.6* | 40 | 7.7 | 11 | 2.1 | 5 | 1.0 | 32 | 6.2 |
| 19[g] | 1 | 809 | 314 | 38.8* | 87 | 10.8 | 25 | 3.1 | 11 | 1.4 | 18 | 2.2 |
| | 3 | 334 | 132 | 39.5* | 21 | 6.3 | 5 | 1.5 | 0 | -- | 20 | 6.0 |
| | 4 | 298 | 51 | 17.1 | 38 | 12.8* | 8 | 2.7 | 10 | 3.4 | 20 | 6.7 |
| Total | -- | 134,411 | 27,021 | 20.1 | 16,767 | 12.5 | 22,280 | 16.6 | 7,640 | 5.7 | 15,076 | 11.2 |

NOTE: An "*" indicates a census block group with an above average percentage of the transit-dependent population group.

[a] *All population figures are based upon census information derived from sample data. Similar information is presented by census tract in Table 13 in Chapter III.*

[b] *Ages five through 17 inclusive.*

[c] *Ages 65 and older.*

[d] *Includes persons of hispanic ethnic origin.*

[e] *Includes persons of all races.*

[f] *Represents persons residing in households with a total 1989 family income below Federal poverty thresholds. Poverty thresholds for families in 1989, as defined by the U. S. Bureau of the Census, are shown in Table A-2 of this appendix.*

[g] *Figures shown represent estimates for only that portion of the census tract within the study area.*

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

## Table A-2

## POVERTY THRESHOLDS IN 1989 BY SIZE OF FAMILY AND NUMBER OF RELATED CHILDREN UNDER 18 YEARS OF AGE

| 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) | $ 6,310 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Under 65 Years | 6,451 | $ 6,451 | -- | -- | -- | -- | -- | -- | -- | -- |
| 65 Years and Older | 5,947 | 5,947 | -- | -- | -- | -- | -- | -- | -- | -- |
| Two Persons | 8,076 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Householder under 65 Years | 7,343 | 8,303 | $ 8,547 | -- | -- | -- | -- | -- | -- | -- |
| Householder 65 Years and Older | 7,501 | 7,495 | 8,515 | -- | -- | -- | -- | -- | -- | -- |
| Three Persons | 9,885 | 9,699 | 9,981 | $ 9,990 | -- | -- | -- | -- | -- | -- |
| Four Persons | 12,674 | 12,790 | 12,999 | 12,575 | $12,619 | -- | -- | -- | -- | -- |
| Five Persons | 14,990 | 15,424 | 15,648 | 15,169 | 14,798 | $14,572 | -- | -- | -- | -- |
| Six Persons | 16,921 | 17,740 | 17,811 | 17,444 | 17,092 | 16,569 | $16,259 | -- | -- | -- |
| Seven Persons | 19,162 | 20,412 | 20,540 | 20,101 | 19,794 | 19,224 | 18,558 | $17,828 | -- | -- |
| Eight Persons | 21,328 | 22,830 | 23,031 | 22,617 | 22,253 | 21,738 | 21,084 | 20,403 | $20,230 | -- |
| Nine Persons or More | 25,480 | 27,463 | 27,596 | 27,229 | 26,921 | 26,415 | 25,719 | 25,089 | 24,933 | $23,973 |

*Source: U. S. Bureau of the Census.*

Table A-3

## DISTRIBUTION OF HOUSEHOLDS WITH NO AUTOMOBILE AVAILABLE IN THE RACINE TRANSIT SYSTEM DEVELOPMENT PLAN STUDY AREA AS APPROXIMATED BY CENSUS BLOCK GROUP: 1990

| Census Tract Number | Census Block Group Number | Households[a] | | |
|---|---|---|---|---|
| | | Block Group Total | With No Automobile Available | |
| | | | Number | Percent of Block Group Households |
| 1 | 1 | 337 | 211 | 62.6* |
| 2 | 3 | 472 | 46 | 9.7 |
| | 4 | 318 | 21 | 6.6 |
| | 5 | 314 | 82 | 26.1* |
| | 6 | 358 | 74 | 20.7* |
| | 7 | 372 | 91 | 24.5* |
| | 8 | 426 | 47 | 11.0* |
| 3 | 1 | 168 | 57 | 33.9* |
| | 2 | 297 | 137 | 46.1* |
| | 3 | 165 | 75 | 45.5* |
| | 5 | 291 | 76 | 26.1* |
| | 6 | 287 | 68 | 23.7* |
| 4 | 1 | 317 | 65 | 20.5* |
| | 2 | 61 | 16 | 26.2* |
| | 4 | 360 | 76 | 21.1* |
| | 5 | 397 | 134 | 33.8* |
| | 6 | 254 | 105 | 41.3* |
| | 7 | 190 | 47 | 24.7* |
| 5 | 3 | 331 | 73 | 22.1* |
| | 5 | 268 | 86 | 32.1* |
| | 6 | 314 | 106 | 33.8* |
| | 7 | 304 | 168 | 55.3* |
| | 8 | 403 | 113 | 28.0* |
| | 9 | 396 | 92 | 23.2* |
| 6 | 4 | 363 | 14 | 3.9 |
| | 5 | 391 | 13 | 3.3 |
| | 6 | 320 | 36 | 11.3* |
| | 7 | 312 | 93 | 29.8* |
| | 8 | 389 | 22 | 5.7 |
| | 9 | 504 | 80 | 15.9* |
| 7 | 1 | 520 | 71 | 13.7* |
| | 2 | 219 | 21 | 9.6 |
| | 3 | 508 | 34 | 6.7 |
| | 6 | 458 | -- | -- |
| | 7 | 379 | 13 | 3.4 |
| | 8 | 317 | 30 | 9.5 |
| 8 | 4 | 266 | 32 | 12.0* |
| | 5 | 338 | 24 | 7.1 |
| | 6 | 269 | 34 | 12.6* |
| | 7 | 299 | 12 | 4.0 |
| | 8 | 300 | 50 | 16.7* |
| | 9 | 237 | -- | -- |
| 9.01 | 1 | 487 | 42 | 8.6 |
| | 2 | 494 | 30 | 6.1 |
| | 4 | -- | -- | -- |
| | 5 | 552 | 18 | 3.3 |
| 9.03 | 1 | 444 | 16 | 3.6 |
| | 2 | 480 | 157 | 32.7* |
| | 3 | 281 | 6 | 2.1 |
| | 4 | 294 | 4 | 1.4 |

Table A-3 (continued)

| Census Tract Number | Census Block Group Number | Households[a] | | |
|---|---|---|---|---|
| | | Block Group Total | With No Automobile Available | |
| | | | Number | Percent of Block Group Households |
| 9.04 | 1 | 395 | 12 | 3.0 |
| | 2 | 295 | 30 | 10.2 |
| | 3 | 308 | - - | - - |
| | 4 | 379 | - - | - - |
| 10.01 | 1 | 368 | 80 | 21.7* |
| | 2 | 306 | 76 | 24.8* |
| | 3 | 449 | 126 | 28.1* |
| 10.02 | 1 | 304 | 26 | 8.6 |
| | 4 | 422 | 23 | 5.5 |
| | 5 | 407 | 23 | 5.7 |
| 10.03 | 2 | 705 | 37 | 5.2 |
| | 3 | 246 | 26 | 10.6* |
| | 4 | 301 | 20 | 6.6 |
| | 5 | 304 | 46 | 15.1* |
| 11 | 1 | 357 | 58 | 16.2* |
| | 3 | 466 | 26 | 5.6 |
| | 4 | 493 | - - | - - |
| | 6 | 357 | - - | - - |
| | 7 | 318 | 7 | 2.2 |
| | 8 | 292 | - - | - - |
| | 9 | 450 | 38 | 8.4 |
| 12.01 | 1 | 739 | 79 | 10.7* |
| | 2 | 354 | 72 | 20.3* |
| | 3 | 314 | 106 | 33.8* |
| | 4 | 286 | 19 | 6.6 |
| 12.02 | 1 | 294 | 9 | 3.1 |
| | 2 | 238 | 7 | 2.9 |
| | 3 | 401 | 84 | 20.9* |
| | 4 | 260 | 24 | 9.2 |
| | 5 | 129 | - - | - - |
| | 6 | 490 | 42 | 8.6 |
| | 7 | 514 | 8 | 1.6 |
| 13.01 | 1 | 441 | 24 | 5.4 |
| | 2 | 381 | 43 | 11.3* |
| | 3 | 290 | 10 | 3.4 |
| | 4 | 448 | 17 | 3.8 |
| 13.02 | 1 | 293 | 8 | 2.7 |
| | 2 | 318 | 47 | 14.8* |
| | 3 | 490 | 107 | 21.8* |
| | 4 | 291 | 60 | 20.6* |
| | 5 | 370 | 37 | 10.0 |
| 14 | 1 | 559 | 99 | 17.7* |
| | 2 | 235 | 8 | 3.4 |
| | 3 | 379 | 34 | 9.0 |
| | 5 | 367 | 33 | 9.0 |
| | 6 | 279 | 8 | 2.9 |
| | 7 | 366 | 29 | 7.9 |
| | 8 | 388 | 26 | 6.7 |
| | 9 | 408 | - - | - - |

Table A-3 (continued)

| Census Tract Number | Census Block Group Number | Households[a] | | |
|---|---|---|---|---|
| | | | With No Automobile Available | |
| | | Block Group Total | Number | Percent of Block Group Households |
| 15.01 | 1 | 382 | 5 | 1.3 |
| | 2 | 244 | 13 | 5.3 |
| | 3 | 463 | - - | - - |
| 15.02 | 1 | 270 | 4 | 1.5 |
| | 2 | 412 | 4 | 1.0 |
| | 3 | 430 | 16 | 3.7 |
| | 9 | 681 | 17 | 2.5 |
| 15.03 | 1 | 482 | - - | - - |
| | 4 | 316 | 4 | 1.3 |
| | 5 | 579 | - - | - - |
| | 6 | 682 | 123 | 18.0* |
| | 7 | 418 | 25 | 6.0 |
| 16.01 | 1 | 191 | - - | - - |
| | 2 | 310 | 5 | 1.6 |
| | 3 | 184 | - - | - - |
| | 4 | 282 | - - | - - |
| | 5 | 423 | 7 | 1.7 |
| | 6 | 158 | - - | - - |
| | 7 | 194 | - - | - - |
| 16.02 | 1 | 456 | 10 | 2.2 |
| | 2 | 344 | - - | - - |
| 17.02 | 2 | 270 | 4 | 1.5 |
| | 4 | 353 | 14 | 4.0 |
| | 5 | 313 | 19 | 6.1 |
| | 9 | 445 | 17 | 3.8 |
| 17.03 | 3 | 150 | - - | - - |
| | 4 | 186 | 9 | 4.8 |
| | 5 | 288 | 9 | 3.1 |
| | 6 | 432 | 9 | 2.1 |
| 17.04 | 1 | 1,327 | 177 | 13.3* |
| | 2 | 504 | 20 | 4.0 |
| | 3 | 614 | 6 | 1.0 |
| | 4 | 688 | - - | - - |
| | 5 | 201 | - - | - - |
| | 8 | 125 | - - | - - |
| 18[b] | 1 | 161 | - - | - - |
| | 2 | 196 | - - | - - |
| 19[b] | 1 | 276 | - - | - - |
| | 3 | 106 | - - | - - |
| | 4 | 99 | 5 | 5.1 |
| Total | - - | 49,700 | 5,134 | 10.3 |

NOTE: An "*" indicates a census block group with an above average percentage of households with no automobile available.

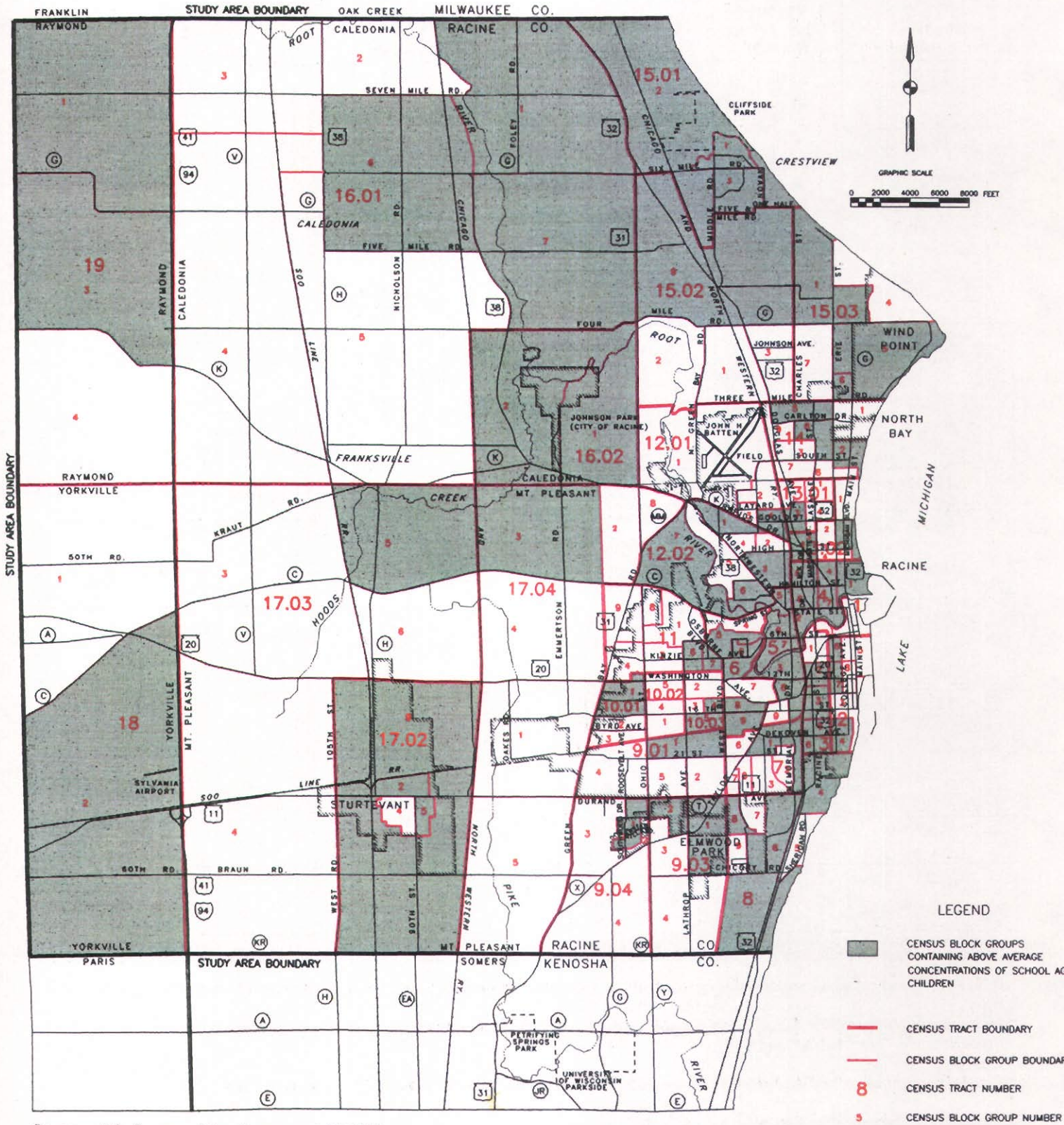
[a] *All household figures are based upon census information derived from sample data. Similar information is presented by census tract in Table 14 in Chapter III.*

[b] *Figures shown represent estimates for only that portion of the census tract within the study area.*

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

## Map A-1

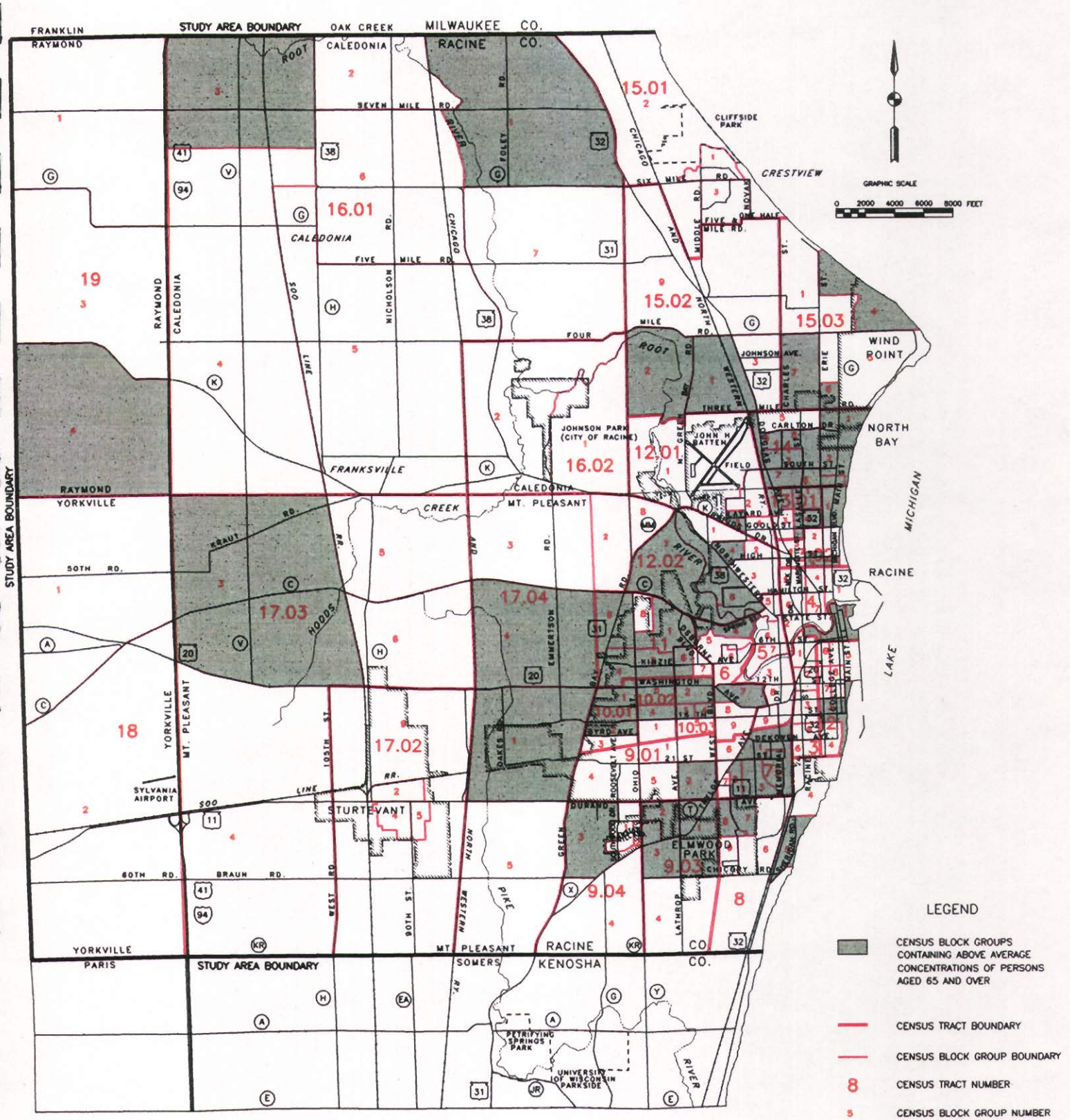
## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF SCHOOL-AGE CHILDREN: 1990




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

Map A-2

## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF ELDERLY PERSONS: 1990




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

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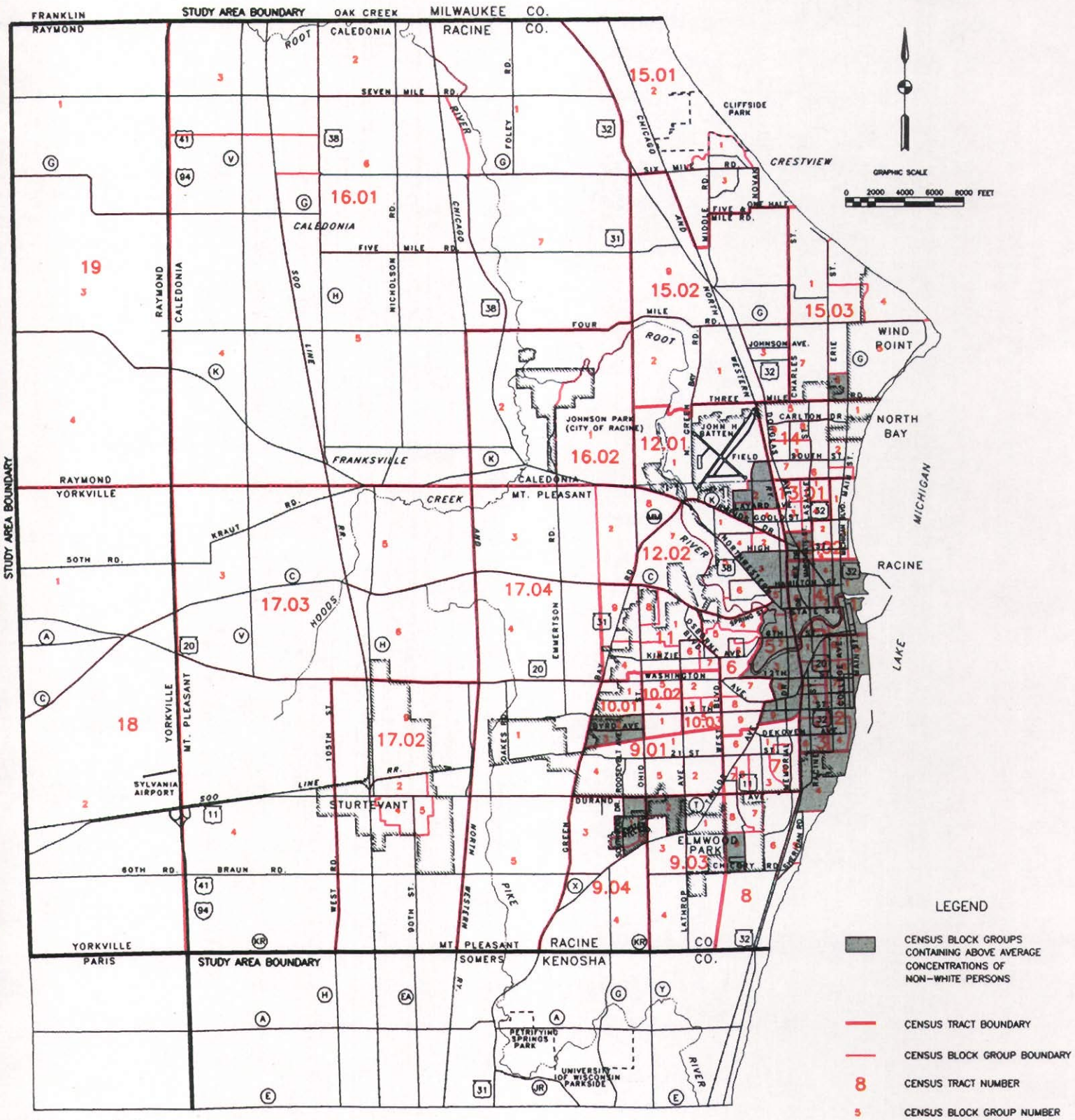
Map A-3

## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF NONWHITE PERSONS: 1990




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

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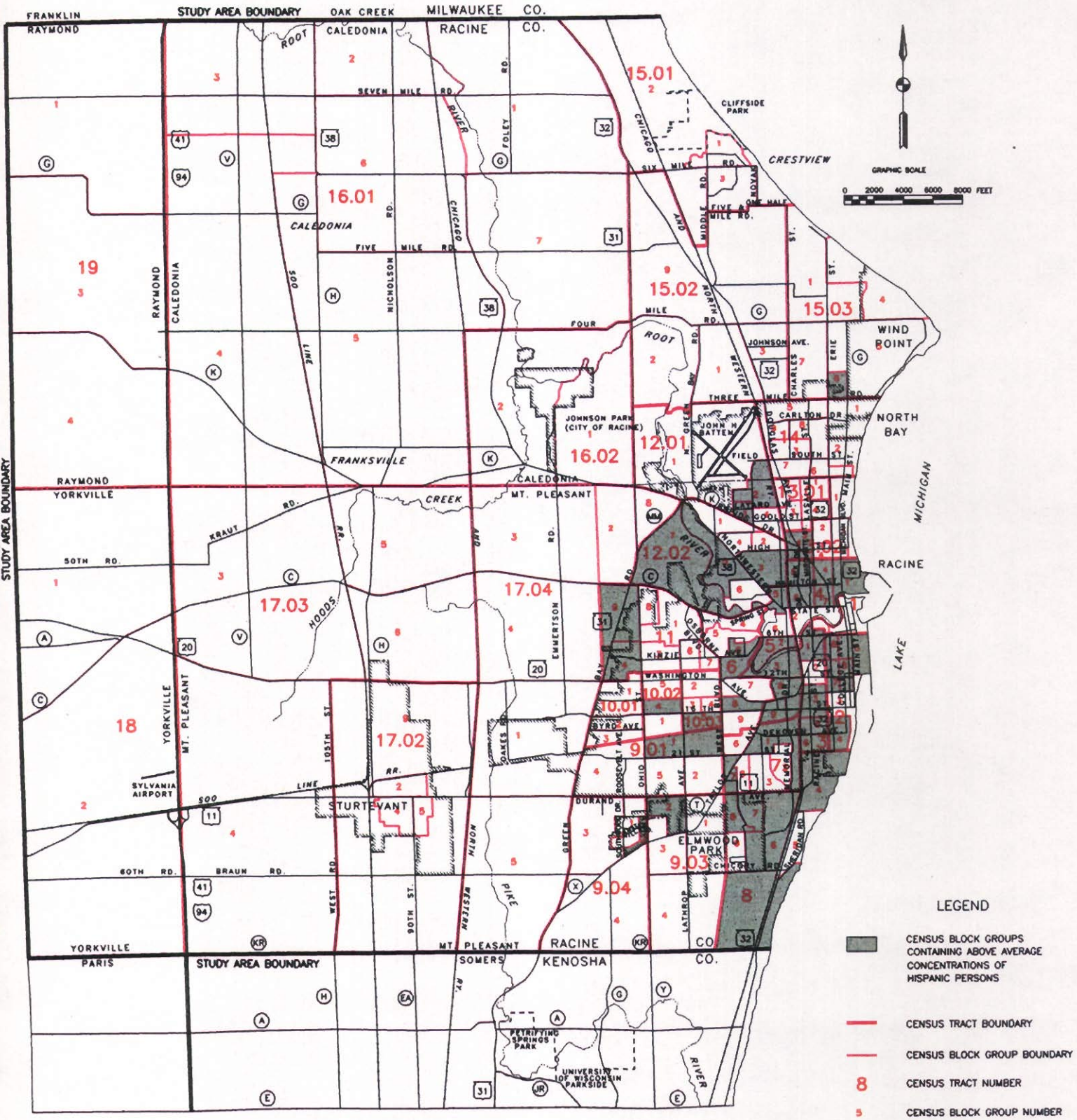
## Map A-4

## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF HISPANIC PERSONS: 1990




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

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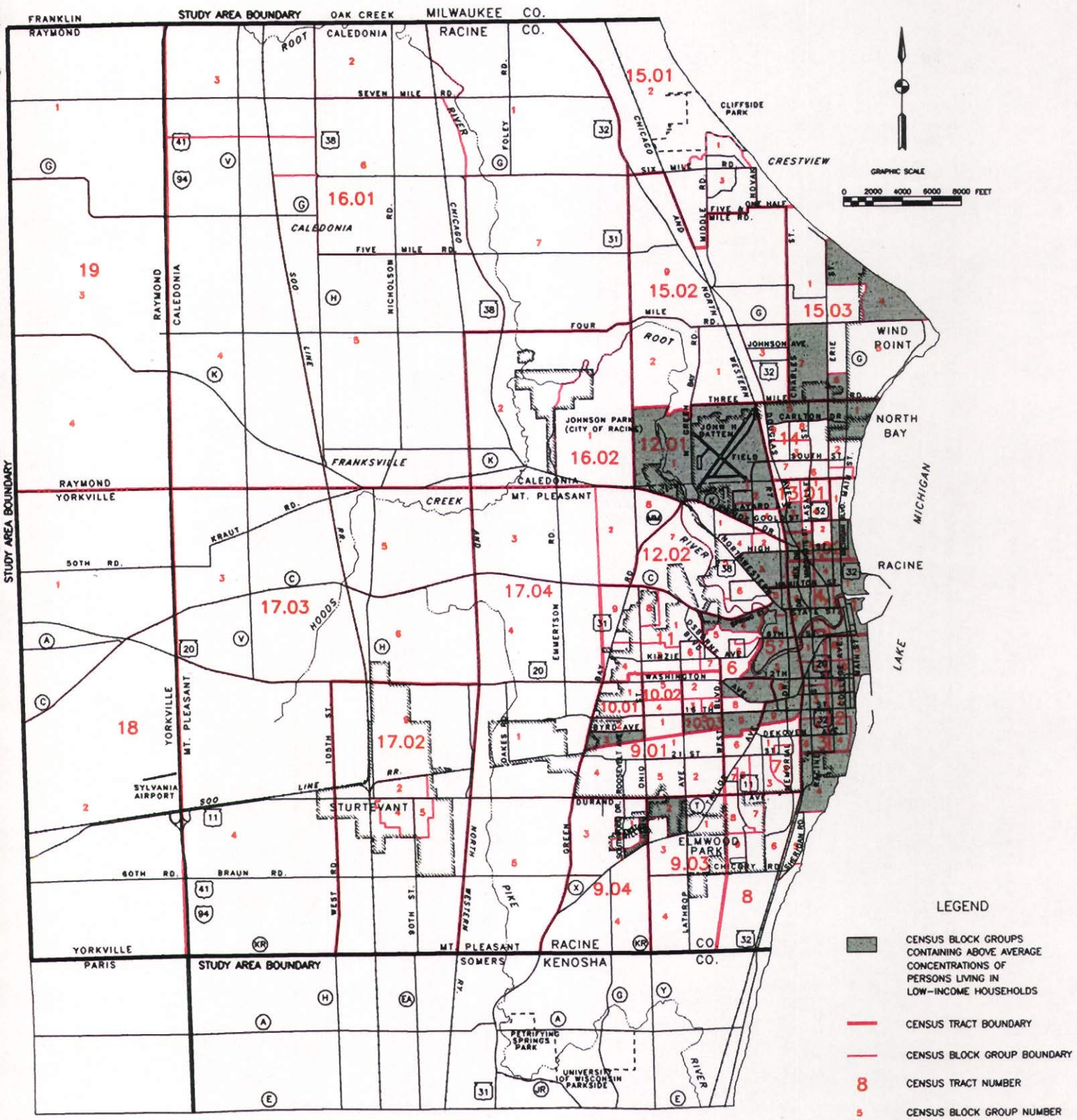
## Map A-5

## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF PERSONS RESIDING IN LOW-INCOME HOUSEHOLDS: 1990




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

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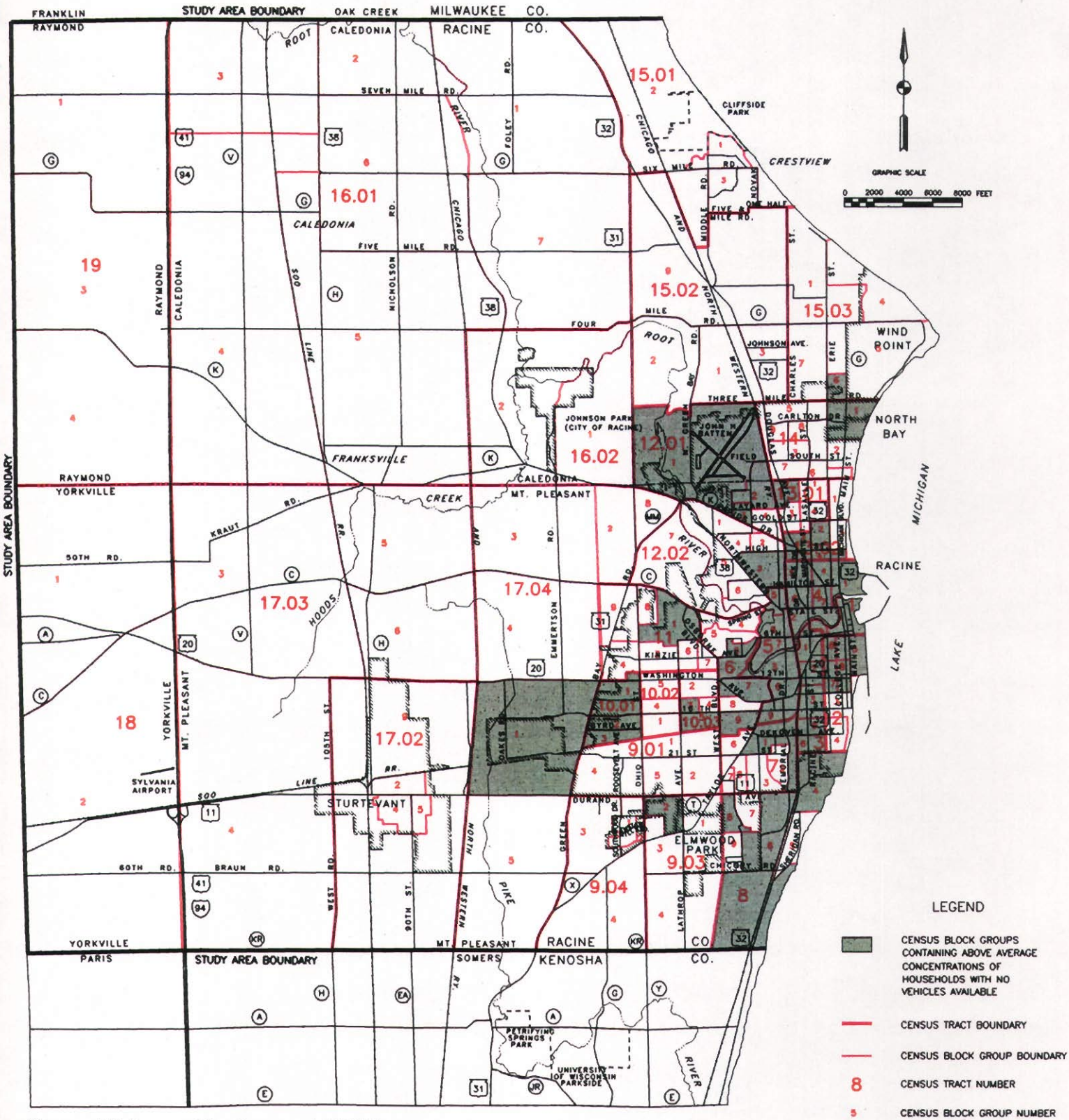
Map A-6

## LOCATION OF CENSUS BLOCK GROUPS CONTAINING ABOVE AVERAGE CONCENTRATIONS OF HOUSEHOLDS WITH NO VEHICLE AVAILABLE: 1990




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

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# Appendix B

# RACINE BELLE URBAN SYSTEM USER SURVEY FORM

## Figure B-1

## SURVEY FORM DISTRIBUTED ON ALL BUS ROUTES

Please Complete and Return on Bus, or Deposit in Any U. S. Mailbox

**PUBLIC TRANSPORTATION SURVEY**

This study of transit riding is being conducted in order to plan better public transportation in your area. Your cooperation is essential. All replies will be kept entirely confidential and will be used for statistical purposes only. When you have completed the card, please return it to the survey officer on the bus or deposit it in any U. S. mailbox. This survey is being conducted by the Southeastern Wisconsin Regional Planning Commission in cooperation with the U. S. Department of Transportation, the Wisconsin Department of Transportation, and the City of Racine.

Please Print Information

1. WHERE DID YOU GET ON THIS BUS?

_____
(name of stop or nearest street intersection)

2. WHAT TIME OF DAY WAS IT WHEN YOU GOT ON?

☐☐ : ☐☐ (enter time) AM ☐ PM ☐ (check one)

3. HOW DID YOU GET TO THE BUS STOP WHERE YOU GOT ON?

☐ Enter Number
1. Transfer from city bus Route No. _____
2. Walking
3. Private auto/truck
4. Other _____ (specify)

4. *HOW DID YOU PAY FOR YOUR TRIP?*

☐ Enter Number
1. In cash (give amount) _____ cents
2. By monthly pass
3. By student pass
4. By token
5. By free transfer

5. WHERE IS THE PLACE LOCATED FROM WHICH YOU BEGAN YOUR TRIP? ☐☐☐☐☐☐☐☐

_____
(nearest street intersection, building name, or street address) (city, village, or town)

6. WHAT WAS YOUR MAIN REASON FOR BEING AT THE PLACE WHERE YOU BEGAN YOUR TRIP? ☐ Enter number

1. Home
2. Work
3. School
4. Shopping
5. Social activity/eat meal
6. Recreational activity
7. Conducting personal business/medical/dentist
8. Other (specify) _____

7. I WILL GET OFF THIS BUS AT THE INTERSECTION OF: _____ and _____

8. WILL YOU TRANSFER TO ANOTHER CITY BUS TO COMPLETE THIS TRIP? (check one)

☐ Yes, I will transfer to: _____ (route no.) ; and get off at _____ (name of stop or street intersection)
☐ No, I will not transfer

9. WHERE IS THE PLACE LOCATED WHERE YOU ARE GOING? ☐☐☐☐☐☐☐☐

_____
(nearest street intersection, building name, or street address) (city, village, or town)

10. WHAT IS YOUR MAIN REASON FOR GOING THERE? ☐ Enter number

1. Home
2. Work
3. School
4. Shopping
5. Social activity/eat meal
6. Recreational activity
7. Conducting personal business/medical/dentist
8. Other (specify) _____

11. PLEASE INDICATE WHERE YOUR HOME RESIDENCE IS LOCATED. ☐☐☐☐☐☐☐☐

_____
(nearest street intersection, street name and hundred block, or street address) (city, village, or town)

12. IS THIS PART OF A ROUND TRIP BY BUS TODAY? (check yes or no)

☐ Yes If yes, what time did you, or will you, start your bus trip in the *opposite direction*? ☐☐ : ☐☐ (enter time) AM ☐ PM ☐ (check one)
☐ No

13. I AM A LICENSED DRIVER (check one).

☐ Yes ☐ No

14. I AM: (check one)

☐ Male ☐ Female

15. MY RACE IS:

☐ Enter Number
1. Black
2. White
3. American Indian/Alaskan
4. Asian/Pacific Islander
5. Other _____

16. OUR HOUSEHOLD HAS _____ VEHICLES AVAILABLE FOR PERSONAL USE

17. MY AGE IS:

☐ Enter Number
1. 5 or under
2. 6-12
3. 13-15
4. 16-18
5. 19-24
6. 25-34
7. 35-44
8. 45-54
9. 55-64
10. 65 and over

18. OUR HOUSEHOLD INCOME IS:

☐☐ Enter Number
1. Under $5,000
2. $5,000-$9,999
3. $10,000-$14,999
4. $15,000-$19,999
5. $20,000-$24,999
6. $25,000-$29,999
7. $30,000-$34,999
8. $35,000-$39,999
9. $40,000-$49,999
10. $50,000 or over

19. THE NUMBER OF PERSONS LIVING IN OUR HOUSEHOLD IS _____

20. WHAT SUGGESTIONS DO YOU HAVE FOR IMPROVING ROUTES OR SCHEDULES? _____

Thank you for your participation; your cooperation is greatly appreciated.

*Source: SEWRPC.*

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# Appendix C

# CHARACTERISTICS OF PASSENGERS ON THE BELLE URBAN SYSTEM REGULAR ROUTES, BASED ON SEWRPC ON-BUS SURVEY CONDUCTED APRIL 16-18, 1991

Table C-1

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY SEX AND ROUTE: APRIL 16-18, 1991

| Regular Route | Percent of Ridership by Sex[a] | | |
|---|---|---|---|
| | Male | Female | Total |
| No. 1 | 35.7 | 64.3 | 11.0 |
| No. 2 | 42.0 | 58.0 | 11.5 |
| No. 3 | 35.3 | 64.7 | 17.3 |
| No. 4 | 42.1 | 57.9 | 17.2 |
| No. 5 | 36.9 | 63.1 | 10.2 |
| No. 6 | 32.5 | 67.5 | 6.7 |
| No. 7 | 39.1 | 60.9 | 15.1 |
| No. 8 | 27.3 | 72.7 | 6.4 |
| No. 9 | 37.1 | 62.9 | 3.9 |
| No. 10 | 54.7 | 45.3 | 0.7 |
| Average | 38.2 | 61.8 | 100.0 |

[a] *Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

Table C-2

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY RACE AND ROUTE: APRIL 16-18- 1991

| Regular Route | Percent of Ridership by Race[a] | | | | | |
|---|---|---|---|---|---|---|
| | Black | White | American Indian | Asian or Pacific Islander | Other | Total |
| No. 1 | 50.1 | 41.7 | 1.4 | 1.4 | 5.4 | 10.7 |
| No. 2 | 35.9 | 54.6 | 1.0 | 0.9 | 7.6 | 11.5 |
| No. 3 | 38.3 | 48.4 | 1.7 | 0.0 | 11.6 | 17.3 |
| No. 4 | 34.1 | 55.7 | 0.4 | 0.3 | 9.5 | 17.4 |
| No. 5 | 41.9 | 40.4 | 1.3 | 0.0 | 16.5 | 10.4 |
| No. 6 | 29.1 | 59.7 | 3.8 | 0.0 | 7.4 | 6.7 |
| No. 7 | 49.5 | 43.1 | 1.3 | 0.0 | 6.1 | 15.0 |
| No. 8 | 43.7 | 52.2 | 1.6 | 1.6 | 0.9 | 6.3 |
| No. 9 | 35.7 | 57.2 | 1.1 | 2.5 | 3.4 | 4.0 |
| No. 10 | 19.0 | 72.4 | 0.0 | 0.0 | 8.6 | 0.7 |
| Average | 39.9 | 49.8 | 1.3 | 0.4 | 8.6 | 100.0 |

[a] *Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

Table C-3

## PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY AGE AND ROUTE: APRIL 16-18, 1991

| Regular Route | Percent of Ridership by Age Group[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 6-12 | 13-15 | 16-18 | 19-24 | 25-34 | 35-44 | 45-54 | 55-64 | 65+ | Total |
| No. 1 | 0.9 | 7.0 | 13.8 | 15.8 | 21.6 | 22.9 | 6.8 | 5.4 | 6.0 | 10.7 |
| No. 2 | 4.5 | 11.4 | 16.2 | 17.2 | 19.8 | 13.2 | 5.2 | 5.8 | 6.7 | 11.5 |
| No. 3 | 3.2 | 20.4 | 22.5 | 15.5 | 23.1 | 10.0 | 3.3 | 0.3 | 1.6 | 17.5 |
| No. 4 | 2.9 | 18.1 | 17.2 | 15.0 | 18.6 | 13.3 | 3.9 | 4.3 | 6.6 | 17.5 |
| No. 5 | 1.0 | 7.8 | 44.9 | 13.9 | 13.6 | 7.1 | 6.4 | 4.5 | 0.8 | 10.0 |
| No. 6 | 0.0 | 4.3 | 22.0 | 11.9 | 25.3 | 13.1 | 6.7 | 9.0 | 7.6 | 6.6 |
| No. 7 | 2.7 | 12.1 | 18.6 | 20.2 | 22.3 | 9.1 | 5.6 | 3.7 | 5.7 | 15.2 |
| No. 8 | 0.0 | 8.2 | 8.8 | 21.4 | 26.0 | 16.1 | 3.1 | 5.5 | 11.0 | 6.3 |
| No. 9 | 0.0 | 1.2 | 11.7 | 34.9 | 23.2 | 12.0 | 7.0 | 1.2 | 8.8 | 3.9 |
| No. 10 | 27.3 | 5.5 | 9.1 | 3.6 | 16.4 | 18.2 | 10.9 | 7.3 | 1.8 | 0.6 |
| Average | 2.5 | 12.9 | 18.8 | 17.1 | 21.2 | 12.4 | 5.5 | 3.9 | 5.7 | 100.0 |

[a]*Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

Table C-4

## PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY FAMILY INCOME BY ROUTE: APRIL 16-18

| Regular Route | Percent of Ridership by Income Level[a] | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Under $5,000 | $5,000-$9,999 | $10,000-$14,999 | $15,000-$19,999 | $20,000-$24,999 | $25,000-$29,999 | $30,000 or More | Total |
| No. 1 | 19.2 | 20.5 | 13.4 | 14.3 | 10.1 | 4.7 | 17.8 | 10.9 |
| No. 2 | 18.0 | 15.3 | 13.6 | 5.5 | 12.4 | 9.9 | 25.2 | 11.8 |
| No. 3 | 18.6 | 24.8 | 13.0 | 6.3 | 6.1 | 8.1 | 23.1 | 16.3 |
| No. 4 | 23.4 | 18.1 | 19.0 | 6.4 | 9.8 | 4.0 | 19.2 | 16.3 |
| No. 5 | 16.3 | 14.3 | 15.6 | 10.3 | 10.9 | 5.3 | 27.2 | 10.5 |
| No. 6 | 35.5 | 16.1 | 16.9 | 6.2 | 5.8 | 5.1 | 14.3 | 6.7 |
| No. 7 | 33.0 | 20.5 | 14.4 | 3.7 | 7.9 | 5.2 | 15.4 | 15.5 |
| No. 8 | 23.8 | 15.2 | 13.6 | 9.7 | 12.5 | 2.9 | 22.3 | 7.0 |
| No. 9 | 19.3 | 14.1 | 8.7 | 10.6 | 13.5 | 6.8 | 27.1 | 4.5 |
| No. 10 | 11.4 | 13.6 | 11.4 | 0.0 | 9.1 | 15.9 | 38.6 | 9.1 |
| Average | 22.3 | 18.5 | 14.6 | 7.4 | 9.2 | 6.0 | 22.1 | 100.0 |

[a]*Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revneue passengers.*

*Source: SEWRPC.*

Table C-5

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY VEHICLE AVAILABILITY BY ROUTE: APRIL 16-18, 1991

| Regular Route | Percent of Ridership by Number of Vehicles Available[a] | | | | |
|---|---|---|---|---|---|
| | None | One | Two | Three or More | Total |
| No. 1 | 40.0 | 31.4 | 20.6 | 8.0 | 11.0 |
| No. 2 | 29.4 | 38.2 | 23.4 | 9.1 | 11.6 |
| No. 3 | 35.8 | 30.6 | 23.5 | 10.1 | 17.2 |
| No. 4 | 35.4 | 31.8 | 23.9 | 8.9 | 16.9 |
| No. 5 | 23.5 | 23.3 | 33.9 | 19.2 | 10.5 |
| No. 6 | 43.6 | 22.1 | 23.2 | 11.1 | 7.0 |
| No. 7 | 37.2 | 33.5 | 17.8 | 11.5 | 14.9 |
| No. 8 | 42.2 | 27.3 | 21.8 | 8.8 | 6.3 |
| No. 9 | 29.2 | 31.6 | 20.8 | 18.4 | 4.0 |
| No. 10 | 11.3 | 39.6 | 34.0 | 15.1 | 0.6 |
| Average | 35.3 | 40.4 | 18.2 | 6.1 | 100.0 |

[a]*Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

Table C-6

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY HOUSEHOLD SIZE BY ROUTE: APRIL 16-18, 1991

| Regular Route | Percent of Ridership by Household Size[a] | | | | | | |
|---|---|---|---|---|---|---|---|
| | One Person | Two Persons | Three Persons | Four Persons | Five Persons | Six or More Persons | Total |
| No. 1 | 14.2 | 21.0 | 26.6 | 16.1 | 9.2 | 12.9 | 10.4 |
| No. 2 | 16.8 | 18.1 | 21.6 | 21.6 | 10.5 | 11.3 | 11.6 |
| No. 3 | 8.4 | 15.3 | 18.6 | 24.2 | 17.5 | 16.0 | 17.4 |
| No. 4 | 14.7 | 16.4 | 21.0 | 20.8 | 10.0 | 17.2 | 17.1 |
| No. 5 | 6.5 | 10.6 | 27.7 | 21.4 | 19.4 | 14.3 | 10.7 |
| No. 6 | 17.4 | 15.8 | 18.0 | 12.5 | 15.3 | 21.0 | 6.9 |
| No. 7 | 14.7 | 15.9 | 24.1 | 15.3 | 15.6 | 14.3 | 15.2 |
| No. 8 | 17.8 | 16.6 | 32.6 | 16.8 | 5.2 | 11.0 | 6.1 |
| No. 9 | 9.3 | 16.8 | 24.6 | 29.0 | 11.0 | 9.3 | 4.1 |
| No. 10 | 5.5 | 5.5 | 20.0 | 23.6 | 23.6 | 21.8 | 0.6 |
| Average | 13.6 | 16.5 | 22.5 | 20.1 | 13.6 | 13.8 | 100.0 |

[a]*Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

Table C-7

PERCENTAGE DISTRIBUTION OF RIDERSHIP ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM BY TRIP PURPOSE BY ROUTE: APRIL 16-18, 1991

| Regular Route | Percentage of Ridership by Trip Purpose[a] | | | | | |
|---|---|---|---|---|---|---|
| | Home-Based Work | Home-Based Shopping | Home-Based Other | Nonhome-Based | School | Total |
| No. 1 | 38.7 | 4.4 | 25.2 | 10.7 | 21.1 | 10.7 |
| No. 2 | 27.1 | 8.3 | 27.4 | 7.3 | 30.0 | 11.7 |
| No. 3 | 20.2 | 3.5 | 24.2 | 8.7 | 43.3 | 17.3 |
| No. 4 | 25.2 | 15.1 | 21.0 | 9.6 | 29.2 | 17.2 |
| No. 5 | 27.2 | 4.5 | 24.8 | 8.5 | 35.0 | 10.3 |
| No. 6 | 21.9 | 13.6 | 32.4 | 11.9 | 20.1 | 6.6 |
| No. 7 | 21.8 | 10.4 | 19.8 | 12.1 | 35.9 | 15.3 |
| No. 8 | 28.6 | 9.5 | 20.5 | 13.2 | 28.2 | 6.2 |
| No. 9 | 14.0 | 3.4 | 12.0 | 12.3 | 58.3 | 3.9 |
| No. 10 | 26.8 | 1.4 | 15.5 | 7.0 | 49.3 | 0.8 |
| Average | 25.0 | 8.6 | 23.3 | 10.6 | 32.5 | 100.0 |

[a]*Individual route percentages are based upon total route ridership, including transfer passengers. The regular route average percentage is based upon total revenue passengers.*

*Source: SEWRPC.*

## Appendix D

## GLOSSARY OF TECHNICAL TERMS

The following list provides definitions of certain technical terms used in this planning report. It should be recognized that while some of these terms may have different meanings when used in a study not related to transportation, or even slightly different meanings when used in other transportation studies, the definitions set forth herein are those used in the preparation of the transit system development plan for the City of Racine.

AVERAGE SPEED: The speed which a transit vehicle achieves between stops, including acceleration, deceleration, and dwell time.

CAPITAL EXPENSE: The outlay of funds for the acquisition of operating equipment and the construction of support facilities necessary to implement a particular plan or project.

CIRCULATION DISTRIBUTION SERVICE: Local public transit service provided for the movement of passengers within major urban activity centers.

CYCLE SCHEDULING: A scheduling technique for providing fixed-route urban public transit service under which the vehicles providing service meet at a common location at the same time, thus maximizing the opportunity for transfer of passengers between routes.

DEADHEAD: The movement of a revenue vehicle without passengers on board, such as from a storage area to the beginning of a regular route.

DEMAND-RESPONSIVE SERVICE: A range of local public transit services characterized by the flexible routing and scheduling of relatively small vehicles to provide shared-occupancy, door-to-door personalized transportation on demand.

DEPRECIATION EXPENSE: A portion of the original cost of capital facilities or equipment allocated to the annual cost of operation. Depreciation expenses are derived by spreading in some equitable manner the original cost of the facility or piece of equipment, less any salvage value, over the useful life of the facility or piece of equipment.

DISABLED PERSON: A person who, by reason of illness, injury, congenital malfunction, or other permanent or temporary incapacity or disability, is physically unable to use regular bus service.

ELDERLY PERSON: A person 65 years of age or older.

EXPRESS SERVICE: That component of the urban public transportation system which serves moderate-length trips, generally over arterial streets and highways, with limited stops located only at intersecting transit routes, intersecting arterial streets, and major traffic generators.

FAREBOX RECOVERY RATE: The ratio of revenues generated by passenger fares to operating expenses expressed as a percent.

FAREBOX REVENUE: See "Passenger Revenue."

FAR-SIDE STOP: A transit stop located on the far side of a street intersection, requiring the transit vehicle to cross the intersection before stopping to pick up or discharge passengers.

FIXED EXPENSE: A cost of providing transit service that remains relatively constant, irrespective of the level of operational activity.

FIXED-ROUTE: Refers to a transit service or system wherein buses or other vehicles operate over a predetermined route with specific stops or station locations and regular schedule.

GRID ROUTING: A routing technique for providing fixed-route urban transit service under which bus routes are laid out in a distinct grid or rectangular pattern, and do not focus on a single geographic location. Because passengers must transfer at route intersections, systems using grid routing usually must operate with a high level of service, that is, with short headways, to minimize waiting time.

HANDICAPPED PERSON: See "Disabled Person."

HEADWAY: The time interval between any two successive transit vehicles providing service on the same route in the same direction.

INCREMENTAL EXPENSE: The net difference in cost between two alternative plans or programs.

LEVEL OF SERVICE: A set of characteristics that indicate the quality and quantity of public transportation services being provided, including characteristics that are readily quantifiable, such as headway, travel time, travel cost, and number of transfers, and those that are difficult to quantify, such as comfort and modal image.

LOAD FACTOR: The ratio of passengers carried on a public transit vehicle to the seated capacity of the vehicle.

LOCAL SERVICE: That component of the urban public transportation system which serves the shortest trips and operates at lowest average speeds. Local transit services can provide a collection-circulation-distribution service for rapid or express transit services and include fixed-route, demand-responsive, and route-deviation transit services.

MAJOR TRAFFIC GENERATOR: A land use area or specific facility which attracts a high volume of person trips.

MASS TRANSPORTATION: See "Transit."

NEAR-SIDE STOP: A transit stop located on the near side of a street intersection, permitting the transit vehicle to pick up or discharge passengers before crossing the intersection.

NONCYCLE SCHEDULING: A scheduling technique for providing fixed-route urban public transit service under which each transit route in a community has transit service scheduled on an individual basis, independent of the schedules of other routes.

OPERATING DEFICIT: The operating expense less the operating revenue.

OPERATING EXPENSE: The sum of all transit system costs incurred in providing transportation and incidental services and in maintaining transit system equipment and property.

OPERATING REVENUE: Revenue derived from the provision of public transit service including: 1) fares paid by transit riders; 2) charter and special contract service revenues; and 3) revenues, for example, from the sale of advertising space aboard transit vehicles, income from concession rentals or from contract maintenance services.

OVERALL TRAVEL SPEED: The over-the-road travel distance divided by the overall travel time.

OVERALL TRAVEL TIME: The total door-to-door time for travel between the origin and destination of a trip, including all the major components of travel time which, for transit travel time, include walking or automobile access at origin, wait time for the first transit vehicle boarded, transfer time, total line-haul or in-vehicle time, and egress time at the destination.

PASSENGER REVENUE: Revenue derived from fares paid by passengers traveling aboard public transit vehicles operating in regular service.

PEAK PERIOD: The hours, usually during weekday mornings or afternoons, when the demand for transportation service is the heaviest.

PLATFORM HOURS: The total driver pay hours for a transit system, including time spent in scheduled revenue service, checkin and checkout time, deadhead time, guaranteed time, preparatory time, and penalty time.

PRIVATE PROVIDER: A privately owned entity that owns facilities and vehicles used to provide transit services.

PUBLIC PROVIDER: Any transit service provider not defined as a private provider.

PUBLIC TRANSIT: Transit systems and services that may be used by the general public and which are not restricted to use by specific population groups.

PULSE SCHEDULING: See "Cycle Scheduling."

RADIAL ROUTING: A routing technique for providing fixed-route urban transit service under which bus routes originate in outlying areas and converge on a central location, usually the central business district. The routes generally follow a radial street system and coincide with the locations of major travel corridors. Because routes focus on a central location, systems using radial routing frequently use cycle scheduling to provide for convenient transfers between routes.

RAPID TRANSIT SERVICE: That component of the urban public transportation system which provides the highest average speeds by generally operating over freeways, thus serving the longest trips along the most heavily traveled corridors, with stops generally limited to the ends of the route, including park-ride lots.

REVENUE PASSENGERS: Includes all boarding passengers who pay a fare, or for whom a fare is paid by another under contract or other special arrangement, for travel between a specific origin and destination; excludes boarding passengers who are not required to pay a fare or who are transferring to a different bus route to complete a trip started on another route.

REVENUE VEHICLE HOURS: The number of hours spent by transit vehicles in providing scheduled revenue transit service. Excludes all deadhead and driver time not spent in revenue service.

REVENUE VEHICLE MILES: The number of miles traveled by transit vehicles in providing scheduled revenue transit service. Excludes deadhead miles.

ROUTE DEVIATION SERVICE: A type of service which includes both fixed-route and demand-responsive elements in which buses provide service at regular intervals between checkpoints along an established route, but are permitted to deviate off the route between checkpoints to make doorstop pickups and drop-offs.

SEATED CAPACITY: The number of seated passengers capable of being carried in a transit vehicle.

SHARED-RIDE TAXICAB: A taxicab which is legally able to transport simultaneously passengers having different origins and destinations.

SMALL URBAN AREA: An area that includes a city or village having a population of at least 2,500, but not more than 49,999, persons.

SPECIALIZED TRANSIT: Transit systems and services that are designed for, and whose use is restricted to, specific subgroups of the general population, such as the elderly, disabled, and school children.

STOP: An area usually designated by distinctive signs or by curb or pavement markings at which passengers wait for, and board or alight from, public transit vehicles.

TERMINAL: The end of a transit route or an elaborate transit station which is designed to handle not only the movement of transit vehicles in the boarding and alighting of passengers, but also the transfer of movements between routes and/or different modes.

TOTAL EXPENSE: The sum of operating and capital costs.

TOTAL VEHICLE HOURS: See "Platform Hours."

TOTAL VEHICLE MILES: The total number of miles traveled by transit vehicles, including miles traveled in scheduled revenue service, deadhead miles, charter miles, and driver training miles.

TOTAL PASSENGERS: Includes all boarding passengers regardless of whether they paid a fare or transferred from another transit route.

TRANSFER TIME: The time required to effect a transfer between routes or a change of mode.

TRANSIT: A general term used to refer to any type of passenger transportation services and facilities both in urbanized areas and in outlying or rural areas surrounding urbanized areas. Transit services can include fixed-route bus systems, rail systems, demand-responsive services, specialized services for the elderly and disabled, and any other type of passenger transportation means.

TRANSIT-DEPENDENT PERSON: A person for whom the transit system is the principal means of mobility because of a lack of transportation options.

TRANSPORTATION DISABLED: See "Disabled Person."

TRIPPER SERVICE: Local public transit service operated over a limited the time period of each weekday and, in some cases, over a special route to accommodate peak ridership demand or to serve special community needs.

TRIP PURPOSE: The primary reason for making a trip, such as work, shopping, or personal business.

USER-SIDE SUBSIDY: Financial assistance provided directly to a transit user, usually in the form of a voucher from a local public body or sponsoring agency, for use in payment of a fare for a trip taken on a public transit system or specialized transit service.

URBANIZED AREA: An urban area officially designated by the U. S. Bureau of the Census which has a population concentration of at least 50,000 persons and which meets specific population density criteria. Urbanized areas generally consist of a central city and the surrounding, closely settled, contiguous suburbs.

VEHICLE CAPACITY: The maximum number of passengers that a vehicle is designed to accommodate comfortably, including both seated and standing passengers.

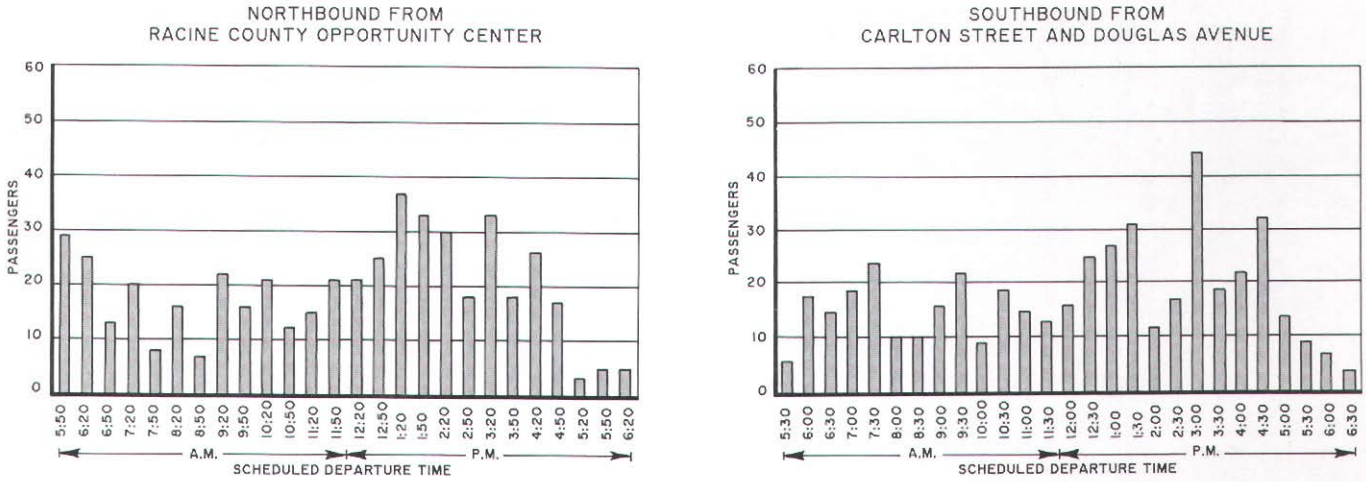
WAIT TIME: Time spent at a bus stop waiting for a transit vehicle.

# Appendix E

## WEEKDAY BOARDING PASSENGERS BY BUS RUN ON THE REGULAR ROUTES OF THE BELLE URBAN SYSTEM: APRIL 16-18, 1991

### Figure E-1

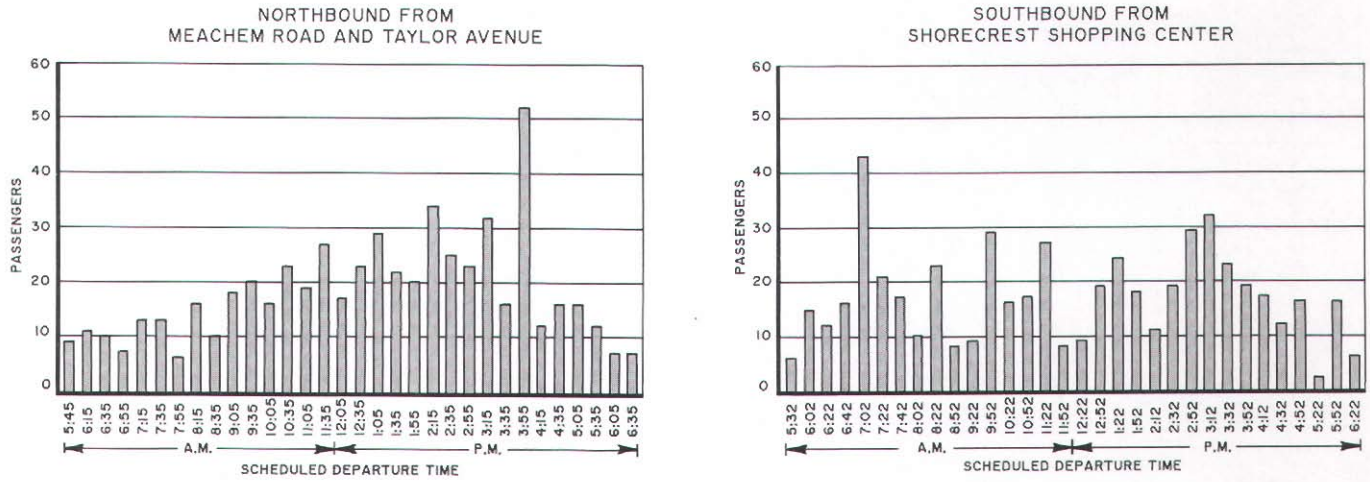
### WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 1




*Source: SEWRPC.*

### Figure E-2

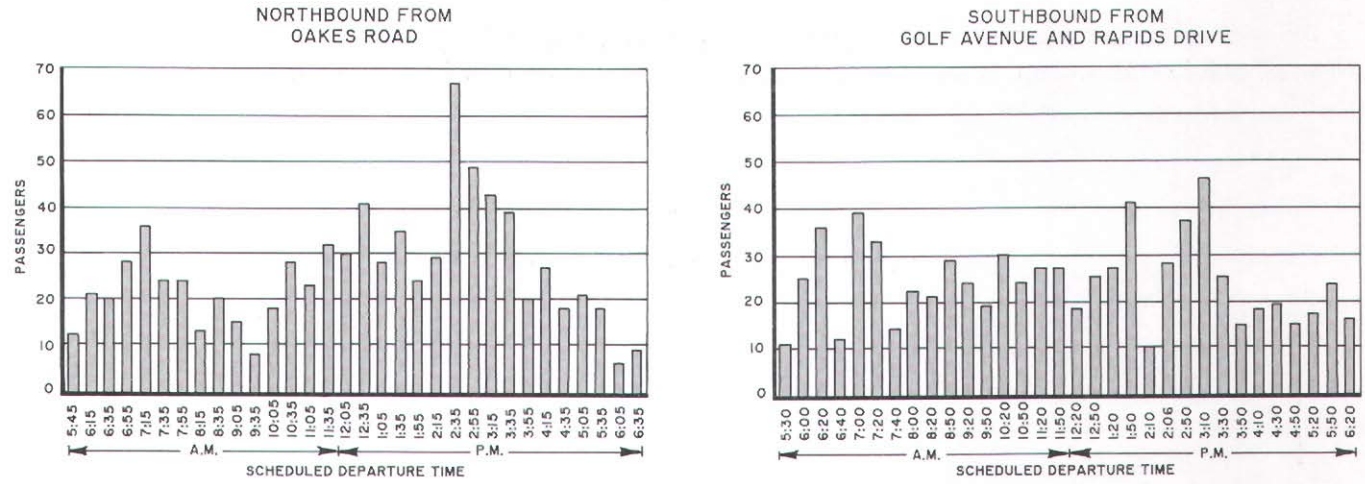
### WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 2




*Source: SEWRPC.*

Figure E-3

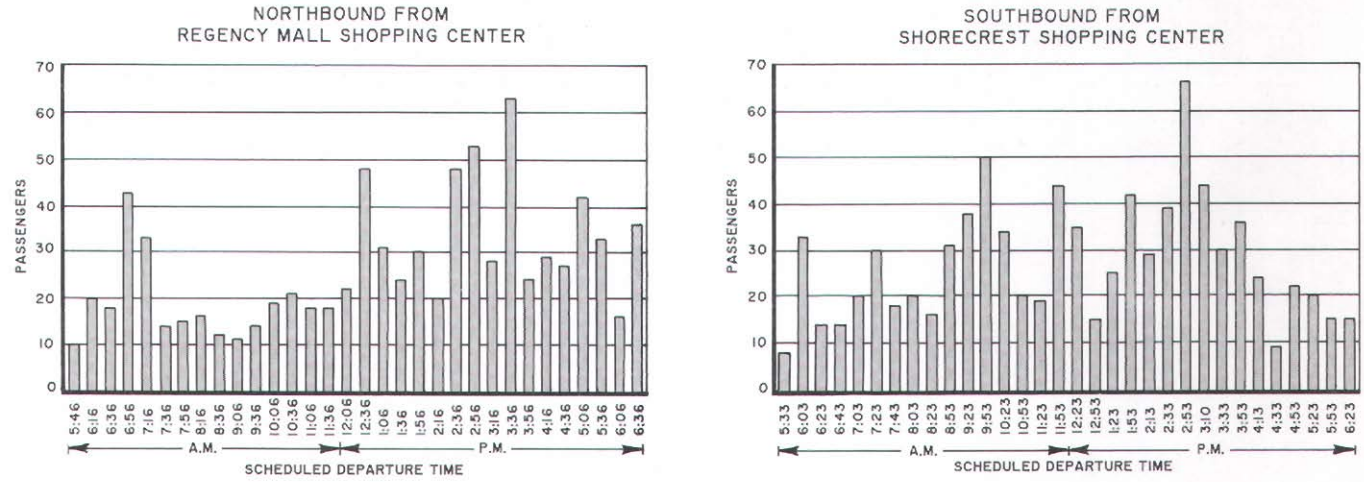
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 3




*Source: SEWRPC.*

Figure E-4

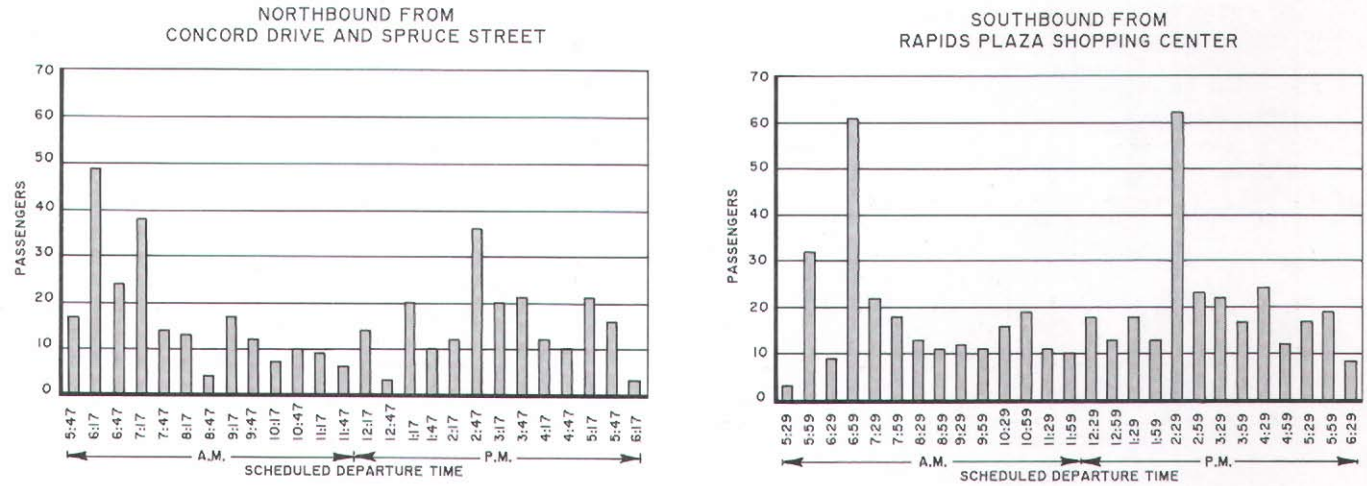
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 4




*Source: SEWRPC.*

Figure E-5

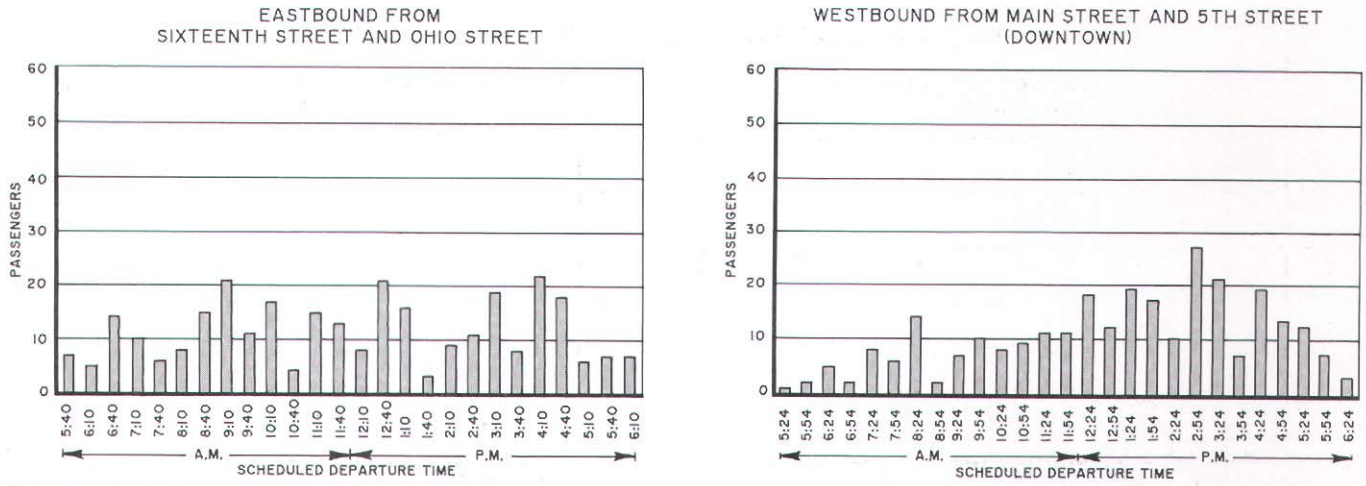
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 5




*Source: SEWRPC.*

Figure E-6

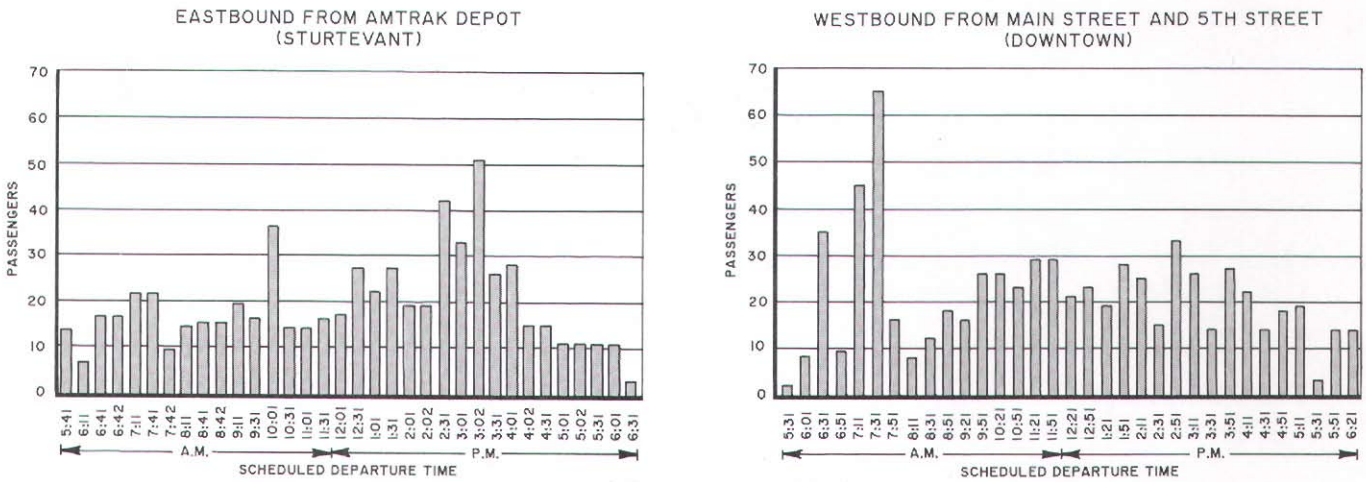
## WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 6




*Source: SEWRPC.*

Figure E-7

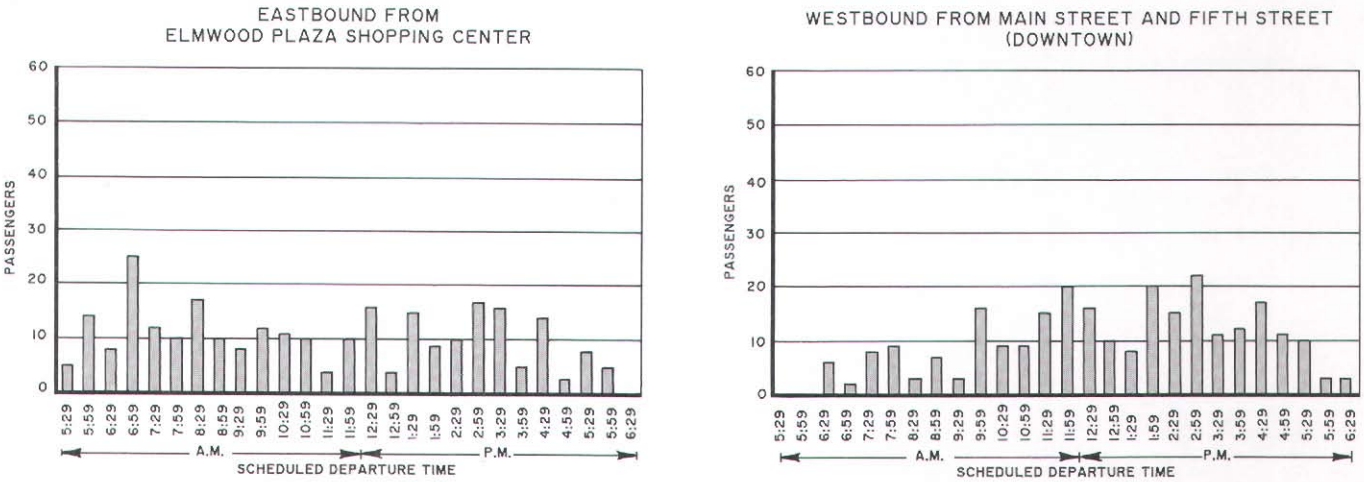
## WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 7




*Source: SEWRPC.*

Figure E-8

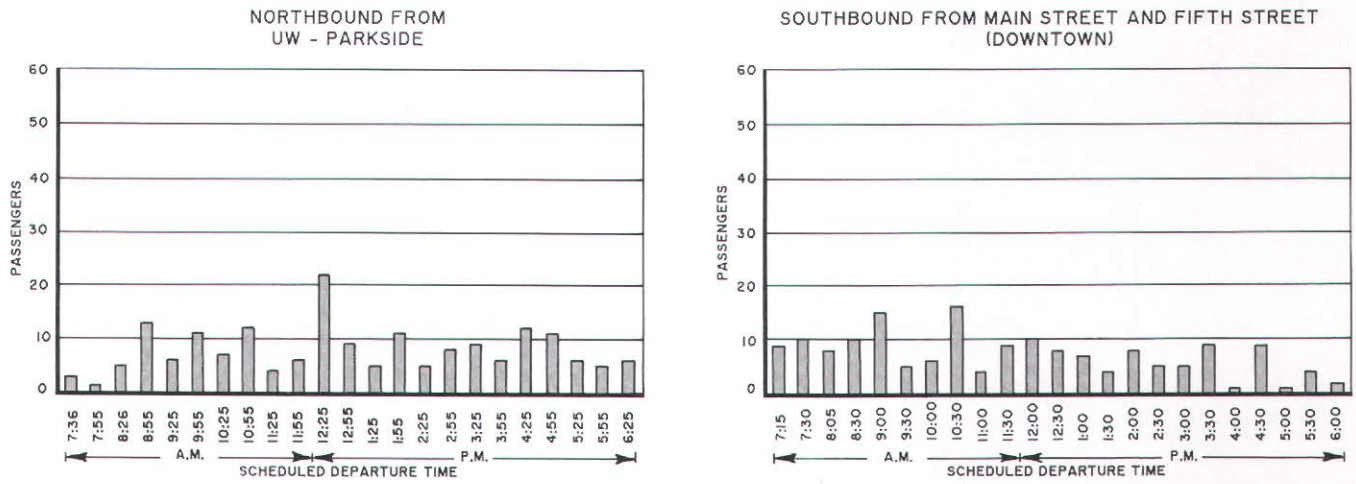
## WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 8




*Source: SEWRPC.*

Figure E-9

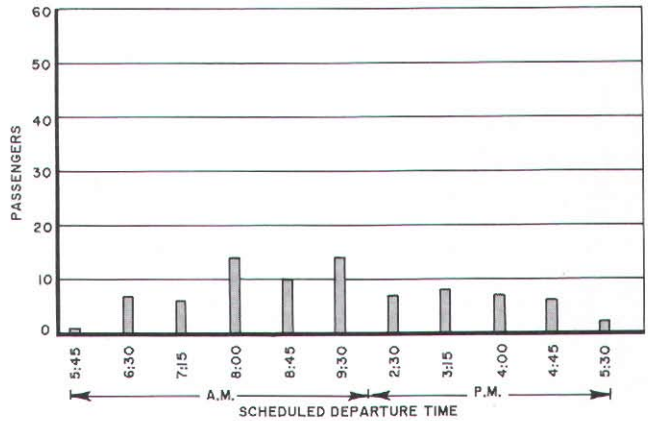
WEEKDAY BOARDING PASSENGERS ON ROUTE NO. 9




*Source: SEWRPC.*

Figure E-10

WEEKDAY BOARDING
PASSENGERS ON ROUTE NO. 10




*Source: SEWRPC.*

# Appendix F

# DETAILED OPERATING CHARACTERISTICS AND PROJECTIONS OF RIDERSHIP AND FINANCIAL PERFORMANCE FOR THE RECOMMENDED TRANSIT SYSTEM

## Table F-1

### OPERATING AND SERVICE CHARACTERISTICS OF THE EXISTING ROUTES OF THE BELLE URBAN SYSTEM: 1992

| Route | Total Route Miles (round-trip) | Weekdays: Labor Day to Memorial Day | | | | |
|---|---|---|---|---|---|---|
| | | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | | |
| No. 1 | 14.35 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 18.30 | 30 | 30 | 26.5 | 3 | 3 |
| No. 3 | 20.95 | 20 | 30 | 32.0 | 5 | 3 |
| No. 4 | 17.85 | 20 | 30 | 32.0 | 5 | 3 |
| No. 5 | 16.10 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 17.55 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 22.05 | 20 | 30 | 33.5 | 4 | 3 |
| No. 8 | 12.95 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 14.10 | 45 | 45 | 11.0 | 1 | 1 |
| Subtotal | 154.20 | 20-45 | 30-45 | 241.5 | 29 | 24 |
| UW-Parkside Service No. 9 | 17.00 | 30 | 30 | 23.0 | 2 | 2 |
| Total | 171.20 | 20-45 | 30-45 | 264.5 | 31 | 26 |

| Route | Weekdays: Memorial Day to Labor Day | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 30 | 30 | 26.5 | 3 | 3 |
| No. 3 | 30 | 30 | 26.5 | 3 | 3 |
| No. 4 | 30 | 30 | 26.5 | 3 | 3 |
| No. 5 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 30 | 30 | 26.5 | 3 | 3 |
| No. 8 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 45 | 45 | 11.0 | 1 | 1 |
| Subtotal | 30-45 | 30-45 | 223.5 | 24 | 24 |
| UW-Parkside Service No. 9 | 60 | 60 | 10.0 | 1 | 1 |
| Total | 30-60 | 30-60 | 233.5 | 25 | 25 |

| Route | Saturdays | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 21.5 | 3 | 3 |
| No. 2 | 30 | 30 | 21.5 | 3 | 3 |
| No. 3 | 30 | 30 | 21.5 | 3 | 3 |
| No. 4 | 30 | 30 | 21.5 | 3 | 3 |
| No. 5 | 30 | 30 | 21.5 | 3 | 3 |
| No. 6 | 30 | 30 | 21.5 | 3 | 3 |
| No. 7 | 30 | 30 | 21.5 | 3 | 3 |
| No. 8 | 30 | 30 | 22.0 | 2 | 2 |
| No. 10 | 45 | 45 | 10.0 | 1 | 1 |
| Subtotal | 30-45 | 30-45 | 182.5 | 24 | 24 |
| UW-Parkside Service No. 9 | -- | -- | -- | -- | -- |
| Total | 30-45 | 30-45 | 182.5 | 24 | 24 |

*Source: City of Racine Department of Transportation and SEWRPC.*

## Table F-2

## OPERATING AND SERVICE CHARACTERISTICS OF THE ROUTES OF THE BELLE URBAN SYSTEM: 1993 RECOMMENDED SYSTEM

| Route | Total Route Miles (round-trip) | Weekdays: Labor Day to Memorial Day | | | | |
|---|---|---|---|---|---|---|
| | | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required[a] | |
| | | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | | |
| No. 1 | 15.10 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 17.70 | 30 | 30 | 26.5 | 3 | 3 |
| No. 3 | 17.25 | 20 | 30 | 32.0 | 4 | 3 |
| No. 4 | 17.55 | 20 | 30 | 32.0 | 5 | 3 |
| No. 5 | 16.10 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 14.55 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 22.05 | 20 | 30 | 33.5 | 4 | 3 |
| No. 8 | 12.95 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 9.35 | 60 | 60 | 9.0 | 0.5 | 0.5 |
| No. 11 | 8.40 | 60 | 60 | 9.0 | 0.5 | 0.5 |
| Subtotal | 151.00 | 20-60 | 30-60 | 248.5 | 28 | 24 |
| UW-Parkside Service No. 9 | 17.00 | 30 | 60 | 19.0 | 2 | 1 |
| Total | 168.00 | 20-60 | 30-60 | 267.5 | 30 | 25 |

| Route | Weekdays: Memorial Day to Labor Day | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required[a] | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 30 | 30 | 26.5 | 3 | 3 |
| No. 3 | 30 | 30 | 26.5 | 3 | 3 |
| No. 4 | 30 | 30 | 26.5 | 3 | 3 |
| No. 5 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 30 | 30 | 26.5 | 3 | 3 |
| No. 8 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 60 | 60 | 9.0 | 0.5 | 0.5 |
| No. 11 | 60 | 60 | 9.0 | 0.5 | 0.5 |
| Subtotal | 30-60 | 30-60 | 230.5 | 24 | 24 |
| UW-Parkside Service No. 9 | 60 | 60 | 10.0 | 1 | 1 |
| Total | 30-60 | 30-60 | 240.5 | 25 | 25 |

| Route | Saturdays | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required[a] | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 21.5 | 3 | 3 |
| No. 2 | 30 | 30 | 21.5 | 3 | 3 |
| No. 3 | 30 | 30 | 21.5 | 3 | 3 |
| No. 4 | 30 | 30 | 21.5 | 3 | 3 |
| No. 5 | 30 | 30 | 21.5 | 3 | 3 |
| No. 6 | 30 | 30 | 21.5 | 3 | 3 |
| No. 7 | 30 | 30 | 21.5 | 3 | 3 |
| No. 8 | 30 | 30 | 22.0 | 2 | 2 |
| No. 10 | 60 | 60 | 8.0 | 0.5 | 0.5 |
| No. 11 | 60 | 60 | 8.0 | 0.5 | 0.5 |
| Subtotal | 30-60 | 30-60 | 188.5 | 24 | 24 |
| UW-Parkside Service No. 9 | -- | -- | -- | -- | -- |
| Total | 30-60 | 30-60 | 188.5 | 24 | 24 |

[a] *Fractions indicate a single vehicle is operated over two routes during a time period.*

*Source: City of Racine Department of Transportation and SEWRPC.*

Table F-3

## OPERATING AND SERVICE CHARACTERISTICS OF THE ROUTES OF THE BELLE URBAN SYSTEM: 1997 RECOMMENDED SYSTEM

| Route | Total Route Miles (round-trip) | Weekdays: Labor Day to Memorial Day | | | | |
|---|---|---|---|---|---|---|
| | | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | | |
| No. 1 | 19.75 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 24.90 | 30 | 30 | 26.5 | 4 | 3 |
| No. 3 | 20.25 | 20 | 30 | 32.0 | 5 | 3 |
| No. 4 | 22.55 | 20 | 30 | 32.0 | 5 | 4 |
| No. 5 | 17.80 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 20.65 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 20.85 | 20 | 30 | 33.5 | 4 | 3 |
| No. 8 | 12.95 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 9.35 | 30 | 30 | 22.0 | 1 | 1 |
| Subtotal | 169.05 | 20-30 | 30 | 252.5 | 30 | 25 |
| UW-Parkside Service | | | | | | |
| No. 9 | 17.00 | 30 | 60 | 19.0 | 2 | 1 |
| Total | 186.05 | 20-30 | 30-60 | 271.5 | 32 | 26 |

| Route | Weekdays: Memorial Day to Labor Day | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 26.5 | 3 | 3 |
| No. 2 | 30 | 30 | 26.5 | 4 | 3 |
| No. 3 | 30 | 30 | 26.5 | 3 | 3 |
| No. 4 | 30 | 30 | 26.5 | 4 | 4 |
| No. 5 | 30 | 30 | 26.5 | 3 | 3 |
| No. 6 | 30 | 30 | 26.5 | 3 | 3 |
| No. 7 | 30 | 30 | 26.5 | 3 | 3 |
| No. 8 | 30 | 30 | 27.0 | 2 | 2 |
| No. 10 | 30 | 30 | 22.0 | 1 | 1 |
| Subtotal | 30 | 30 | 234.5 | 26 | 25 |
| UW-Parkside Service | | | | | |
| No. 9 | 60 | 60 | 10.0 | 1 | 1 |
| Total | 30-60 | 30-60 | 244.5 | 27 | 26 |

| Route | Saturdays | | | | |
|---|---|---|---|---|---|
| | Service Frequency (minutes) | | Total Daily Round-Trip Bus Trips | Vehicles Required | |
| | Peak Periods | Off-Peak Periods | | Peak Periods | Off-Peak Periods |
| Regular Routes | | | | | |
| No. 1 | 30 | 30 | 21.5 | 3 | 3 |
| No. 2 | 30 | 30 | 21.5 | 3 | 3 |
| No. 3 | 30 | 30 | 21.5 | 3 | 3 |
| No. 4 | 30 | 30 | 21.5 | 4 | 4 |
| No. 5 | 30 | 30 | 21.5 | 3 | 3 |
| No. 6 | 30 | 30 | 21.5 | 3 | 3 |
| No. 7 | 30 | 30 | 21.5 | 3 | 3 |
| No. 8 | 30 | 30 | 22.0 | 2 | 2 |
| No. 10 | 30 | 30 | 18.0 | 1 | 1 |
| Subtotal | 30 | 30 | 190.5 | 25 | 25 |
| UW-Parkside Service | | | | | |
| No. 9 | 60 | 60 | 10.0 | 1 | 1 |
| Total | 30-60 | 30-60 | 200.5 | 26 | 26 |

*Source: City of Racine Department of Transportation and SEWRPC.*

## Table F-4

## CHANGE IN PROJECTED ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE CITY OF RACINE BELLE URBAN SYSTEM WITH THE RECOMMENDED SERVICE CHANGES OVER THE EXISTING TRANSIT SYSTEM: 1992-1997 IN CONSTANT 1993 DOLLARS

| Operating Characteristic | Estimated 1992 | Projected with Existing 1992 Transit System[a] | | | | | Projected with Recommended Service Changes[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Increment for Service Changes | | | | | Total System with Service Changes | | | | |
| | | 1993 | 1994 | 1995 | 1996 | 1997 | 1993 | 1994 | 1995 | 1996 | 1997 | 1993 | 1994 | 1995 | 1996 | 1997 |
| Annual Service Provided | | | | | | | | | | | | | | | | |
| Vehicle Hours | | | | | | | | | | | | | | | | |
| Revenue Vehicle Hours | 103,900 | 102,700 | 102,700 | 102,300 | 102,700 | 102,300 | -700 | -1,400 | 1,200 | 3,100 | 5,700 | 102,000 | 101,300 | 103,500 | 105,800 | 108,000 |
| Total Vehicle Hours | 114,000 | 109,900 | 109,800 | 109,400 | 109,800 | 109,400 | -700 | -1,200 | 1,500 | 3,300 | 6,000 | 109,200 | 108,600 | 110,900 | 113,100 | 115,400 |
| Vehicle Miles | | | | | | | | | | | | | | | | |
| Revenue Vehicle Miles | 1,257,300 | 1,244,500 | 1,243,800 | 1,239,700 | 1,243,800 | 1,239,700 | -24,300 | -66,800 | 300 | 59,100 | 126,400 | 1,220,200 | 1,177,000 | 1,240,000 | 1,302,900 | 1,366,100 |
| Total Vehicle Miles | 1,346,400 | 1,329,200 | 1,328,500 | 1,324,100 | 1,328,500 | 1,324,100 | -23,300 | -64,500 | 3,900 | 63,600 | 132,200 | 1,305,900 | 1,264,000 | 1,328,000 | 1,392,100 | 1,456,300 |
| Service Productivity | | | | | | | | | | | | | | | | |
| Annual Revenue Passengers | 1,820,600 | 1,839,000 | 1,791,000 | 1,827,000 | 1,799,000 | 1,834,000 | 1,000 | 5,000 | 52,000 | 51,000 | 53,000 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Revenue Passengers per | | | | | | | | | | | | | | | | |
| Revenue Vehicle Hour | 17.5 | 17.9 | 17.4 | 17.9 | 17.5 | 17.9 | -- | -- | -- | -- | -- | 18.0 | 17.7 | 18.2 | 17.5 | 17.5 |
| Revenue Vehicle Mile | 1.45 | 1.48 | 1.44 | 1.47 | 1.45 | 1.48 | -- | -- | -- | -- | -- | 1.51 | 1.53 | 1.52 | 1.42 | 1.38 |
| Capita (population served) | 16.2 | 16.4 | 15.9 | 16.3 | 16.0 | 16.3 | -- | -- | -- | -- | -- | 16.4 | 16.0 | 16.7 | 16.5 | 16.8 |
| Service Cost | | | | | | | | | | | | | | | | |
| Total Annual Operating Expenses | $3,713,400 | $3,879,200 | $3,877,300 | $3,864,900 | $3,877,300 | $3,864,900 | -$28,800 | -$64,500 | $33,400 | $107,300 | $205,400 | $3,850,400 | $3,812,800 | $3,898,300 | $3,984,600 | $4,070,300 |
| Total Annual Operating Revenue | 874,100 | 883,200 | 893,200 | 875,900 | 892,500 | 875,100 | 600 | 2,200 | 25,000 | 25,500 | 25,200 | 883,800 | 895,400 | 900,900 | 918,000 | 900,300 |
| Total Annual Operating Deficit | 2,839,300 | 2,996,000 | 2,984,100 | 2,989,000 | 2,984,800 | 2,989,800 | -29,400 | -66,700 | 8,400 | 81,800 | 180,200 | 2,966,600 | 2,917,400 | 2,997,400 | 3,066,600 | 3,170,000 |
| Sources of Required Public Funds | | | | | | | | | | | | | | | | |
| Federal Operating Assistance | 907,200 | 830,800 | 798,800 | 768,100 | 738,600 | 710,200 | -- | -- | -- | -- | -- | 830,800 | 798,800 | 768,100 | 738,600 | 710,200 |
| State Operating Assistance | 1,559,600 | 1,629,300 | 1,628,500 | 1,623,300 | 1,628,500 | 1,623,300 | -12,100 | -27,100 | 14,000 | 45,000 | 86,200 | 1,617,200 | 1,601,400 | 1,637,300 | 1,673,500 | 1,709,500 |
| Local Operating Assistance | 372,500 | 535,900 | 556,800 | 597,600 | 617,700 | 656,300 | -17,300 | -39,600 | -5,600 | 36,800 | 94,000 | 518,600 | 517,200 | 592,000 | 654,500 | 750,300 |
| Service Effectiveness | | | | | | | | | | | | | | | | |
| Total Expense per Passenger | $2.04 | $2.11 | $2.16 | $2.12 | $2.16 | $2.11 | -$0.02 | -$0.04 | -$0.05 | -$0.01 | $0.05 | $2.09 | $2.12 | $2.07 | $2.15 | $2.16 |
| Total Deficit per Passenger | $1.56 | $1.63 | $1.67 | $1.64 | $1.66 | $1.63 | -$0.02 | -$0.05 | -$0.04 | -- | $0.05 | $1.61 | $1.62 | $1.60 | $1.66 | $1.68 |
| Percent of Expenses Recovered through Operating Revenues | 23.5 | 22.8 | 23.0 | 22.7 | 23.0 | 22.6 | 0.2 | 0.5 | 0.4 | -- | -0.5 | 23.0 | 23.5 | 23.1 | 23.0 | 22.1 |
| Passenger Fares | | | | | | | | | | | | | | | | |
| Base Adult Cash Fare | $0.60 | $0.60 | $0.67 | $0.65 | $0.71 | $0.68 | -- | -- | -- | -- | -- | $0.60 | $0.67 | $0.65 | $0.71 | $0.68 |
| Average Fare per Trip | 0.48 | 0.48 | 0.50 | 0.48 | 0.50 | 0.48 | -- | -- | -- | -- | -- | 0.48 | 0.50 | 0.48 | 0.50 | 0.48 |

*[a]Assumes no inflationary increases in operating expenses over the planning period. Passenger fares have been assumed to increase modestly, and Federal transit operating assistance levels have been assumed to remain stable over the planning period. However, the amounts of passenger revenues and Federal aid have been adjusted to reflect a decrease in the future value of the funds based upon the impacts which general price inflation has had in the past on transit system operating costs, total operating deficits, and local funding requirements.*

*Source: SEWRPC.*

## Table F-5

## CHANGE IN PROJECTED ANNUAL RIDERSHIP AND FINANCIAL PERFORMANCE OF THE CITY OF RACINE BELLE URBAN SYSTEM WITH THE RECOMMENDED SERVICE CHANGES OVER THE EXISTING TRANSIT SYSTEM: 1992-1997 IN YEAR OF EXPENDITURE DOLLARS

| Operating Characteristic | Estimated 1992 | Projected with Existing 1992 Transit System[a] | | | | | Projected with Recommended Service Changes[a] | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | Increment for Service Changes | | | | | Total System with Service Changes | | | | |
| | | 1993 | 1994 | 1995 | 1996 | 1997 | 1993 | 1994 | 1995 | 1996 | 1997 | 1993 | 1994 | 1995 | 1996 | 1997 |
| Annual Service Provided | | | | | | | | | | | | | | | | |
| Vehicle Hours | | | | | | | | | | | | | | | | |
| Revenue Vehicle Hours | 103,900 | 102,700 | 102,700 | 102,300 | 102,700 | 102,300 | -700 | -1,400 | 1,200 | 3,100 | 5,700 | 102,000 | 101,300 | 103,500 | 105,800 | 108,000 |
| Total Vehicle Hours | 114,000 | 109,900 | 109,800 | 109,400 | 109,800 | 109,400 | -700 | -1,200 | 1,500 | 3,300 | 6,000 | 109,200 | 108,600 | 110,900 | 113,100 | 115,400 |
| Vehicle Miles | | | | | | | | | | | | | | | | |
| Revenue Vehicle Miles | 1,257,300 | 1,244,500 | 1,243,800 | 1,239,700 | 1,243,800 | 1,239,700 | -24,300 | -66,800 | 300 | 59,100 | 126,400 | 1,220,200 | 1,177,000 | 1,240,000 | 1,302,900 | 1,366,100 |
| Total Vehicle Miles | 1,346,400 | 1,329,200 | 1,328,500 | 1,324,100 | 1,328,500 | 1,324,100 | -23,300 | -64,500 | 3,900 | 63,600 | 132,200 | 1,305,900 | 1,264,000 | 1,328,000 | 1,392,100 | 1,456,300 |
| Service Productivity | | | | | | | | | | | | | | | | |
| Annual Revenue Passengers | 1,821,000 | 1,839,000 | 1,791,000 | 1,827,000 | 1,799,000 | 1,834,000 | 1,000 | 5,000 | 52,000 | 51,000 | 53,000 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Revenue Passengers per | | | | | | | | | | | | | | | | |
| Revenue Vehicle Hour | 17.5 | 17.9 | 17.4 | 17.9 | 17.5 | 17.9 | -- | -- | -- | -- | -- | 18.0 | 17.7 | 18.2 | 17.5 | 17.5 |
| Revenue Vehicle Mile | 1.45 | 1.48 | 1.44 | 1.47 | 1.45 | 1.48 | -- | -- | -- | -- | -- | 1.51 | 1.53 | 1.52 | 1.42 | 1.38 |
| Capita (population served) | 16.2 | 16.4 | 15.9 | 16.3 | 16.0 | 16.3 | -- | -- | -- | -- | -- | 16.4 | 16.0 | 16.7 | 16.5 | 16.8 |
| Service Cost | | | | | | | | | | | | | | | | |
| Total Annual Operating Expenses | $3,713,400 | $3,879,200 | $4,026,600 | $4,168,500 | $4,343,400 | $4,496,900 | -$28,800 | -$67,000 | $36,200 | $120,800 | $240,300 | $3,850,400 | $3,959,600 | $4,204,700 | $4,464,200 | $4,737,200 |
| Total Annual Operating Revenue | 874,100 | 883,200 | 928,900 | 947,400 | 1,003,900 | 1,023,800 | 600 | 2,300 | 27,000 | 28,700 | 29,400 | 883,800 | 931,200 | 974,400 | 1,032,600 | 1,053,200 |
| Total Annual Operating Deficit | 2,839,300 | 2,996,000 | 3,097,700 | 3,221,100 | 3,339,500 | 3,473,100 | -29,400 | -69,300 | 9,200 | 92,100 | 210,900 | 2,966,600 | 3,028,400 | 3,431,600 | 3,431,600 | 3,684,000 |
| Sources of Required Public Funds | | | | | | | | | | | | | | | | |
| Federal Operating Assistance | 907,200 | 830,800 | 830,800 | 830,800 | 830,800 | 830,800 | -- | -- | -- | -- | -- | 830,800 | 830,800 | 830,800 | 830,800 | 830,800 |
| State Operating Assistance | 1,559,600 | 1,629,300 | 1,691,200 | 1,750,800 | 1,824,200 | 1,888,700 | -12,100 | -28,200 | 15,200 | 50,800 | 100,900 | 1,617,200 | 1,663,000 | 1,766,000 | 1,875,000 | 1,989,600 |
| Local Operating Assistance | 372,500 | 535,900 | 575,700 | 639,500 | 684,500 | 753,600 | -17,300 | -41,100 | -6,000 | 41,300 | 110,000 | 518,600 | 534,600 | 533,500 | 725,800 | 863,600 |
| Service Effectiveness | | | | | | | | | | | | | | | | |
| Total Expense per Passenger | $2.04 | $2.11 | $2.25 | $2.28 | $2.41 | $2.45 | -$0.02 | -$0.05 | -$0.04 | -- | $0.06 | $2.09 | $2.20 | $2.24 | $2.41 | $2.51 |
| Total Deficit per Passenger | $1.56 | $1.63 | $1.73 | $1.76 | $1.86 | $1.89 | -$0.02 | -$0.04 | -$0.04 | -$0.01 | $0.06 | $1.61 | $1.69 | $1.72 | $1.85 | $1.95 |
| Percent of Expenses Recovered through Operating Revenues | 23.5 | 22.8 | 23.1 | 22.7 | 23.1 | 22.8 | 0.2 | 0.4 | 0.5 | -- | -0.6 | 23.0 | 23.5 | 23.2 | 23.1 | 22.2 |
| Passenger Fares | | | | | | | | | | | | | | | | |
| Base Adult Cash Fare | $0.60 | $0.60 | $0.70 | $0.70 | $0.80 | $0.80 | -- | -- | -- | -- | -- | $0.60 | $0.70 | $0.70 | $0.80 | $0.80 |
| Average Fare per Trip | 0.48 | 0.48 | 0.52 | 0.52 | 0.56 | 0.56 | -- | -- | -- | -- | -- | 0.48 | 0.52 | 0.52 | 0.56 | 0.56 |

[a] *Assumes increases in operating expenses of 4 percent per year per unit of service. Passenger fares have also been assumed to increase modestly, and Federal transit operating assistance levels have been assumed to remain stable over the planning period.*

*Source: SEWRPC.*

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## Appendix G

## ASSESSMENT OF FINANCIAL CAPACITY FOR THE CITY OF RACINE BELLE URBAN SYSTEM

### INTRODUCTION

The purpose of this appendix is to document the findings of an analysis of the financial capacity of the City of Racine to implement the plan recommendations presented in Chapter VI of this report. This analysis was conducted in accordance with current Federal guidelines and included an assessment of the past financial condition of the City of Racine Belle Urban System and the City's probable future financial capacity to fund the operation of the recommended transit system.

### FINANCIAL CAPACITY ASSESSMENT

The existing financial condition and the future financial capacity of the City were assessed on the basis of a number of key indicators utilizing information on historical and projected expenditures, revenues, service levels and service utilization, as shown in Table G-1. These indicators were drawn from a broader checklist used by the Federal Transit Administration (FTA) in assessing the financial capacity of recipients of FTA funds during its review of the projects proposed by each transit operator for Federal funding.

The historic and anticipated ridership and service levels of the transit system for a 10-year period, including the five years from 1988 through 1992 immediately preceding the planning period and the five-year planning period from 1993 through 1997, are shown in Figure G-1. The transit system operating expenses, revenues, and deficits for this period are shown in Figure G-2. On the basis of this information, it may be concluded that the projections made for the recommended transit system, including those for ridership, operating expenses, operating revenues, and operating deficits, are reasonable, based upon historic trends observed for the transit system and projected service levels under the recommended plan. For the most part, past trends in system ridership have closely followed trends in service levels and changes in passenger fares. The significant ridership decreases observed for 1989 and 1991 reflect the affects of fare increases implemented in late-1988 and mid-1991 on system ridership. Ridership on the system between 1988 and 1992 has also been affected by a declining number of students provided with subsidized fares for school transportation by the Racine Unified School District. The increases in ridership projected to occur over the planning period are directly related to increases in service levels on the transit system resulting from full implementation of the recommended service changes. The projected ridership changes over the period also reflect the anticipated negative impacts on systemwide ridership of fare increases which are recommended to be implemented in 1994 and 1996. In this respect, base adult cash fares are recommended to be increased from the current $0.60 per one-way trip to $0.80 per one-way trip by the end of the period.

The projected increases in service levels from 1993 through 1997 are expected to result in steady increases in the total operating expenses and deficits for the transit system over the period, as well as in the operating cost and deficit per passenger and per passenger mile, as shown in Figure G-3. These projected trends will be similar to the actual trends observed from 1988 through 1992. Between 1993 and 1997, total operating expenses for the transit system are projected to increase by about 23 percent, or by about 5 percent per year. Projected ridership increases and increases in passenger fares would be expected to increase system operating revenues by about 19 percent over this period, or by about 4 percent per year. Because total system operating expenses are projected to increase at a faster rate than operating revenues over the period, a significant increase in the total operating deficit for the transit system under the recommended transit plan may be expected. Over all, the operating deficit may be expected to increase by about 24 percent over 1993 levels by 1997, an average annual increase of over 5 percent per year. Accordingly, the major focus of this financial capacity analysis was on the ability of the available funding sources to provide the monies needed to support the operating expenses for the transit system over the planning period. The actual and projected

## Table G-1

## KEY INDICATORS OF FINANCIAL CAPACITY FOR THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997

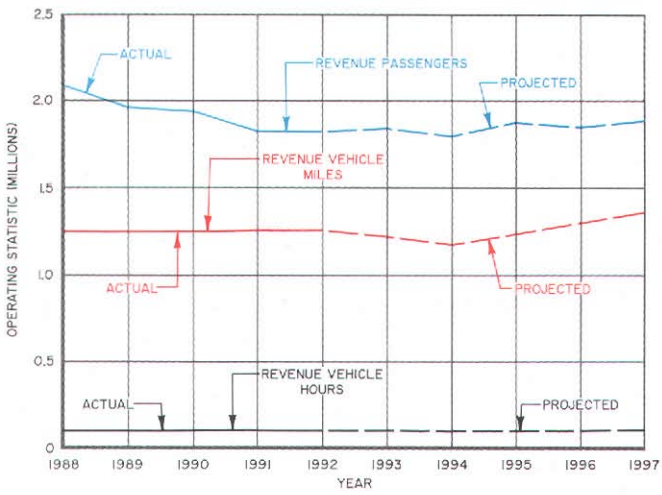
| Financial Capacity Indicator | Actual | | | | | Projected under Recommended Plan | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 |
| Transit Service Levels and Utilization | | | | | | | | | | |
| Annual Revenue Vehicle Miles Operated | 1,255,200 | 1,249,900 | 1,251,400 | 1,258,500 | 1,257,300 | 1,220,200 | 1,177,000 | 1,240,000 | 1,302,900 | 1,366,100 |
| Annual Revenue Vehicle Hours Operated | 105,100 | 104,600 | 104,400 | 104,400 | 103,900 | 102,000 | 101,300 | 103,500 | 105,800 | 108,000 |
| Annual Revenue Passenger Trips | 2,089,000 | 1,962,800 | 1,941,000 | 1,827,700 | 1,820,600 | 1,840,000 | 1,796,000 | 1,879,000 | 1,850,000 | 1,887,000 |
| Annual Total Passenger Trips | 2,512,500 | 2,127,400 | 2,303,900 | 2,344,700 | 2,512,500 | 2,539,500 | 2,478,100 | 2,593,800 | 2,553,100 | 2,604,400 |
| Annual Passenger Miles | 6,191,700 | 5,212,500 | 5,639,000 | 5,337,400 | 5,212,500 | 5,268,600 | 5,141,200 | 5,381,300 | 5,296,900 | 5,403,200 |
| Revenue Passengers per | | | | | | | | | | |
| Revenue Vehicle Mile | 1.66 | 1.57 | 1.55 | 1.45 | 1.45 | 1.51 | 1.53 | 1.52 | 1.42 | 1.38 |
| Revenue Vehicle Hour | 19.9 | 18.8 | 18.6 | 17.5 | 17.5 | 18.0 | 17.7 | 18.2 | 17.5 | 17.5 |
| Transit Service Financial Information | | | | | | | | | | |
| Total System Operating Expenses | $3,116,200 | $3,301,700 | $3,515,500 | $3,622,700 | $3,713,400 | $3,850,400 | $3,959,600 | $4,204,700 | $4,464,200 | $4,737,200 |
| Total System Operating Revenues | 895,800 | 848,500 | 870,100 | 956,200 | 874,100 | 883,800 | 931,200 | 974,400 | 1,032,600 | 1,053,200 |
| Total System Operating Deficit | | | | | | | | | | |
| Federal Share | $1,149,600 | $ 967,700 | $ 868,700 | $ 857,000 | $ 907,200 | $ 830,800 | $ 830,800 | $ 830,800 | $ 830,800 | $ 830,800 |
| State Share | 1,168,600 | 1,254,700 | 1,353,500 | 1,394,800 | 1,559,600 | 1,617,200 | 1,663,000 | 1,766,000 | 1,875,000 | 1,989,600 |
| Local Share[a] | -- | 230,800 | 423,200 | 414,700 | 372,500 | 518,600 | 534,600 | 633,500 | 725,800 | 863,600 |
| Subtotal | $2,318,200 | $2,453,200 | $2,645,400 | $2,666,500 | $2,839,300 | $2,966,600 | $3,028,400 | $3,230,300 | $3,431,600 | $3,684,000 |
| Percent of Operating Expenses Recovered through Operating Revenues | 28.7 | 25.7 | 24.8 | 26.4 | 23.5 | 23.0 | 23.5 | 23.2 | 23.1 | 22.2 |
| Operating Expense per | | | | | | | | | | |
| Revenue Vehicle Mile | $2.48 | $2.64 | $2.81 | $2.88 | $2.95 | $3.16 | $3.36 | $3.39 | $3.43 | $3.47 |
| Revenue Vehicle Hour | 29.65 | 31.57 | 33.67 | 34.70 | 35.74 | 37.75 | 39.09 | 40.63 | 42.19 | 43.86 |
| Revenue Passenger | 1.49 | 1.68 | 1.81 | 1.98 | 2.04 | 2.09 | 2.20 | 2.24 | 2.41 | 2.51 |
| Passenger Mile | 0.50 | 0.63 | 0.62 | 0.68 | 0.71 | 0.73 | 0.77 | 0.78 | 0.84 | 0.88 |

[a] *Includes funds provided by the City of Racine, the Village of Sturtevant, the Towns of Mt. Pleasant and Caledonia, and the University of Wisconsin Parkside.*

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

## Figure G-1

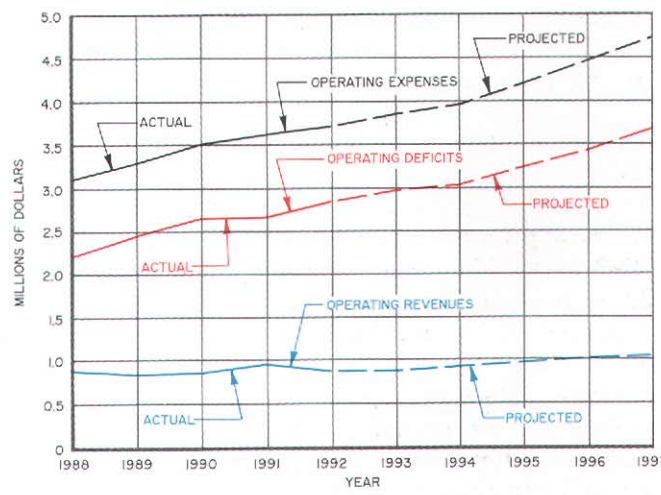
### ANNUAL RIDERSHIP AND SERVICE LEVELS ON THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997




*Source: City of Racine Department of Transportation and SEWRPC.*

## Figure G-2

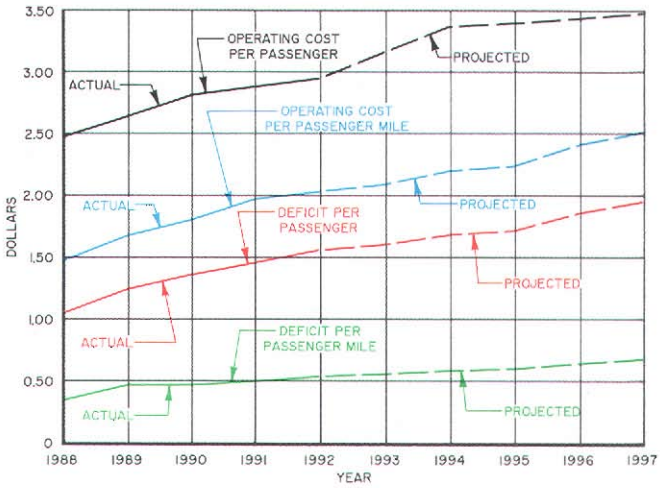
### ANNUAL OPERATING EXPENSES, REVENUES, AND DEFICITS ON THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997




*Source: City of Racine Department of Transportation and SEWRPC.*

Figure G-3

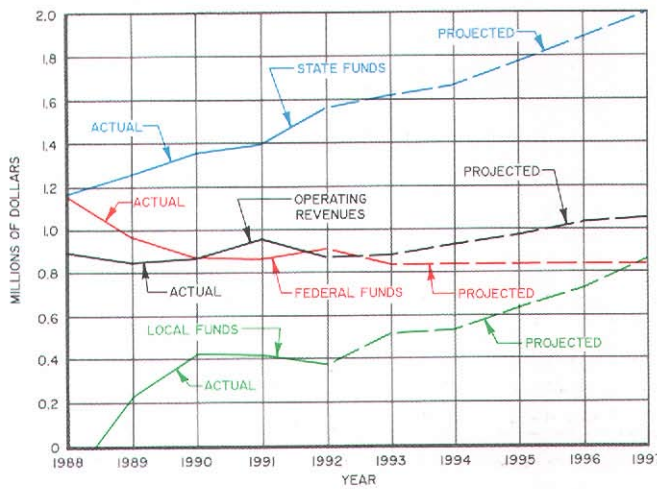
**TOTAL OPERATING COST PER PASSENGER AND PER PASSENGER MILE ON THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997**




*Source: City of Racine Department of Transportation and SEWRPC.*

Figure G-4

**AMOUNTS OF OPERATING REVENUES AND PUBLIC FUNDS FOR THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997**

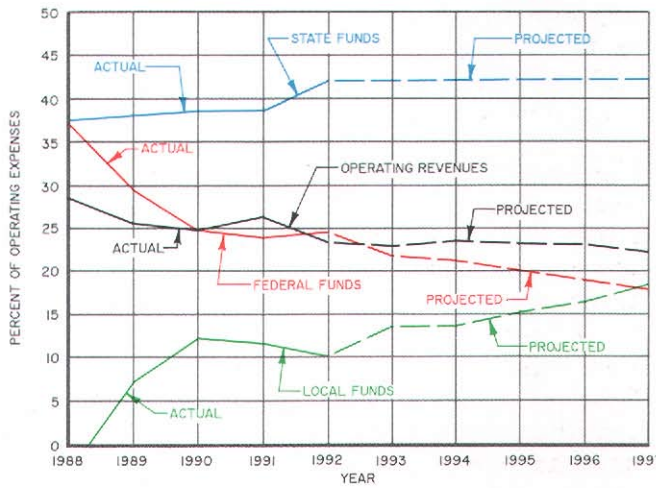



*Source: City of Racine Department of Transportation and SEWRPC.*

amounts of operating revenues and public funds from Federal, State, and local sources needed to support the annual operating expenditures for the City of Racine Belle Urban System between 1988 and 1997 are shown in Figure G-4. Figure G-5 shows the percent of total transit system operating expenditures covered by each of these funding sources over the same period.

Figure G-5

**PERCENT OF TOTAL OPERATING EXPENSES COVERED BY OPERATING REVENUES AND PUBLIC FUNDS FOR THE CITY OF RACINE BELLE URBAN SYSTEM: 1988-1997**




*Source: City of Racine Department of Transportation and SEWRPC.*

Between 1988 and 1992, Federal transit operating assistance funds available to the City transit system decreased from a high of $1,150,000 in 1988 to about $907,000 in 1992. Federal transit operating assistance funds made available to the City during 1993 amounted to approximately $831,000. The decline in Federal transit operating assistance funds for the transit system is a direct result of a decline in Federal transit operating assistance funds allocated to the State of Wisconsin for small urbanized areas under the FTA Section 9, Formula Transit Assistance Program. In this respect, the total allocation of Section 9 funds to the State, from which Federal operating assistance funds for the City of Racine Belle Urban System are drawn, has declined from about $6.2 million in 1988 to about $5.7 million in 1993. Projections of Federal transit operating assistance funds available to the City of Racine Belle Urban System assume that such funds will remain stable at the 1993 levels through 1997. However, with projected increases in transit system operating expenses resulting from planned service changes, the portion of transit system operating expenses which are covered by Federal funds may be expected to continue to decline through 1997.

## Table G-2

## PROPORTION OF APPROPRIATIONS FROM THE STATE TRANSPORTATION FUND FOR TRANSIT OPERATING ASSISTANCE FOR THE CITY OF RACINE: 1988-1997

| Year | State Transportation Revenue Fund Appropriations | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Appropriations for Urban Transit Operating Assistance Program | | | | | | | Appropriations for Other Programs and Costs | | Total Appropriations | |
| | Assistance for City of Racine Belle Urban System | | Assistance for Other Transit Systems | | Total Operating Assistance Program | | | | | | |
| | Number | Percent of Program Total | Number | Percent of Program Total | Number | Percent of Program Total | Percent of Fund Total | Number | Percent of Fund Total | Number | Percent of Fund Total |
| 1988 | $1,168,600 | 2.61 | $ 43,566,400 | 97.39 | $ 44,735,000 | 100.0 | 6.66 | $ 627,262,600 | 93.34 | $ 671,997,600 | 100.0 |
| 1989 | 1,254,700 | 2.59 | 47,282,300 | 97.41 | 48,537,000 | 100.0 | 6.73 | 673,147,900 | 93.27 | 721,684,900 | 100.0 |
| 1990 | 1,353,500 | 2.86 | 45,922,600 | 97.14 | 47,276,100 | 100.0 | 6.05 | 733,773,000 | 93.95 | 781,049,100 | 100.0 |
| 1991 | 1,394,800 | 2.73 | 49,622,400 | 97.27 | 51,017,200 | 100.0 | 6.39 | 746,753,300 | 93.61 | 797,770,500 | 100.0 |
| 1992 | 1,559,600 | 2.91 | 52,014,900 | 97.09 | 53,574,500 | 100.0 | 6.40 | 784,084,500 | 93.60 | 837,659,000 | 100.0 |
| Total | $6,731,200 | 2.75 | $238,408,600 | 97.25 | $245,139,800 | 100.0 | 6.43 | $3,565,021,300 | 93.57 | $3,810,161,100 | 100.0 |
| 1993 | $1,617,200 | 2.66 | $ 59,172,500 | 97.34 | $ 60,789,700 | 100.0 | 6.91 | $ 818,752,300 | 93.09 | $ 879,542,000 | 100.0 |
| 1994 | 1,663,000 | 2.61 | 62,166,200 | 97.39 | 63,829,200 | 100.0 | 6.91 | 859,689,900 | 93.09 | 923,519,100 | 100.0 |
| 1995 | 1,766,000 | 2.64 | 65,254,700 | 97.36 | 67,020,700 | 100.0 | 6.91 | 902,674,400 | 93.09 | 969,695,100 | 100.0 |
| 1996 | 1,875,000 | 2.66 | 68,496,700 | 97.34 | 70,371,700 | 100.0 | 6.91 | 947,808,200 | 93.09 | 1,018,179,900 | 100.0 |
| 1997 | 1,989,600 | 2.69 | 71,900,700 | 97.31 | 73,890,300 | 100.0 | 6.91 | 995,198,600 | 93.09 | 1,069,088,900 | 100.0 |
| Total | $8,910,800 | 2.65 | $326,990,800 | 97.35 | $335,901,600 | 100.0 | 6.91 | $4,524,123,400 | 93.09 | $4,860,025,000 | 100.0 |

*Source: Wisconsin Department of Transportation, Bureau of Transit; and SEWRPC.*

State urban mass transit operating assistance funds available to the City of Racine Belle Urban System have increased steadily since 1988. In 1992, the City received approximately $1,560,000 in State aid, or about 33 percent more than the approximately $1,169,000 it received during 1988. The increased levels of State assistance during this period was a direct result of increases in the amount of State aids for operating expenses each transit system was eligible to receive. State aids were increased from 37.5 to 38.5 percent of operating expenses effective July 1, 1989, and again to 42 percent of operating expenses effective January 1, 1992. It is assumed that State transit operating assistance funds will continue to cover 42 percent of eligible transit system operating expenses through 1997. Under this assumption, the amount of State aid received for the operation of the City of Racine Belle Urban System in 1997 would be about 23 percent more than the amount received by the transit system during 1993. In light of the past increases in the State aid formula approved between 1988 and 1992, this assumption may provide a conservative estimate of State aid levels for the recommended transit system.

The funds distributed under the Wisconsin urban mass transit operating assistance program are obtained through the State transportation fund, which receives revenues from State motor-fuel taxes, motor vehicle registration fees, drivers license fees, and other miscellaneous fees. Table G-2 indicates the historic trend in funding of the City of Racine Belle Urban System from Wisconsin's urban mass transit operating assistance program and compares the level of State support for this program to the total State transportation funding provided for the years 1988 through 1992. Over this period, the operating assistance provided by the State to the City's transit system has represented less than 3 percent of the total transit operating assistance program funds available. The table also indicates that both the transportation revenue fund and appropriations for the urban transit operating assistance program from the fund have increased steadily over the period. Some increase in the total trust fund and in appropriations for the operating assistance program was, therefore, projected for future years.

While annual increases in the trust fund from 1988 through 1993 averaged nearly 6 percent, a more modest 5 percent rate of increase in the total trust funds revenues was projected for 1994 through 1997. The portion of the trust fund revenues appropriated for the urban transit operating assistance program during the period 1993 through 1997 was assumed to be about the same as that for the period 1988 through 1992. Based upon these projections, the State funds that would need to be committed to the City of Racine Belle Urban System over the planning period would be about the same as the proportion committed during the previous five years.

Table G-3

PROPORTION OF CITY OF RACINE PROPERTY TAX LEVY FOR TRANSIT OPERATING ASSISTANCE: 1988-1997

| Year | Total Local Share of Transit System Operating Deficit | City of Racine Property Taxes | | | | | |
|---|---|---|---|---|---|---|---|
| | | For Transit System Operating Assistance[a] | | For Other Programs and Costs | | Total | |
| | | Number | Percent of Total | Number | Percent of Total | Number | Percent of Total |
| 1988 | -- | -- | -- | $ 19,910,500 | 100.00 | $ 19,910,500 | 100.0 |
| 1989 | $ 230,800 | $ 191,800 | 0.94 | 20,172,300 | 99.06 | 20,364,100 | 100.0 |
| 1990 | 423,200 | 355,600 | 1.49 | 23,540,700 | 98.51 | 23,896,300 | 100.0 |
| 1991 | 414,700 | 337,700 | 1.35 | 24,714,900 | 98.65 | 25,052,600 | 100.0 |
| 1992 | 372,500 | 229,200 | 0.84 | 27,082,300 | 99.16 | 27,311,500 | 100.0 |
| Total | $1,441,200 | $1,114,300 | 0.96 | $115,420,700 | 99.04 | $116,535,000 | 100.0 |
| 1993 | $ 518,600 | $ 389,000 | 1.28 | $ 30,063,500 | 98.72 | $ 30,452,500 | 100.0 |
| 1994 | 534,600 | 401,000 | 1.27 | 31,259,100 | 98.73 | 31,660,100 | 100.0 |
| 1995 | 633,500 | 475,100 | 1.43 | 32,768,100 | 98.57 | 33,243,200 | 100.0 |
| 1996 | 725,800 | 544,400 | 1.56 | 34,360,900 | 98.44 | 34,905,300 | 100.0 |
| 1997 | 863,600 | 647,700 | 1.77 | 36,002,900 | 98.23 | 36,650,600 | 100.0 |
| Total | $3,276,100 | $2,457,200 | 1.47 | $164,454,500 | 98.53 | $166,911,700 | 100.0 |

[a]*Since 1990, property taxes from the City of Racine have represented an average of about 75 percent of the total local funds needed for the transit system. The remaining 25 percent of the local funds needed have been provided by local units of government contracting for transit service, including the Village of Sturtevant, the Towns of Mt. Pleasant and Caledonia, and the University of Wisconsin-Parkside. Figures shown for 1993 through 1997 assume that the City of Racine will continue to fund 75 percent of the total local transit system operating deficit.*

*Source: City of Racine Department of Transportation and SEWRPC.*

Local funds for transit operating assistance are obtained from the City of Racine and the four local governmental units contracting with the City for transit service: the Village of Sturtevant, the Towns of Caledonia and Mt. Pleasant, and the University of Wisconsin-Parkside. Historically, the vast majority of the local operating assistance funds have been provided by the City of Racine, with the City funds representing an average of about 75 percent of the total local funds needed for the transit system since 1990. The City of Racine has relied on the property tax as the principal local source of such funds. Table G-3 presents information on the actual total amount of property taxes levied by the City of Racine and those taxes applied to the transit system operating deficit between 1988 and 1992 and on projections of these figures for 1993 through 1997. During 1988, no City funds were required to support transit system operation since operating and contract revenues, along with available Federal and State operating assistance funds, were sufficient to cover all the transit system operating expenses. Between 1989 and 1992, the actual City operating subsidy for the transit system provided through City property taxes increased from about $192,000 in 1989 to about $356,000 in 1990 before decreasing to about $229,000 in 1992 as a result of increases in State aid levels and passenger fares. Over the entire period from 1989 through 1992, City funds for the operating deficit of the transit system increased by about $37,000, or about 19 percent. During the same period, the total City of Racine property tax levy increased from about $20.4 million in 1989 to about $27.3 million in 1992, or by about 34 percent. The proportion of the tax levy spent on operating subsidies for the transit system during this period has been very small, averaging about 1 percent per year.

Assuming that the City will continue to fund about 75 percent of the total local operating deficit over the planning period, the operating subsidy from the City for the transit system in 1993 was projected to be about $389,000, an increase of about $160,000, or 70 percent, over the 1992 subsidy level. If all of the recommended transit service changes are fully implemented by 1997, the City's subsidy for

the transit system operations is projected to increase to about $648,000, an increase of about $259,000, or 67 percent, over the 1993 funding requirement. During the same period, some increases in the total City property tax receipts may also be expected, as a result of increases in assessed valuation as land use development and redevelopment proceeds within the City. Information provided by the City would indicate that the total property taxes are projected to increase from about $30.5 million in 1993 to about $36.7 million in 1997, or by about 20 percent. With the projected increase, the proportion of total Racine property tax dollars that would be required to subsidize the projected City funding requirement for the transit system over this period would average about 1.5 percent per year.

## CONCLUSION

On the basis of this analysis, it may be concluded that the amount of public funds that would be required over the planning period from the identified Federal, State, and local funding sources appears to be within the funding capability of each public agency. With respect to the City of Racine, in particular, the portion of total tax dollars that would be required to be committed to the transit system by the City over the planning period would remain a relatively small part of the City's total tax revenues, increasing from an average of about 1 percent to about 1.5 percent per year. While this would represent a small increase in the proportion of total tax dollars levied for operation of the transit system, the absolute increase in City of Racine tax revenues used to support the transit system would still be substantial, totalling about $259,000 between 1993 and 1997. This increase would, however, be only about 73 percent of the increase in the City's property tax revenues provided for operating subsidies of about $356,000 which occurred between 1988 and 1990. This would indicate that the City of Racine should be able to fund the recommended transit system during the five-year planning period with a reasonable increase in its past levels of local funding commitment.

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