

AMENDMENT TO THE

RACINE COUNTY

JURISDICTIONAL HIGHWAY

SYSTEM PLAN--2000

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**AMENDMENT TO THE RACINE COUNTY
JURISDICTIONAL HIGHWAY SYSTEM PLAN—2000**

This Document Amends SEWRPC Planning Report No. 22,
A Jurisdictional Highway System Plan for Racine County, February 1975

Prepared by the

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September 1990

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TABLE OF CONTENTS

	Page		Page
Introduction	1	Extensions of Eight Mile Road	32
Background	1	CTH K	32
Original Racine County		Seven Mile Road	32
Jurisdictional Highway		City of Burlington Bypass	33
System Plan	1	Description of Alternatives	40
Revisions to the Original Plan	3	Evaluation of Alternatives	45
Second Generation Regional		Inner Bypass Alternatives	45
Transportation Plan—1978	3	Outer Bypass Alternatives	46
Lake Freeway South Corridor		Comparison of Inner and	
Plan Amendment—1981	3	Outer Bypass Alternatives	53
Caledonia Plan		Recommendation	53
Amendment—1982	5	Alternative Outer	
Overview of Currently		Bypass Alignments	56
Adopted Plan	8	Erie Street and Five Mile Road	65
Major Plan Implementation		Recommended Jurisdictional	
Actions to Date	8	Highway System Plan to be	
Functional Highway		Taken to Public Hearing	65
Improvements	8	Public Reaction to Preliminary	
Jurisdictional Highway Transfers	8	Amended Jurisdictional	
Proposed Additional		Highway Plan	73
Plan Revisions	10	Advisory Committee Reaction	
Proposed Plan Revisions	18	to Public Comments	75
Three Mile Road	21	Final Recommended Jurisdictional	
Extension of Memorial Drive		Highway System Plan	78
Between Chickory Road		Plan Implementation	90
and CTH KR	25	Federal Level	90
CTH KR Between		U. S. Department of	
STH 31 and STH 32	25	Transportation, Federal	
Extension of Mt. Pleasant Street	28	Highway Administration	90
Extension of Melvin Street		State Level	90
Between Green Bay Road		Wisconsin Department	
and Mt. Pleasant Street	28	of Transportation	90
STH 38 Jurisdictional		Regional Level	90
Changes Between County		Southeastern Wisconsin Regional	
Line and CTH K	29	Planning Commission	90
Chickory Road Extension		County Level	90
Between Meachem Road		Racine County Board	90
and Taylor Avenue	30	Local Level	91
STH 11 East of IH 94	30	Summary	91

LIST OF APPENDICES

	Page
Appendix	
A Study of the Extension of Three Mile	
Road Between Green Bay Road and STH 31	95

Table A-1	Comparison of Benefits and Costs of Extension of Three Mile Road Between Green Bay Road and STH 31 Relative to the No Build Alternative	104
Figure A-1	Proposed Cross-Section for Three Mile Road Extension	99
Map A-1	Alternative Alignments for the Extension of Three Mile Road Between Green Bay Road and STH 31	97
Map A-2	Location of Origins and Destinations of Vehicle Trips Using the Three Mile Road Extension	101
Map A-3	Forecast Year 2000 Average Weekday Traffic that Would be Removed from, or Added to, Arterial Facilities Upon the Implementation of the Proposed Three Mile Road Extension	102

LIST OF TABLES

Table		Page
1	Summary of Functional Criteria for Jurisdictional Classification of Arterial Highways in Racine County	4
2	Major Arterial Street and Highway System Improvement and Expansion Projects Completed in Racine County: 1975-1989	10
3	Status of Functional Highway Improvements in Racine County by Improvement Category and Planned Jurisdictional System: 1975-1989	12
4	Jurisdictional Highway System Transfers and New Facilities Completed in Racine County: 1975-1989	14
5	Pattern of Existing Through Traffic in the Burlington Area	35
6	Pattern of Existing Internal-External Traffic in the Burlington Area	40
7	Evaluation of Burlington Bypass Alternatives	47
8	Evaluation of Burlington Area Outer Bypass Alternatives by Segment	58
9	Evaluation of Combinations of Alternative Alignments for the Burlington Area Outer Bypass	61
10	Preliminary Recommended Amendments to the Racine County Jurisdictional Highway System Plan as Taken to Public Hearing	67
11	Capacity Improvements Recommended Under the Preliminary Racine County Jurisdictional Highway System Plan	69
12	Changes in Highway System Jurisdictional Responsibility Under the Preliminary Racine County Jurisdictional Highway System Plan	71
13	Arterial Street Mileage by Jurisdiction Under the Preliminary Racine County Jurisdictional Highway System Plan	73
14	Estimated Cost to the Year 2000 of the Preliminary Amended Racine County Jurisdictional Highway System Plan	74
15	Capacity Improvements Recommended Under the Final New Racine County Jurisdictional Highway System Plan	81
16	Changes in Highway System Jurisdictional Responsibility Under the Final Recommended Racine County Jurisdictional Highway System Plan	83
17	Arterial Street Mileage by Jurisdiction Under the Final Recommended Racine County Jurisdictional Highway System Plan	85
18	Estimated Cost to the Year 2000 of the Final New Racine County Jurisdictional Highway System Plan as Amended	87

Table	Page
19 Estimated Annual Cost and Local Funding Required by Level and Unit of Government of the Final New Racine County Jurisdictional Highway System Plan as Amended	88

LIST OF FIGURES

Figure	Page
1 Existing Turning Movements at the Intersections of CTH MM and STH 38 and Rapids Drive and STH 38	24
2 Pattern of Through Trips in the Burlington Area	36
3 Pattern of Existing Internal-External Traffic in the Burlington Area	38
4 Relationship Between Arterial Vehicle Miles of Travel and Arterial Mileage	86
5 Relationship Between Total Vehicle Miles of Travel and Total Mileage	86

LIST OF MAPS

Map	Page
1 Jurisdictional Highway System Plan for Racine County Adopted in 1975	6
2 Second Generation Jurisdictional Highway System Plan for Racine County	7
3 Jurisdictional Highway System Plan for Racine County as Amended to Date	9
4 Arterial Street and Highway Projects Completed in Racine County by Improvement Category: 1975-1989	11
5 Jurisdictional Highway System Transfers Completed in Racine County: 1989	13
6 Functional Changes to the Racine County Jurisdictional Highway System Plan Recommended in SEWRPC Memorandum Report No. 9	15
7 Jurisdictional Changes to the Racine County Jurisdictional Highway System Plan Recommended in SEWRPC Memorandum Report No. 9	17
8 Proposed New Roadway to Provide More Direct Connection Between Four Mile Road and IH 94 Interchange at CTH K	19
9 Potential Realignment and Widening of the Intersections of CTH MM and STH 38 and STH 38 and Rapids Drive as an Alternative to the Extension of Three Mile Road	26
10 Option to the Potential Improvement of the Intersections of CTH MM and STH 38 and STH 38 and Rapids Drive	27
11 Potential Alignment for the Extension of Melvin Street	29
12 Jurisdictional Responsibility of STH 38 Between Milwaukee County-Racine County Line and CTH K: Existing Jurisdictional Plan-Recommended Change and Currently Proposed Change	31
13 Potential Option for the Segment of CTH K to be Constructed on New Alignment	33
14 Original Racine County Year 1990 Jurisdictional Highway System Plan for the Burlington Area Prepared in 1966	34
15 Racine County Year 2000 Jurisdictional Highway System Plan as Amended in 1978 for the Burlington Area	35
16 Estimated Total Existing Through and Internal-External Vehicle Travel on an Average Weekday in the City of Burlington	40

Map	Page	
17	Estimated Existing Through and Internal-External Truck Travel on an Average Weekday in the Burlington Area	41
18	Estimated Existing Average Weekday Traffic in the Burlington Area	41
19	Burlington Area Arterial Streets Estimated to Carry Average Weekday Traffic Volumes Exceeding Their Design Capacity: 1988	42
20	Forecast Year 2010 Average Weekday Traffic in the Burlington Area	42
21	Burlington Area Arterial Streets Expected to Carry Forecast Year 2010 Traffic Volumes Which Will Exceed Their Design Capacity Assuming No Arterial System Improvements	43
22	Alternative Inner Bypass Alignments for the City of Burlington	44
23	Alternative Outer Bypass Alignments for the City of Burlington	46
24	Preliminary Recommended Jurisdictional Highway System Plan for the City of Burlington Area	55
25	Alternative Alignments for the Burlington Area Outer Bypass	56
26	Alternative Alignments for the Burlington Area Outer Bypass by Segment	57
27	Alternative Combinations of Alignments for the Burlington Area Outer Bypass	59
28	Recommended Preliminary Jurisdictional Highway System Plan to be Taken to Public Hearing	66
29	Capacity Improvements Under the Preliminary Racine County Jurisdictional Highway System Plan	68
30	Changes in Highway System Jurisdictional Responsibility in Racine County Under the Preliminary Racine County Jurisdictional Highway System Plan	70
31	Final Proposed Realignment of CTH MM and Rapids Drive at STH 38	76
32	Final Recommended Racine County Jurisdictional Highway System Plan	79
33	Capacity Improvements Recommended Under the Final New Racine County Jurisdictional Highway System Plan	80
34	Changes in Highway System Jurisdictional Responsibility Under the Final Recommended Racine County Jurisdictional Highway System Plan	82

SEWRPC PLAN AMENDMENT
RACINE COUNTY JURISDICTIONAL
HIGHWAY SYSTEM PLAN—2000

INTRODUCTION

On December 2, 1975, the Racine County Board of Supervisors adopted a jurisdictional highway system plan. That plan, set forth in SEWRPC Planning Report No. 22, A Jurisdictional Highway System Plan for Racine County, was the result of a comprehensive study of the jurisdictional responsibilities for the construction, maintenance, and operation of arterial streets and highways in Racine County. Prepared under the guidance of a Technical Coordinating and Advisory Committee consisting of federal, state, county, and local officials, the plan was intended to provide the County with an integrated highway transportation system that would effectively serve and promote a desirable land use pattern in the County; abate traffic congestion; reduce travel time and costs; and reduce accident exposure. The plan would serve to concentrate appropriate resources and capabilities on corresponding areas of need, thus assuring the most effective use of all public resources in the provision of highway transportation.

In the 12 years since adoption of the Racine County jurisdictional highway system plan, some progress has been made toward implementation of the plan, and certain revisions have been made to that plan to take into account changing conditions. Accordingly, the purpose of this report is fourfold. First, the report is intended to document the Racine County jurisdictional highway system plan as adopted and amended to date. Second, the report is intended to summarize the major actions taken to date to implement both the functional highway improvement and jurisdictional responsibility elements of the plan. Third, the report is intended to document additional proposed revisions to the plan, including those identified in a special study of the highway needs of eastern Racine County and documented in SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County. Finally, this report is intended to serve as a redescription of the Racine County jurisdictional highway system plan for use in the preparation of a new regional highway system plan in 1990. As an amendment to SEWRPC Planning Report

No. 22, this document is intended to be reviewed and approved by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County; by the Public Works Committee of the Racine County Board of Supervisors; by the Board itself; and by the Southeastern Wisconsin Regional Planning Commission as the designated metropolitan transportation planning organization (MPO) for the Racine and adjacent Kenosha and Milwaukee urbanized areas.

BACKGROUND

Original Racine County
Jurisdictional Highway System Plan

The Racine County jurisdictional highway system plan adopted in 1975 was based upon the functional highway system recommended in the original regional transportation system plan.¹ That plan consisted of recommendations concerning the location, type, capacity, and service levels of the arterial street and highway facilities needed to serve the developing and changing Southeastern Wisconsin Region. Except for freeways, however, that original plan did not contain recommendations as to which levels and agencies of government should assume responsibility for the construction, operation, and maintenance of each of the various facilities included in the functional plan. It was recommended in the plan that the Wisconsin Department of Transportation assume jurisdictional responsibility for all proposed freeways. The subsequently prepared Racine County jurisdictional highway system plan, then, together with similar plans for the six other counties comprising the Southeastern Wisconsin Region,

¹ See SEWRPC Planning Report No. 7, The Land Use-Transportation Study, Volume One, Inventory Findings: 1963, May 1965; Volume Two, Forecasts and Alternative Plans: 1990, June 1966; and Volume Three, Recommended Regional Land Use and Transportation Plans: 1990, November 1966.

represented a logical sequel to, and an implementation action recommended in, the original regional transportation system plan. In effect, the functional highway system plan prepared at the regional level was converted to a jurisdictional highway system plan on a county-by-county basis.

The primary purpose of jurisdictional highway system planning is to group into classes arterial streets and highways that serve similar functions and which, accordingly, should have similar design standards and levels of service. Once this classification process is completed, it is possible to logically assign jurisdictional responsibility for the design, construction, operation, and maintenance of each of the groups to the state, county, and local levels of government. Thus, each county jurisdictional highway system plan indicates which highway facilities should be the primary responsibility of state government, county government, and local—city, village, or town—government.

The Racine County jurisdictional highway system plan is intended to help Racine County:

- Cope with the growing traffic demands within the County;
- Adjust the existing jurisdictional highway systems to changes in land use development along their alignment;
- Maintain an integrated county trunk highway system within the County;
- Adjust the existing jurisdictional highway system to better serve the major changes in traffic patterns taking place within the County; and
- Achieve an equitable distribution of arterial street and highway development and maintenance costs and revenues among the various levels and agencies of government concerned.

The Racine County jurisdictional highway system plan was based upon certain “functional” criteria for jurisdictional classification; that is, the plan recommendations as to whether or not a given facility should be a state trunk highway, a county trunk highway, or a local arterial street or highway were based upon careful consideration of the existing and proba-

ble future function of each facility in the total arterial highway system. The particular function that a facility serves was defined by examining three basic characteristics of the facility: 1) the kinds of trips served; 2) the land uses connected and served; and 3) the operational characteristics of the facilities themselves. The specific functional criteria used for jurisdictional classification of arterial highways in Racine County are summarized in Table 1.

The criterion selected to best characterize trip service was trip length. In general, this criterion states that the longest trips should be accommodated on state trunk highways and the shortest trips on local streets and highways, with the intermediate length trips being accommodated on county trunk highways.

With respect to the land uses connected and served, the criteria state that state trunk highways should serve land uses of areawide importance—e. g., interregional transportation terminals, such as General Mitchell International Airport; regional shopping centers; higher educational facilities; and regional industrial centers. County trunk highway facilities should serve land uses of countywide importance, such as general aviation airports, county parks, large truck terminals, and subregional commercial and industrial centers. Local arterials should serve land uses of local importance.

The criteria for the operational characteristics involve considerations of system continuity, spacing, and traffic volume.

In the jurisdictional highway system planning process, careful analyses were made to identify the trips served by, the land uses served by, and the operational characteristics of each facility. Application of the criteria to these data resulted in the recommended jurisdictional highway system plan.² In general, the recommended state trunk highways, which are supported primarily by the taxpayers of the entire State, serve the longest trips and the most important land uses, and carry the highest traffic volumes. The recommended county trunk highways, which are

²See *SEWRPC Planning Report No. 22, A Jurisdictional Highway System Plan for Racine County, February 1975.*

supported primarily by county taxpayers, serve trips of intermediate length and intermediate traffic volumes. The local trunk facilities, which are supported primarily by municipal taxpayers, serve the shortest trips, serve locally oriented land uses, and carry the lightest traffic volumes.

The jurisdictional highway system plan for Racine County adopted by the County Board of Supervisors on December 2, 1975, and by the Regional Planning Commission on December 4, 1975, is shown on Map 1. The arterial street and highway system recommended in the original plan totaled about 451 route miles of facilities. Of this total arterial system, 165 route miles, or about 36 percent, were proposed to comprise the state trunk highway system, representing an increase of 9 route miles over the then-existing system of state trunk highways and connecting streets. The system was expected to carry about 69 percent of the arterial traffic demand exerted within Racine County. The recommended state trunk highway system is identified by red lines on Map 1.

The county trunk highway system recommended in the original plan consisted of 220 route miles, or 49 percent of the total arterial network. This system represented an increase of 65 route miles over the then-existing county trunk highway system. The county trunk highways were expected to carry about 24 percent of the arterial travel demand. The initially recommended county trunk system is identified by blue lines on Map 1.

Finally, the original plan recommended a local trunk highway system consisting of the remaining 66 route miles of arterial facilities, or about 15 percent of the total planned arterial network. The local trunk highways were expected to carry about 7 percent of the arterial travel demand. This recommended local system is identified by green lines on Map 1.

Revisions to the Original Plan

Since adoption, the Racine jurisdictional highway system plan has been amended three times. A brief review of these amendments follows.

Second Generation Regional Transportation Plan—1978: The most extensive set of revisions to the original jurisdictional highway system plan for Racine County was made in the adoption of the second generation regional transportation

system plan.³ This plan, which is shown on Map 2, was adopted by the Regional Planning Commission on June 1, 1978, and by the Racine County Board of Supervisors on June 12, 1979.

The second generation regional transportation system plan took into account changing conditions throughout southeastern Wisconsin. These included changes in forecast levels of population and economic activity, household formation rates, and labor force participation rates, and, of particular importance within Racine County, changes in public attitudes toward the construction of additional freeways and bypass facilities.

Of particular significance to the Racine County arterial street and highway system plan and the jurisdictional assignments based on that original plan was the elimination from that plan of the following four major arterial street and highway improvements: 1) the Racine Loop Freeway arterial facility; 2) the relocation of STH 11 to a new alignment from the southern leg of the Racine Loop Freeway arterial facility to the originally proposed Burlington outer bypass; 3) the Burlington outer bypass which would have carried STH 36 around the east side of Browns Lake and the south side of the City of Burlington; and 4) the STH 83 western bypass of the Villages of Rochester and Waterford. The elimination from the plan of these four major new highway facilities resulted in numerous other changes to the functional highway system plan and the resulting reassignment of jurisdictional responsibility to the entire network. All of these revisions were reviewed and approved by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County.

Lake Freeway South Corridor Plan Amendment—1981: During 1981, another change was made to the original functional highway network set forth in the 1975 jurisdictional highway

³See *SEWRPC Planning Report No. 25, A Regional Land Use Plan and a Regional Transportation Plan for Southeastern Wisconsin: 2000, Volume One, Inventory Findings, April 1975; and Volume Two, Alternative and Recommended Plans, May 1978.*

Table 1

**SUMMARY OF FUNCTIONAL CRITERIA FOR JURISDICTIONAL
CLASSIFICATION OF ARTERIAL HIGHWAYS IN RACINE COUNTY**

Criteria	Arterial Type		
	I (state trunk)	II (county trunk)	III (local trunk) ^a
<u>Trip Service</u> Average Trip Length (miles)	<u>Urban</u> More than 19	<u>Rural</u> 30 or more	<u>Urban</u> 7 to 19
			<u>Rural</u> Less than 30
			<u>Urban</u> Less than 7
<u>Land Use Service</u> Transportation Terminals	<u>Urban^b and Rural^c</u> Connect and serve interregional rail, bus, and major truck terminals, and air-carrier airports	<u>Urban^b and Rural^c</u> Connect and serve freeway interchanges, general aviation airports, pipeline terminals, major intraregional truck terminals, and rapid transit and modified rapid transit system loading and unloading points not served by Type I arterials	<u>Urban^b</u> Connect and serve truck terminals generating 250 or more truck trips per average weekday, and off-street parking facilities having a minimum of 500 parking spaces not served by Types I and II arterials
Recreational Facilities	<u>Urban and Rural</u> Connect and serve all state parks having a gross area of 500 or more acres	<u>Urban and Rural</u> Connect and serve regional parks and special recreational use areas of countywide significance	<u>Urban</u> Connect and serve community parks not served by Types I and II arterials
Commercial Centers	<u>Urban and Rural</u> Connect and serve major retail and service centers	<u>Urban and Rural</u> Connect and serve community retail and service centers not served by Type I arterials	<u>Urban</u> Connect and serve neighborhood retail and service commercial centers not served by Types I and II arterials
Industrial Centers	<u>Urban and Rural</u> Connect and serve major regional industrial centers	<u>Urban and Rural</u> Connect and serve major community industrial centers not served by Type I arterials	<u>Urban</u> Connect and serve major community industrial centers not served by Types I and II arterials
Institutional	<u>Urban and Rural</u> Connect and serve universities, county seats, and state institutions	<u>Urban and Rural</u> Connect and serve county institutions, accredited degree-granting colleges, public vocational schools, and community hospitals not served by Type I arterials	<u>Urban</u> Connect and serve city and village halls and high schools not served by Types I and II arterials
Urban Areas	<u>Rural</u> Connect and serve urban areas of 2,500 or more population	<u>Rural</u> Connect and serve developed areas of 500 or more population	--
<u>Operational Characteristics</u> System Continuity	<u>Urban and Rural</u> Interregional or regional continuity comprising total systems at the regional and state levels	<u>Urban and Rural</u> Intermunicipality and intercounty continuity comprising integrated systems at the county level	<u>Urban</u> Intracommunity continuity comprising an integrated system at the city or village level
Spacing	<u>Urban and Rural</u> Minimum 2 miles	<u>Urban and Rural</u> Minimum 1 mile	<u>Urban</u> Minimum 0.5 mile
Volume	<u>Urban</u> Minimum 10,000 vehicles per average weekday (1990 forecast)	<u>Urban</u> 3,500 to 10,000 vehicles per average weekday (1990 forecast)	<u>Urban</u> Fewer than 3,500 vehicles per average weekday (1990 forecast)
	<u>Rural</u> Minimum 6,500 vehicles per average weekday (1990 forecast)	<u>Rural</u> Maximum 6,500 vehicles per average weekday (1990 forecast)	<u>Rural</u> --
Traffic Mobility	<u>Urban</u> Average overall travel speed ^d 30 to 70 miles per hour	<u>Urban</u> Average overall travel speed ^d 25 to 50 miles per hour	<u>Urban</u> Average overall travel speed ^d 20 to 40 miles per hour
	<u>Rural</u> Average overall travel speed 40 to 70 miles per hour	<u>Rural</u> Average overall travel speed 30 to 60 miles per hour	<u>Rural</u> --
Land Access Control	Full or partial control of access ^{e,f}	Partial control of access ^f	Minimum control of access ^g

(Footnotes to Table 1)

^aA rural subcategory for Type III arterials is not provided.

^bUrban arterial facilities are considered to "serve and connect" given land uses when direct access from the facility to roads serving the land use area is available within the following maximum over-the-road distances from the main vehicular entrance to the land use to be served: Type I arterial facility, 1 mile; Type II arterial facility, 0.5 mile; Type III arterial facility, 0.25 mile.

^cRural arterial facilities are considered to "connect and serve" given land uses when direct access from the facility to roads serving the land use area is available within the following maximum over-the-road distances from the main vehicular entrance to the land use to be served: Type I arterial facility, 2 miles; Type II arterial facility, 1 mile.

^dAverage overall travel speed is defined as the sum of the distances traveled by all vehicles using a given section of highway during an average weekday divided by the sum of the actual travel times, including traffic delays.

^eFull control of access is defined as the exercise of eminent domain or police power to control access so as to give preference to movement of through traffic by providing access connections only at selected public roads via grade-separated interchanges.

^fPartial control of access is defined as the exercise of eminent domain or police power to control access so as to give preference to the movement of through traffic to a degree that, in addition to access connections at selected public roads, there may be some direct access to abutting land uses, with generally one point of reasonably direct access to each parcel of abutting land as these parcels existed at the time of an official declaration that partial control of access shall be exercised.

^gMinimum control of access is defined as the exercise of eminent domain or police power to regulate the placement and geometrics of direct access roadway connections as necessary for safety.

Source: SEWRPC.

system plan for Racine County.⁴ This change involved the conversion of the originally proposed Lake Freeway, which would have provided a second north-south freeway facility east of IH 94 from downtown Milwaukee to the Illinois state line, to a standard surface arterial facility generally along the same alignment as the previously proposed freeway facility. This plan amendment, which was adopted by the Regional Planning Commission on June 18, 1981, and by the Racine County Board of Supervisors on January 25, 1983, called for the Wisconsin Department of Transportation to conduct a preliminary engineering study of that portion of the proposed lake arterial facility from E. Layton Avenue near General Mitchell International Airport in Milwaukee County south to the Illinois state line. It was intended that this study would establish the horizontal and vertical alignment of the proposed facility, as well as right-of-way requirements, access control requirements, and the proper location of a southern terminus of the facility. That study has not yet been made.

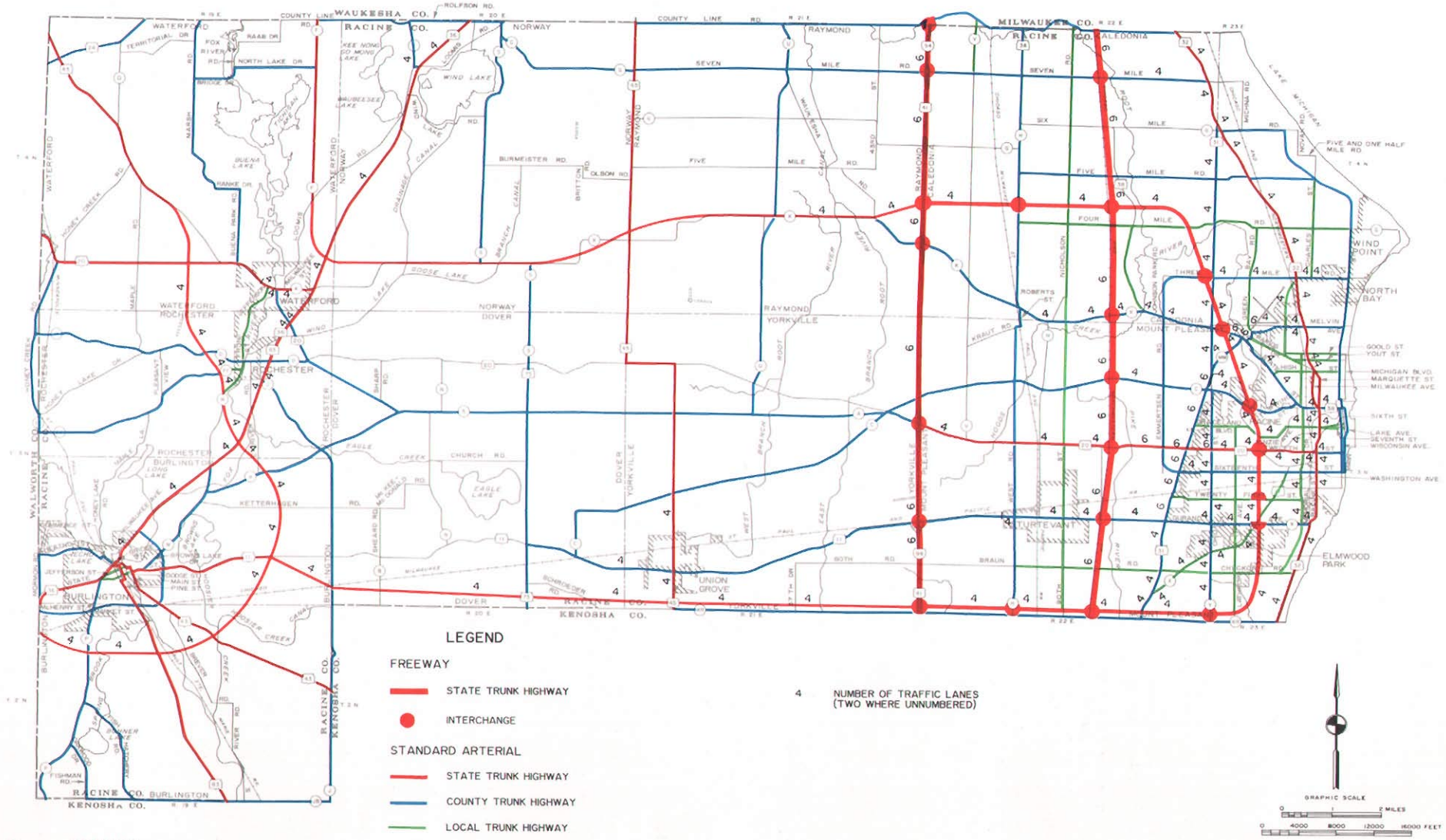
Caledonia Plan Amendment—1982: The third change to the original Racine County jurisdictional highway system plan came about in 1982 and was made at the request of the Town Board of the Town of Caledonia.⁵ The original plan had called for the improvement and extension of Whitewater Street from Six Mile Road south to Five Mile Road. After conducting preliminary engineering studies attendant to the proposed Whitewater Street improvement, and after holding public hearings thereon, the Town Board requested that the plan be changed to eliminate the Whitewater Street improvement and extension, and in its place identify for improvement Six Mile Road from Novak Road to Whitewater Street; Novak Road from Five and One-Half Mile Road to Six Mile Road; Five and One-Half Mile Road from Novak Road to Charles Street; and Charles Street from Five Mile Road to Five and One-Half Mile Road. This change in the plan was recommended by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County, and was adopted by the Regional Planning Commission

⁴See Amendment to the Regional Transportation Plan—2000, Lake Freeway South Corridor, SEWRPC, June 1981.

⁵See Amendment to the Regional Transportation Plan—2000, Racine County, SEWRPC, December 1982.

Map 1

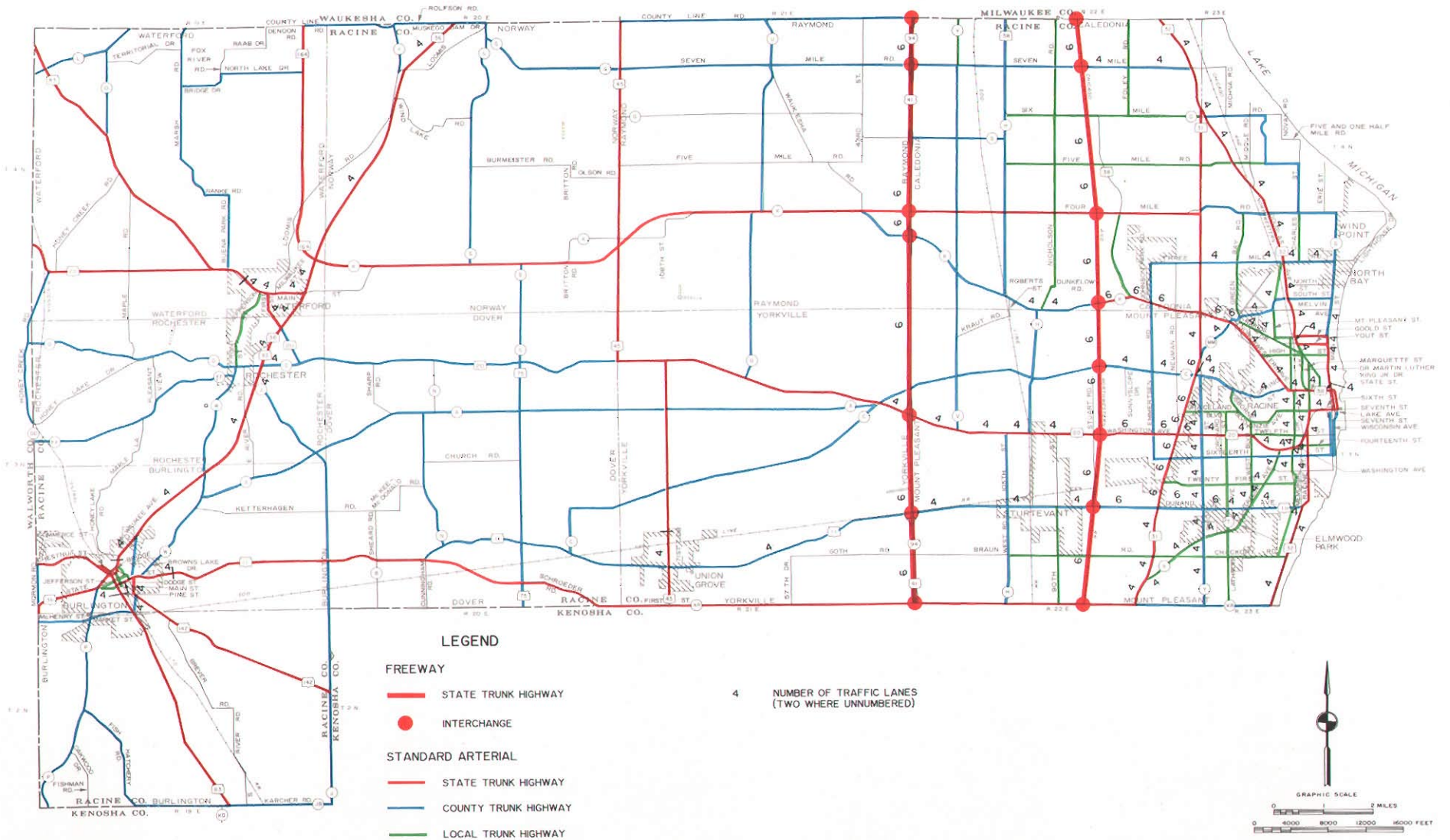
JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR RACINE COUNTY ADOPTED IN 1975



Source: SEWRPC.

Map 2

SECOND GENERATION JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR RACINE COUNTY



Source: SEWRPC.

on December 2, 1982, and by the Racine County Board of Supervisors on February 22, 1983.

Overview of Currently Adopted Plan

The jurisdictional highway system plan for Racine County as amended to date is shown on Map 3. The arterial street and highway system recommended in the amended plan totals about 443 route miles of facilities. Of this total arterial system, 161 route miles, or about 36 percent, are proposed to comprise the state trunk highway system. This represents an increase of two route miles over the present system of state trunk highways and connecting streets. The state trunk system is expected to carry about 65 percent of the arterial traffic demand within the County. The currently recommended state trunk highway system is identified by red lines on Map 3.

The county trunk highway system recommended in the plan as amended to date consists of about 214 route miles, or 48 percent of the total arterial network. This system would represent an increase of 64 route miles over the existing county trunk highway system. The county trunk highways are expected to carry about 25 percent of the arterial travel demand within the County. The currently recommended county trunk highway system is identified by blue lines on Map 3.

Finally, the amended plan currently recommends 68 route miles of local trunk highways, or about 15 percent of the total planned arterial network. This recommended local system is identified by green lines on Map 3.

MAJOR PLAN IMPLEMENTATION ACTIONS TO DATE

Functional Highway Improvements

Of the 443-mile total arterial street and highway network recommended for Racine County, about 348 miles, or 78 percent, are roads that may be categorized for functional improvement purposes by the term "system preservation"—that is, existing facilities that over the plan implementation period will require either no substantial work; resurfacing only; or, in some cases, reconstruction to provide the same traffic-carrying capacity. An additional 60 miles, or 14 percent, may be categorized by the term "system improvement"—that is, existing facilities that over the plan implementation period will need to be reconstructed and widened to

provide additional traffic-carrying capacity, or for which construction of a replacement facility on new alignment is proposed. The remaining 35 miles, or 8 percent, may be categorized by the term "system expansion"—that is, totally new arterial highway facilities.

Those functional highway projects undertaken in Racine County since the adoption of the original jurisdictional highway system plan in 1975 which fall into the system improvement and system expansion categories as defined above are identified in Table 2 and shown on Map 4. Of the eight major projects identified, two fall into the system expansion category and six into the system improvement category. The two expansion projects consist of the extension of 16th Street from STH 31 west to Emmertsen Road and the extension of STH 164—previously CTH F—from Loomis Road south and east to STH 36. The six improvement projects consist of the widening of STH 11 to provide a four-lane facility from CTH H to 86th Street; the widening of STH 20 to provide a four-lane facility from IH 94 east to the Chicago & North Western Railway right-of-way; the widening of STH 31 to provide a six-lane highway facility from STH 11 to CTH MM; the widening of CTH MM to provide a four-lane highway facility from STH 31 to STH 38; the relocation of CTH K from Hillcrest Road to a connection with the newly extended STH 164; and the widening of 6th Street to provide a four-lane facility from Kinzie Avenue to Marquette Street. Together these system improvement and expansion projects total about 13 miles, and represent about 14 percent of the total miles of system improvement and expansion projects envisioned in the plan as amended to date.

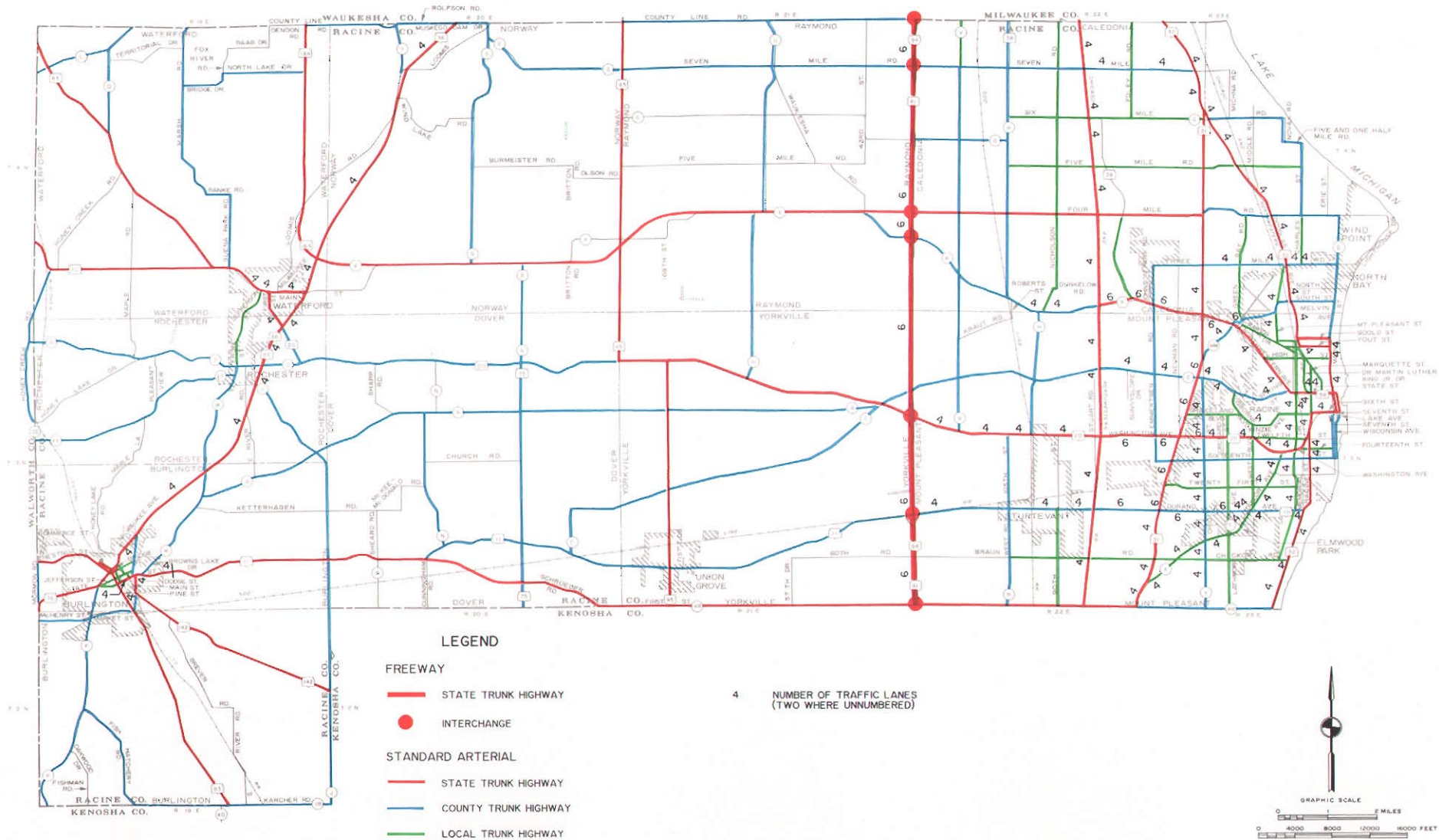
In addition to the foregoing system improvement and expansion projects, about 76 miles of facilities in the system preservation category have been improved through resurfacing and reconstruction projects. This represents 22 percent of the system preservation work envisioned in the plan. The status of all functional highway improvement projects by improvement category and by planned jurisdictional system is summarized in Table 3.

Jurisdictional Highway Transfers

Progress made to date in implementing the jurisdictional transfer element of the Racine County plan is summarized on Map 5 and in Table 4. Of the 56 miles of highway proposed to be added to the state trunk highway system,

Map 3

JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR RACINE COUNTY AS AMENDED TO DATE



Source: SEWRPC.

Table 2

MAJOR ARTERIAL STREET AND HIGHWAY SYSTEM IMPROVEMENT
AND EXPANSION PROJECTS COMPLETED IN RACINE COUNTY: 1975-1989

Facility	Limits	Miles	Project Type
<u>State</u>			
STH 11	CTH H to 86th Street	1.3	Improvement
STH 20	IH 94 to Lake Arterial	3.9	Improvement
STH 31	STH 11 (Durand Avenue) to CTH MM	3.2	Improvement
STH 164	Loomis Road to STH 36	1.2	Expansion
Subtotal	--	9.6	--
<u>County</u>			
CTH MM	STH 31 to STH 38	0.9	Improvement
CTH K	STH 36 to Hillcrest Road	1.2	Improvement
Subtotal	--	2.1	--
<u>Local</u>			
6th Street	Kinzie Avenue to Marquette Street	0.9	Improvement
16th Street	STH 31 to Emmertsen Road	0.4	Expansion
Subtotal	--	1.3	--
Total	--	13.0	--

Source: SEWRPC.

about 7.6 miles have been added to date, or about 14 percent of the total proposed. The new state trunk highway facilities consist of Durand Avenue from Taylor Avenue to STH 32 in the City of Racine, together with a series of streets in the downtown area of the City of Burlington where STH 11 and STH 83 have been relocated as recommended in the plan, and STH 164 from the Waukesha County line to STH 36.

Of the 103 miles of highways proposed to be added to the county trunk highway system, about 2.39 miles, or about 2 percent of the total proposed, have been added to date, consisting of two short segments of Loomis Road in the Town of Norway, and STH 24 between the Waukesha County line and the Walworth County line in the Town of Waterford. In addition, the new CTH K facility that connects at STH 36 in the Town of Waterford was added to the county trunk system. This facility, however, is to be transferred to the state trunk highway system under the plan.

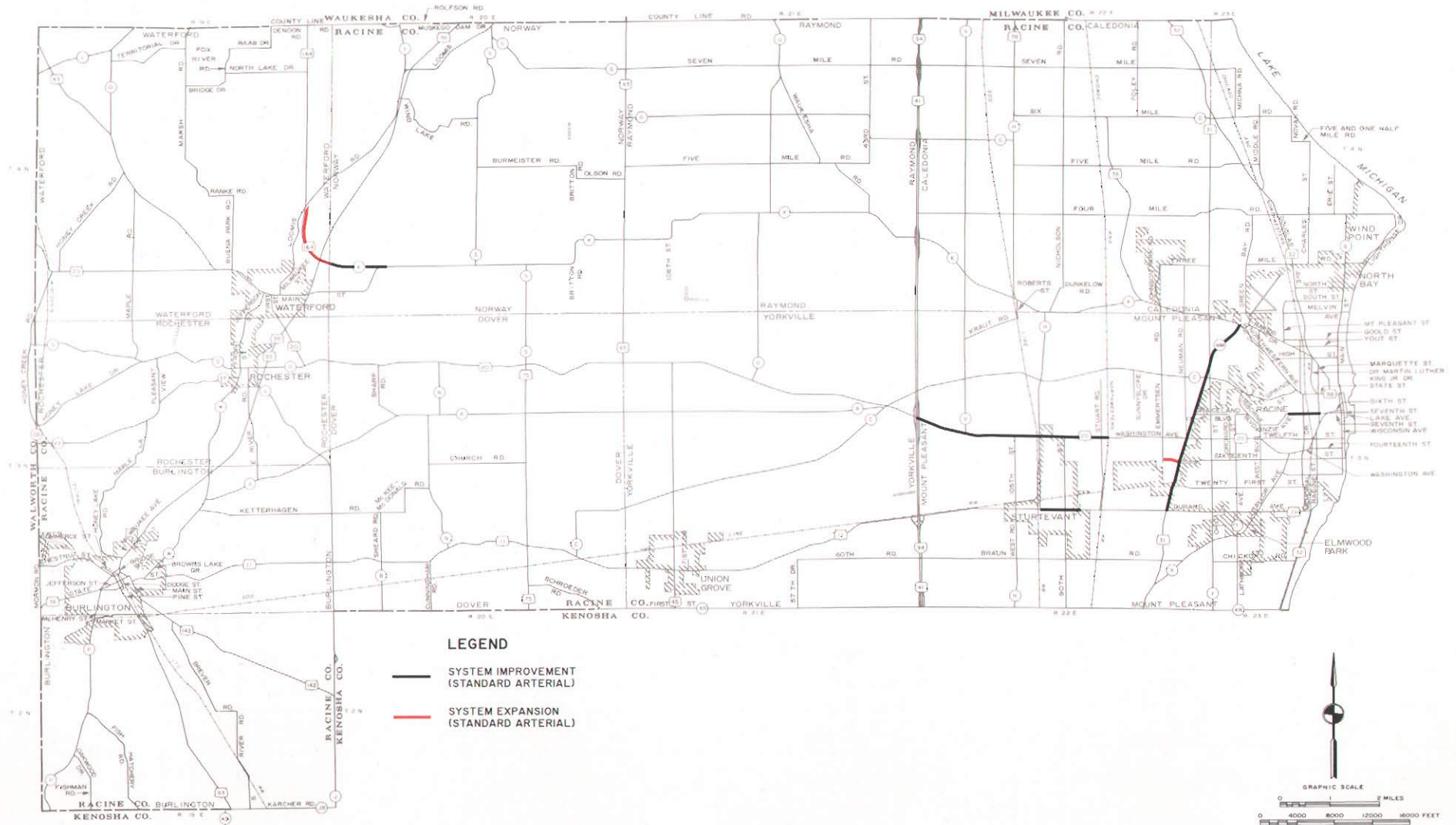
About four miles of former state and county trunk facilities have been transferred to local jurisdiction. As shown in Table 4, these facilities include portions of Taylor Avenue and 14th Street in the City of Racine, and Main Street Road in the Village of Waterford and the Towns of Waterford and Norway.

PROPOSED ADDITIONAL
PLAN REVISIONS

Locally perceived needs and changing conditions have brought about the need to consider additional revisions to the Racine County jurisdictional highway system plan. As a first step toward this end, the Racine County Board of Supervisors, on August 27, 1985, asked the Regional Planning Commission to reevaluate the need for arterial highway improvements in eastern Racine County, in particular that portion of eastern Racine County proposed in the original plan to be served by the Racine Loop

Map 4

ARTERIAL STREET AND HIGHWAY PROJECTS COMPLETED IN RACINE COUNTY BY IMPROVEMENT CATEGORY: 1975-1989



Source: SEWRPC.

Table 3

**STATUS OF FUNCTIONAL HIGHWAY IMPROVEMENTS IN RACINE COUNTY BY
IMPROVEMENT CATEGORY AND PLANNED JURISDICTIONAL SYSTEM: 1975-1989**

Improvement Category	Planned System			
	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
System Preservation				
Length (miles)	104.7	184.8	58.5	348.0
Projects Completed (miles)	37.8	30.5	5.7	75.8
Percent Implemented	41	17	10	22
System Improvement				
Length (miles)	33.9	20.4	5.7	60.0
Projects Completed (miles)	8.3	2.2	0.9	11.4
Percent Implemented	24	11	16	19
System Expansion				
Length (miles)	22.6	8.2	4.2	35.0
Projects Completed (miles)	1.2	0.4	--	1.6
Percent Implemented	5	5	--	5
Total System				
Length (miles)	161.2	213.4	68.4	443.0
Projects Completed (miles)	49.1	33.1	6.6	88.8
Percent Implemented	31	16	10	20

Source: SEWRPC.

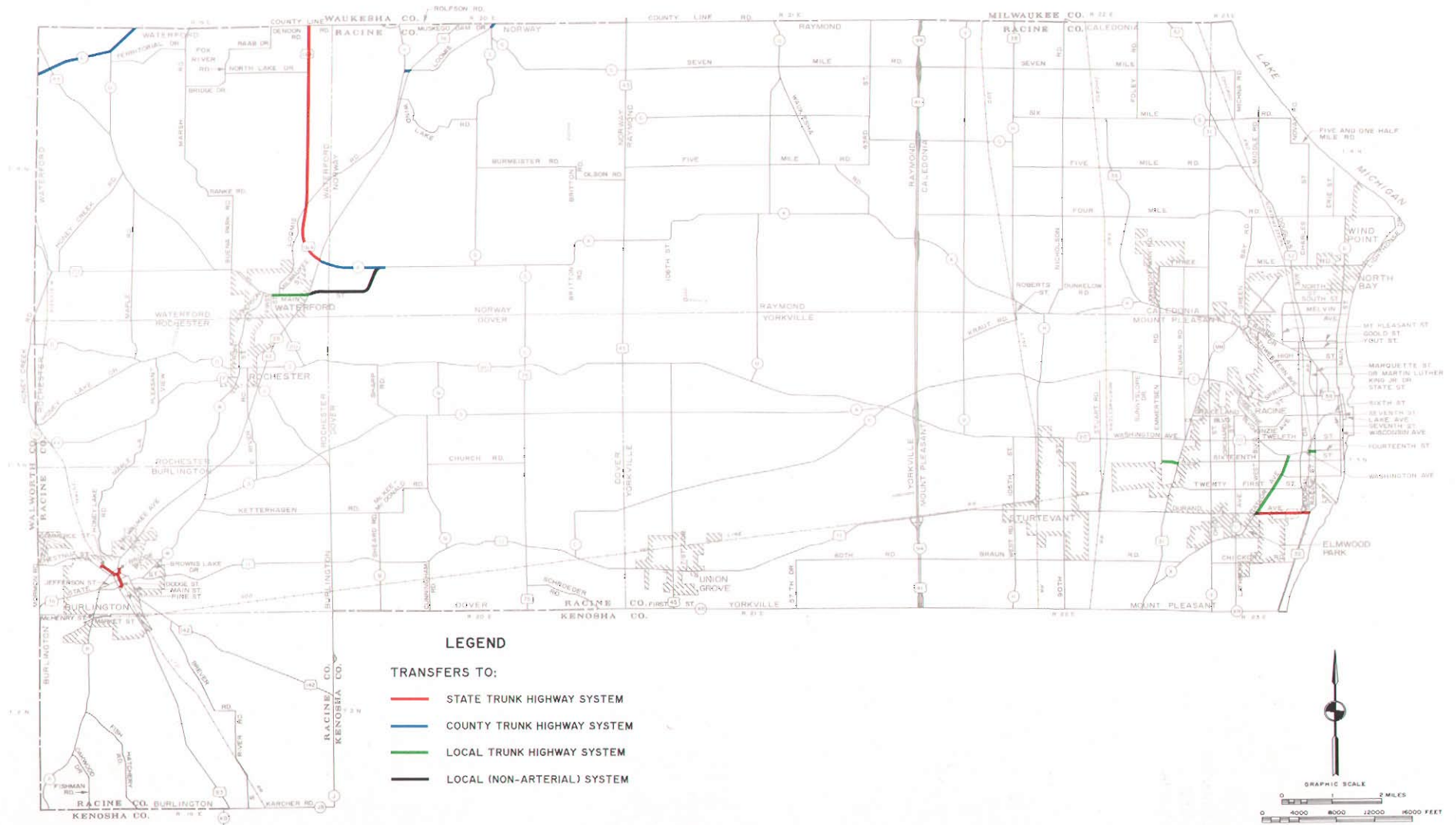
Freeway. In response to that request, the Regional Planning Commission prepared in April 1987 a report that reevaluated the existing and probable future transportation needs of that portion of eastern Racine County generally bounded by Four Mile Road on the north, STH 31 on the east, CTH KR on the south, and IH 94 on the west.⁶ In this study, alternative configurations of an arterial loop system for the area were examined, including a system of east-west and north-south arterial streets which would provide a grid rather than a loop system of arterials in the eastern Racine County area. That study has resulted in the following proposals to further amend the Racine County jurisdictional highway system plan:

⁶See SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County, April 1987.

1. Proposed Functional System Changes (see Map 6)
 - a. Provide for the reconstruction of CTH KR from IH 94 east to STH 31 to provide four travel lanes. At present, the plan recommends preservation of the existing two-lane facility. This recommendation would provide a better level of service and a more attractive entrance to the Racine community from the southwest. The facility would also better serve the proposed Racine County industrial park on STH 31 north of CTH KR.
 - b. Provide for the reconstruction of STH 20 from Stuart-Willow Roads east to the proposed lake arterial facility to provide six travel lanes. At present, the plan recommends preservation of this segment of STH 20 as a four-lane facility.

Map 5

JURISDICTIONAL HIGHWAY SYSTEM TRANSFERS COMPLETED IN RACINE COUNTY: 1989



Source: SEWRPC.

Table 4

**JURISDICTIONAL HIGHWAY SYSTEM TRANSFERS AND
NEW FACILITIES COMPLETED IN RACINE COUNTY: 1975-1989**

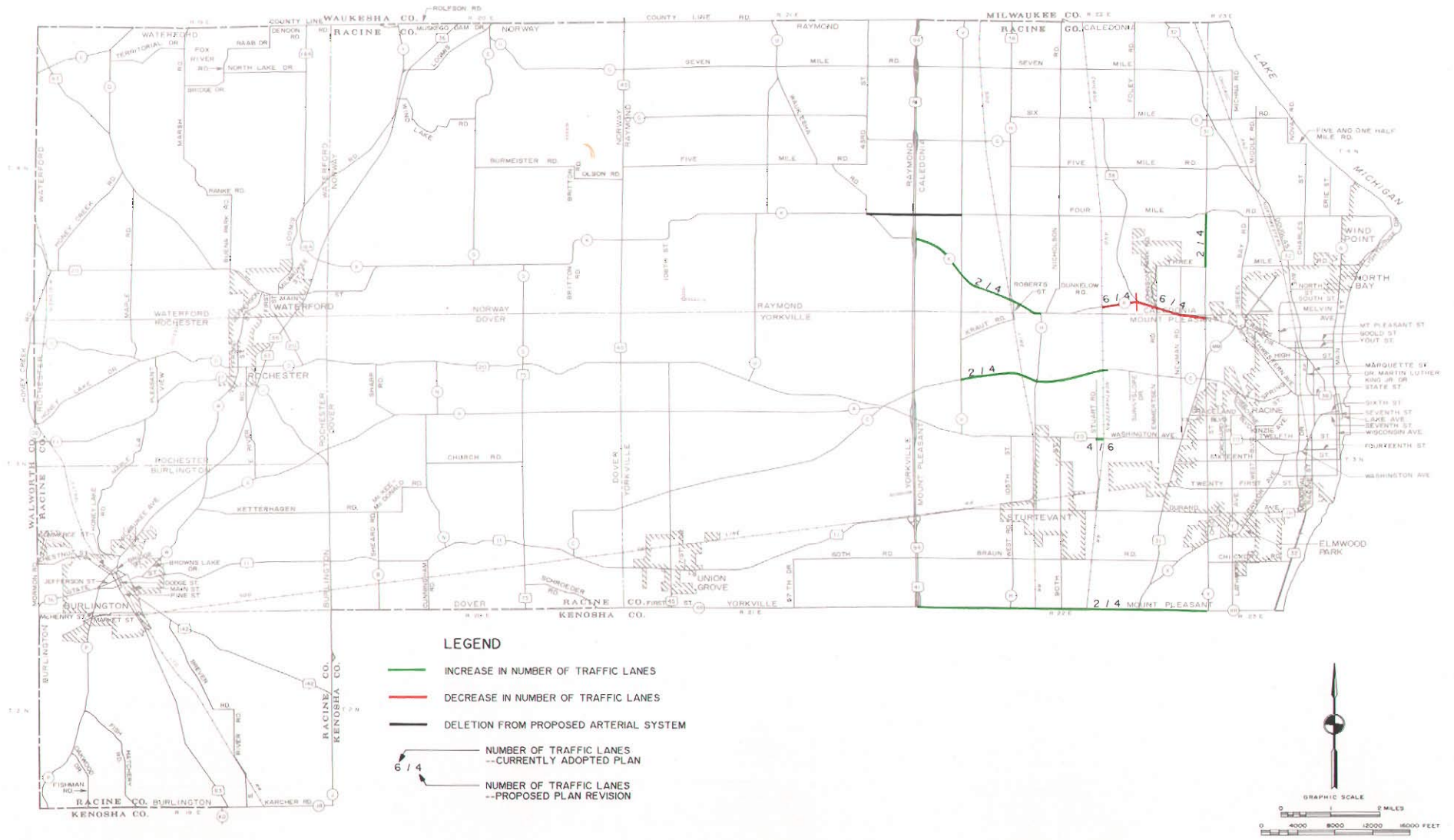
Facility	Limits	Municipality	Length (miles)
Transfers to State/New State Facilities			
<u>County to State</u>			
Durand Avenue	Ashland Avenue to STH 32 (Racine Street)	City of Racine	0.66
CTH F	Waukesha County line to STH 36	Town of Waterford	4.96
Subtotal	--	--	5.62
<u>Local to State</u>			
Durand Avenue	Taylor Avenue to Ashland Avenue	City of Racine	0.44
Bridge Street	Congress Street to Chestnut Street	City of Burlington	0.12
Chestnut Street	Bridge Street to Pine Street	City of Burlington	0.11
Dodge Street	Chestnut Street to State Street	City of Burlington	0.25
State Street	Dodge Street to Pine Street	City of Burlington	0.06
Pine Street	Chestnut Street to Milwaukee Avenue	City of Burlington	0.05
Commerce Street	Milwaukee Avenue to N. Origen Street	City of Burlington	0.26
N. Origen Street	Commerce Street to Chestnut Street	City of Burlington	0.05
Subtotal	--	--	1.34
State Total	--	--	7.62
Transfers to County/New County Facilities			
<u>State to County</u>			
STH 24	Waukesha County line to Walworth County line	Town of Waterford	2.26
<u>Local to County</u>			
Loomis Road	CTH S to Waukesha County line	Town of Norway	0.07
Loomis Road	CTH Y to STH 36	Town of Norway	0.06
Subtotal	--	--	0.13
<u>New Facility</u>			
CTH K ^a	STH 36 to Hillcrest Road	Town of Norway and Town of Waterford	1.20
County Total	--	--	3.59
Transfers to Local/New Local Facilities			
<u>State to Local</u>			
Taylor Avenue	STH 11 (Durand Avenue) to STH 20 (Washington Avenue)	City of Racine	1.37
14th Street	Washington Avenue to STH 32 (Racine Street)	City of Racine	0.14
Subtotal	--	--	1.51
<u>County to Local</u>			
Main Street Road	STH 20 and STH 83 to CTH K	Village of Waterford, Town of Waterford, and Town of Norway	2.47
<u>New Facility</u>			
16th Street	STH 31 to Emmertsen Road	Town of Mt. Pleasant	0.40
Local Total	--	--	4.38

^aThis facility is recommended for transfer to the state trunk highway system.

Source: SEWRPC.

Map 6

FUNCTIONAL CHANGES TO THE RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN RECOMMENDED IN SEWRPC MEMORANDUM REPORT NO. 9



Source: SEWRPC.

- c. Provide for the reconstruction of CTH C from CTH V east to the proposed lake arterial facility to provide four travel lanes. At present, the plan calls for the preservation of this segment of CTH C as a two-lane facility.
- d. Provide for the reconstruction of CTH K from IH 94 east to CTH H at Franksville to provide four travel lanes. At present, the plan calls for the preservation of this segment of CTH K as a two-lane facility.
- e. Provide for the reconstruction of STH 31 from Three Mile Road north to Four Mile Road to provide four travel lanes. At present, the plan calls for the preservation of this segment of STH 31 as a two-lane facility.
- f. Eliminate from the plan the currently proposed reconstruction of STH 38 from CTH K east to STH 31 to provide six travel lanes. Instead, the plan would provide for the preservation of the four travel lanes now provided on this segment of STH 38.
- g. Provide for the reconstruction of CTH K from STH 38 west to the proposed lake arterial facility to provide four travel lanes. At present, the plan calls for the reconstruction of this segment of CTH K to provide six travel lanes.
- h. Eliminate from the plan the proposed interchange of Four Mile Road and IH 94; concomitantly, eliminate from the arterial system existing Four Mile Road from IH 94 east to CTH V and the proposed construction of Four Mile Road extended west from IH 94 to existing CTH K.

2. Proposed Jurisdictional System Changes
(see Map 7)

- a. Provide for the transfer to the state trunk highway system of existing CTH K from about one mile west of IH 94 easterly to the proposed lake arterial highway facility. At present, the plan calls for the retention of this facility on the county trunk highway system.

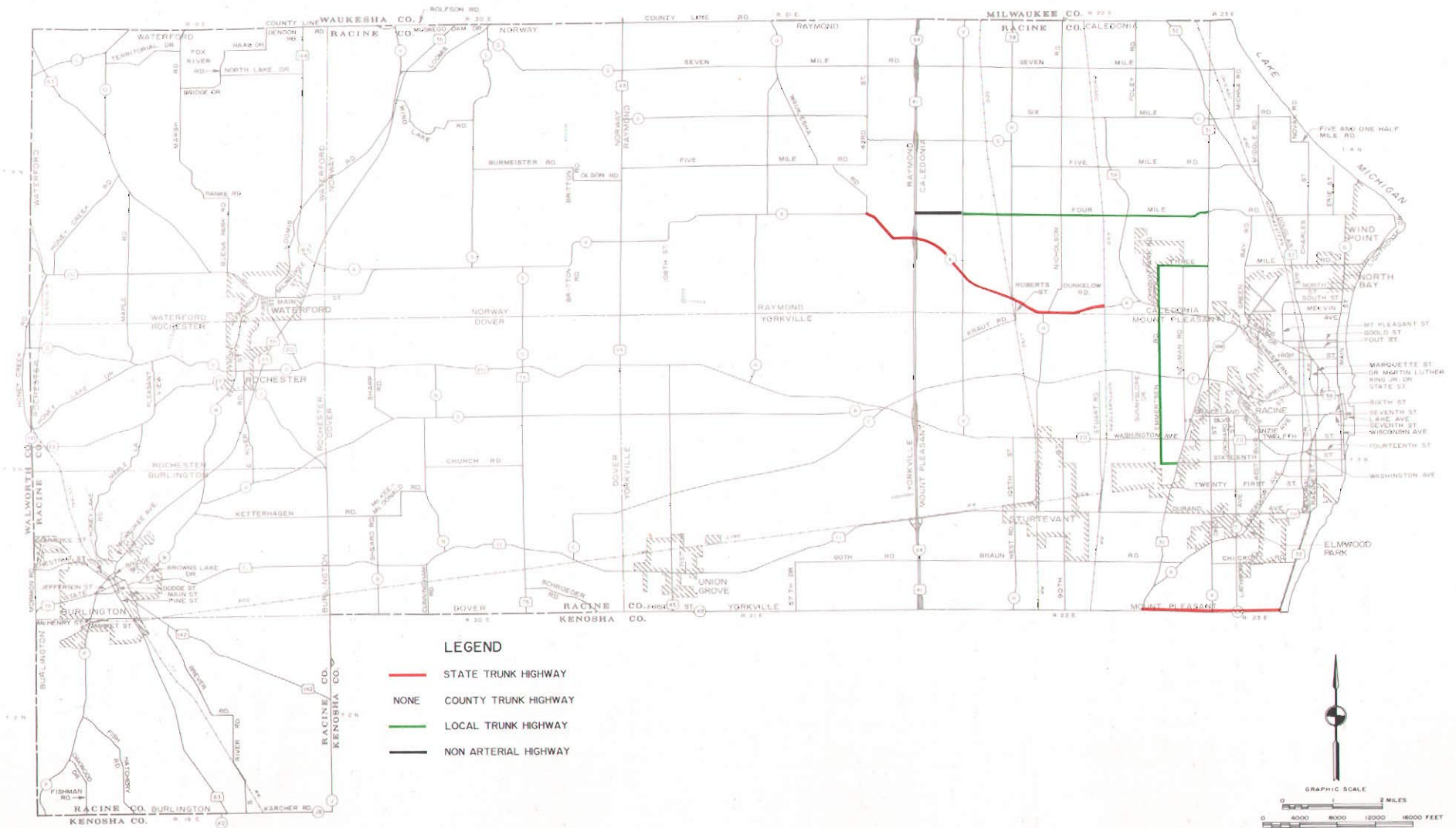
- b. Provide for the retention on the local arterial system of Four Mile Road from CTH V east to STH 31. At present, the plan calls for the transfer of this facility to the state trunk highway system.
- c. Provide for the elimination from the proposed state trunk highway system of Four Mile Road and Four Mile Road extended from CTH V west to CTH K about one mile west of IH 94.
- d. Provide for the removal from the proposed county trunk highway system of Three Mile Road from STH 31 west to Johnson Park Road, Johnson Park Road and its extension along the eastern boundary of Johnson Park, Emmertsen Road from STH 38 south to 16th Street, and 16th Street east from Emmertsen Road to STH 31. At present, the plan calls for the placement of these local arterial facilities on the county trunk highway system.
- e. Provide for the placement on the future state trunk highway system of CTH KR from STH 31 to STH 32. At present, the plan calls for the retention of this facility on the county trunk highway system.

With the foregoing described changes to the Racine County jurisdictional highway system plan, that portion of eastern Racine County that would have been provided with a high level of arterial highway service by the initially proposed Racine Loop Freeway would now be provided with service by a series of widened and improved arterial highways roughly forming a grid. The major north-south arterial highways in this grid would consist of STH 31, the proposed new Lake Arterial, and IH 94; the major east-west arterials in the grid would consist of CTH KR, STH 11, STH 20, CTH C, and a combination of existing STH 38 and CTH K.

The Racine County Public Works Committee reviewed and gave tentative approval to the above-listed changes to the Racine County jurisdictional highway system plan recommended in SEWRPC Memorandum Report No. 9 at its meeting on February 19, 1987. The Committee directed that the Technical Coordinating and Advisory Committee on Jurisdictional

Map 7

JURISDICTIONAL CHANGES TO THE RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN RECOMMENDED IN SEWRPC MEMORANDUM REPORT NO. 9



Source: SEWRPC.

Highway Planning for Racine County be reactivated to consider these tentatively proposed changes and to identify any additional changes to the plan that may be required both in that portion of eastern Racine County not addressed in the aforereferenced study, and in that portion of Racine County lying west of IH 94. The recommendations of the Technical Coordinating and Advisory Committee in this respect were then to be reported back to the County Public Works Committee and, ultimately, the County Board of Supervisors and the Regional Planning Commission.

PROPOSED PLAN REVISIONS

The Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County met on February 19, 1988, to consider the recommended functional and jurisdictional changes to the Racine County jurisdictional highway system plan contained in SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Racine County. These changes would result in the portion of eastern Racine County bounded by CTH KR on the south, IH 94 on the west, Four Mile Road on the north, and STH 31 on the east, which was once planned to be served by a loop freeway, being served by a grid of widened and improved north-south and east-west arterial highways. The major north-south arterial highways in this grid would consist of STH 31, a proposed new arterial along the Chicago & North Western Transportation Company's New Line Subdivision railway line located one to two miles west of STH 31, and IH 94. The major east-west arterials in the grid would consist of CTH KR, STH 11, STH 20, CTH C, and a combination of CTH K and STH 38. The specific functional and jurisdictional changes recommended for this portion of Racine County were identified earlier in this report.

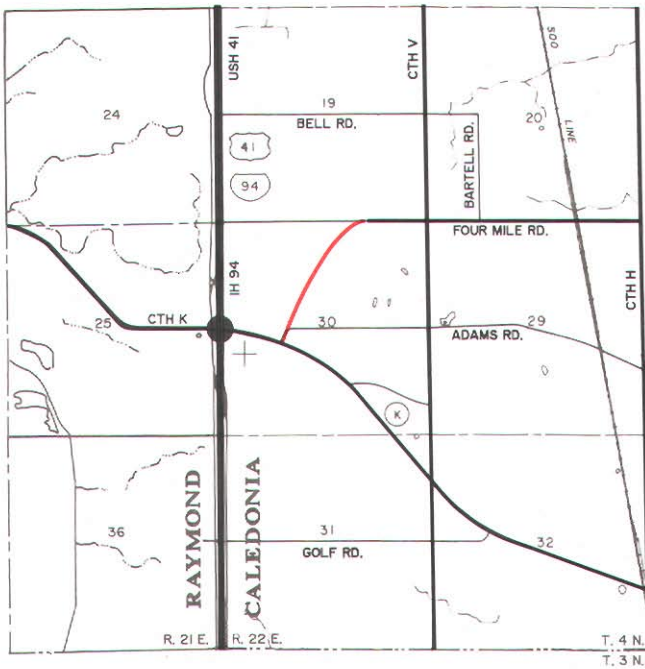
At the meeting, the Advisory Committee expressed five concerns about the plan changes recommended in eastern Racine County. The representative of the Town of Mt. Pleasant expressed concern over the recommendation that six traffic lanes be provided on STH 31 between STH 11 and CTH MM through the prohibition of on-street parking. Specifically, concern was expressed over the proposed prohibition of parking on the segment of STH 31 between 16th Street and CTH MM, as this stretch of STH 31

has residential land uses which front on STH 31. Parking was recommended to be prohibited on this segment of STH 31, as current traffic volumes approximate 26,000 to 35,000 vehicles per average weekday, and exceed the design capacity of 25,000 vehicles per average weekday for the four traffic lanes currently provided. Forecast year 2000 traffic volumes of 25,000 to 35,000 vehicles per average weekday, as well, indicate a need to either prohibit parking or carry out a major widening. It should be noted that the forecast traffic volumes are about the same as current traffic volumes because the proposed north-south arterial along the Chicago & North Western Railway may be expected to remove substantial traffic from STH 31. Without the implementation of this proposed arterial, year 2000 volumes on this segment of STH 31 may be expected to reach 38,000 to 40,000 vehicles per average weekday. It should, as well, be noted that if it is not deemed feasible to prohibit on-street parking along the entire segment concerned, parking should be prohibited during the three-hour morning and afternoon peak traffic periods to permit full use during those periods of the existing six lanes on STH 31 between 16th Street and CTH MM; and all parking should be prohibited between 16th Street and STH 11. Currently, parking is prohibited on this segment of STH 31 only at selected intersection approaches.

A second concern related to the need to provide a more direct routing via Four Mile Road to IH 94 from the northern City of Racine-Town of Caledonia-Village of Wind Point area. A specific improvement was proposed by the representative of the Town of Caledonia, as shown on Map 8. The proposed new roadway would extend from Four Mile Road west of CTH V to CTH K east of IH 94. With respect to travel to the southbound IH 94 on-ramp and from the southbound and northbound IH 94 off-ramps, the routing would be approximately 0.2 mile more direct than the current routing to the CTH K interchange with IH 94 via Four Mile Road and the freeway frontage road. With respect to travel to the northbound IH 94 on-ramp, the proposed routing would be approximately 0.3 mile more direct than the current routing of CTH V, Adams Road (a local street), and CTH K. The proposed roadway would provide a savings of approximately 160 total vehicle miles and 6.1 total vehicle hours per average weekday for the approximately 700 vehicles per average weekday currently utilizing Four Mile Road to travel to

Map 8

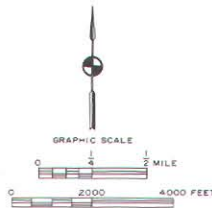
PROPOSED NEW ROADWAY TO PROVIDE MORE DIRECT CONNECTION BETWEEN FOUR MILE ROAD AND IH 94 INTERCHANGE AT CTH K



LEGEND

EXISTING AND PLANNED ARTERIAL STREET AND HIGHWAY SYSTEM

- FREEWAY
- STANDARD ARTERIAL
- FREEWAY INTERCHANGE
- POTENTIAL ROADWAY ALIGNMENT



Source: SEWRPC.

and from the IH 94 interchange with CTH K; and a savings of 450 total vehicle miles and 17.3 total vehicle hours for the 2,000 vehicles per average weekday forecast to utilize Four Mile Road to travel to and from the IH 94 interchange with CTH K in the year 2000. The potential savings of this roadway over a 20-year period—in terms of motor vehicle operating costs, travel time, and accident savings—is estimated at \$1.4 million. The construction cost of the roadway, including right-of-way costs of \$21,000, is estimated at \$370,000. The roadway would require the acquisition of 8.3 acres of agricultural land and would divide one farm.

A third concern related to the proposed relocation of CTH H between STH 20 and STH 11 from Wisconsin Street to West Road. This relocation was proposed under the original jurisdictional highway system plan. The existing location of CTH H carries 3,100 to 4,000 vehicles per average weekday, and is forecast to carry 6,000 vehicles per average weekday by the year 2000. The proposed location of CTH H on West Road currently carries approximately 1,000 vehicles per average weekday, and is anticipated to carry 4,000 to 5,000 vehicles per average weekday in the year 2000. CTH H is currently located along the eastern boundary of the Village of Sturtevant, serving residential and commercial development in the Village, as well as a proposed state prison. The proposed prison may be expected to result in an additional 700 vehicles per average weekday on CTH H, which is included in the forecast year 2000 traffic. The proposed location of CTH H along West Road would serve an area of proposed industrial development to the east of West Road. This industrial development would be anticipated to generate about 9,000 vehicle trips per average weekday, which is included in the forecast year 2000 traffic on West Road.

The fourth concern, raised by a representative of Racine County, related to the recommendation that two county trunk highways—CTH V and CTH H—be provided between STH 20 and Seven Mile Road. CTH V was recommended to remain a county trunk highway under the revision of the original jurisdictional highway system plan completed in 1978. CTH H is generally located along the anticipated limits of future urban development; and CTH V is located in the rural area. CTH H currently carries 3,100 to 4,600 vehicles per average weekday, and is forecast to carry 4,500 to 6,500 vehicles per average weekday in the year 2000. CTH V currently carries 900 to 1,700 vehicles per average weekday, and is forecast to carry 2,000 to 3,000 vehicles per average weekday in the year 2000. The standards embodied in the Racine County jurisdictional highway plan recommend that arterial facilities in rural areas be spaced no closer than two miles. The existing spacing between CTH V and CTH H is one to 1.5 miles, and between CTH V and IH 94 and its associated frontage roads approximately one mile.

The fifth concern was related to the extension of 21st Street west of STH 31 as a local arterial facility. Such an arterial facility should, if provided, extend as an arterial to an intersection with the proposed north-south arterial, which would probably be located along the Chicago & North Western Railway right-of-way. It may be desirable to further extend 21st Street as a nonarterial to Willow Road and provide direct access to the proposed north-south arterial, and also to extend 21st Street from the S. C. Johnson & Son, Inc., Waxdale plant. This nonarterial extension should be addressed in the preliminary engineering study of the north-south arterial. The proposed arterial extension of 21st Street would provide approximately one-half mile east-west arterial spacing in this area, which is suitable for high-density urban development. Such arterial spacing may be appropriate given the existing and potential commercial development in this area, including a regional shopping center. The proposed 21st Street would be expected to carry 4,000 vehicles per average weekday, removing 1,000 vehicles per average weekday from STH 20, 500 vehicles from STH 11, and 1,000 vehicles from the segment of STH 31 between STH 20 and STH 11.

A sixth concern was raised subsequent to the Advisory Committee meeting by a representative of Racine County. With the removal from the adopted jurisdictional highway system plan of the proposed interchange of Four Mile Road with IH 94, the planned jurisdiction of Four Mile Road between IH 94 and STH 31 had been proposed to be changed from a state trunk highway to a local trunk highway. The Racine County representative suggested that consideration be given to the segment of Four Mile Road between STH 31 and the proposed north-south arterial being recommended as a county trunk highway rather than a local trunk highway. The proposed county trunk highway would constitute an extension of an existing and proposed county trunk highway on Four Mile Road between Main Street and STH 31. The stretch of Four Mile Road between STH 31 and the proposed north-south arterial may be expected to carry 3,500 to 4,500 vehicles per average weekday in the year 2000.

Based upon the analyses conducted in response to the six concerns raised, the Technical Coordinating and Advisory Committee, at its meet-

ing of January 20, 1989, adopted SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County, including its proposed functional and jurisdictional changes to the Racine County jurisdictional highway system plan, with the following amendments:

- The provision of six traffic lanes continues to be recommended on that segment of STH 31 between STH 11 and CTH MM, with the six lanes between 16th Street and CTH MM provided only during peak traffic periods through the prohibition of peak-period, on-street parking.
- The existing location of CTH H over Wisconsin Street between STH 20 and STH 11 should be retained and the proposed relocation of CTH H to West Road between STH 20 and STH 11 should be eliminated from the county jurisdictional highway system plan. West Road between STH 20 and STH 11 should be retained as a local trunk arterial highway on the jurisdictional highway plan.
- CTH V between Seven Mile Road and STH 20 should be eliminated from the county jurisdictional highway system plan both as a county trunk highway and as an arterial highway, and its jurisdiction should rest with the Towns of Caledonia and Mt. Pleasant.
- A proposed transition roadway from Four Mile Road to CTH K should be added to the plan to provide an improved connection between Four Mile Road and IH 94. The recommended jurisdiction of Four Mile Road between CTH K and STH 31 was changed from the currently recommended state trunk highway to a county trunk highway.
- The extension of 21st Street from STH 31 to the proposed north-south arterial should be added to the jurisdictional highway system plan as a local trunk arterial facility. The Advisory Committee recommended that a further extension of 21st Street as a collector street to Willow Road be examined during the preliminary engineering of 21st Street and the north-south arterial.

Also at the February meeting of the Advisory Committee, the following potential changes to the jurisdictional highway system plan were identified for consideration by the Committee:

- Resolution of the long-planned extension of Three Mile Road between Green Bay Road and STH 31 and the advancing of this much-needed roadway extension to implementation in the short term.
- Review of the need for the planned extension of Mt. Pleasant Street from its current terminus north of South Street to Three Mile Road.
- Review of the need for the planned extension of Melvin Street south of John H. Batten Field (formerly the Horlick-Racine Airport) between Mt. Pleasant Street and Green Bay Road.
- Review of the need for the proposed addition to the jurisdictional highway system plan of the extension of Memorial Drive as a local arterial from Chickory Road to CTH KR.
- Review of the need for the proposed improvement of CTH KR to four—rather than the currently recommended two—lanes between STH 31 and STH 32.
- Review of the currently proposed jurisdictional changes to the route of STH 38 between the Milwaukee County-Racine County line and CTH K, considering whether these changes should be retained in the adopted jurisdictional highway plan, or should be considered interim changes only.
- Review of the need for the planned extension of Chickory Road between Meachem Road and Taylor Avenue, as recommended in the adopted jurisdictional highway plan.
- Review of whether STH 11 east of IH 94 should remain a state trunk highway, or should be converted to a county trunk highway as recommended in the adopted jurisdictional highway plan.
- Review of whether the planned extensions of Eight Mile Road between 60th Street and CTH U, and between CTH G and W. Muskego Dam Drive, as recommended in the adopted jurisdictional highway plan, should remain on the jurisdictional highway plan

as arterial facilities; and whether Racine County should remain the unit of government responsible for implementation.

- Review of the recommended alignment of that portion of CTH K recommended in the adopted jurisdictional highway plan to be constructed on new alignment.
- Review of the addition of Seven Mile Road to the county trunk highway system from USH 45 to STH 32, as recommended in the adopted jurisdictional highway plan.
- Review of the need for a potential outer bypass for the City of Burlington, and potential modification of the currently recommended inner bypass and improvements to arterial highway facilities within the City of Burlington.

Three Mile Road

On May 2, 1988, the Racine County Public Works Commissioner, together with representatives of concerned and affected municipalities, asked the Commission staff to conduct a special study of alternative alignments for the extension of Three Mile Road between Green Bay Road and STH 31, and of the costs and benefits of such an extension. It was intended that the study assist in the selection of the alignment for the extension of Three Mile Road, and be the first step toward the implementation of the long-planned roadway extension in the short term. A draft report documenting this study was prepared and reviewed by the concerned and affected units of government.⁷

The report identified five alternative roadway extensions, as well as a do nothing alternative. The proposed roadway would have a right-of-way of 80 feet in width and carry two traffic lanes. The report identified the estimated traffic impacts of each alternative alignment and the benefits and costs of each alternative alignment. The estimated benefits included the potential to provide for more direct routing of travel; the potential to reduce turning movements; and the potential to remove traffic from other segments

⁷See *SEWRPC Memorandum Report Study of the Extension of Three Mile Road Between Green Bay Road and STH 31 (draft) set forth in Appendix A.*

of the arterial street system. The estimated monetary value of these benefits with respect to reducing motor vehicle operating costs, travel time savings, and accident savings was estimated. The costs of the roadway section were also estimated, including construction costs, and the costs of right-of-way requirements and of disruption of adjacent land use. Environmental impacts were assessed to the extent practicable at the systems planning level. The draft report was approved by technical staffs of Racine County and the concerned and affected municipalities, but a final report was not prepared, as implementation of the roadway extension in the short term was abandoned because of substantial public opposition. With abandonment of the proposal to implement in the short term, there are three alternatives available to the County and municipalities concerned regarding the proposed extension:

1. Retaining the proposed Three Mile Road extension on the long-range system plan, recognizing that such extension would not be implemented in the short term, but may be implemented in the long term if public opinion changes with increasing urbanization and attendant traffic congestion.
2. Eliminating the proposed Three Mile Road extension and providing alternative roadway improvements.
3. Eliminating the proposed Three Mile Road improvement from the system plan, with no replacement improvements.

The estimated construction cost, including right-of-way, for the Three Mile Road extension was \$1.8 to \$2.4 million, depending upon the alternative alignment considered. Each of the five alternative alignments for the roadway extension would sever the property of St. Monica's Senior Citizens Home, and would sever Armstrong Park or be routed along its northern boundary.

Among the benefits of the proposed extension of Three Mile Road was that it would provide the one-mile spacing of east-west arterial streets desirable in areas devoted to medium-density urban land development, as exists in, and is planned for, this portion of the Racine urbanized area. Three Mile Road is an important element of a grid of north-south and east-west arterial facilities in this portion of Racine County. In addition, the extension would reduce the spacing

between crossings of the Root River from about 2.4 to 1.2 miles. It would also improve access to and from STH 31, and to and from IH 94.

The extension of Three Mile Road may be expected to carry 3,500 to 4,500 vehicles per average weekday under current land use and transportation system conditions, and 5,000 to 6,500 vehicles per average weekday under design year 2000 land use and transportation system conditions. The extension of Three Mile Road would be expected to provide eastern Racine County with a more efficient transportation system, resulting in a reduction in travel indirected of 500 to 1,100 vehicle miles per average weekday in the year 2000; a reduction in the number of major intersections traversed by traffic of 7,100 to 8,200 on an average weekday; and a reduction in the number of turning movements required at those intersections of 8,100 to 9,700 on an average weekday.

The monetary value of the travel benefits of the Three Mile Road extension in terms of vehicle operating cost savings, travel time savings, and travel accident savings was estimated to range from \$81,000 to \$168,000 on an average weekday in the year 2000, depending upon the alternative alignment for the extension. In addition, the Three Mile Road extension would remove a substantial amount of traffic from congested routes in eastern Racine County, including 2,000 to 3,900 vehicles per average weekday from Rapids Drive between Yout Street and STH 38; 3,400 to 3,900 vehicles per average weekday from STH 38 between Rapids Drive and CTH MM; 2,000 to 2,500 vehicles per average weekday from CTH MM between STH 38 and STH 31; 1,400 to 2,600 vehicles per average weekday from Four Mile Road between STH 32 and STH 31; and 1,900 to 2,400 vehicles per average weekday from STH 32 between Three Mile Road and Goid Street.

Thus, Three Mile Road would particularly provide substantial relief to Rapids Drive, STH 38, STH 32, and Four Mile Road. Improvement on segments of each of these arterials—or of parallel roadways such as Charles Street, which is parallel to STH 32—may be considered as an alternative to the extension of Three Mile Road. These alternative improvements include the widening of Four Mile Road between Charles Street and STH 31; the conversion of Charles Street from Three Mile Road to Yout Street from a local street to an arterial street, including the

extension of Charles Street from Carlton Drive to Three Mile Road; and the realignment and widening of the intersection of CTH MM and STH 38, the intersection of STH 38 and Rapids Drive, and the segment of STH 38 between CTH MM and Rapids Drive.

The first of these alternatives is the widening of Four Mile Road from Charles Street to the Chicago & North Western Railway line about 1,000 feet west of STH 32 to an undivided four-lane urban cross-section; and from the railway line to STH 31 to a higher quality rural two-lane cross-section, providing two 12-foot-wide traffic lanes and two 10-foot-wide shoulders—including a four-foot-wide section of paved shoulder in each direction, and turn lanes at the intersections with Green Bay Road and STH 31. This improvement, at an estimated cost of \$1.9 million, would assist in carrying the additional 1,400 to 2,600 vehicles per average weekday expected to be carried by this segment of Four Mile Road in the year 2000 without the extension of Three Mile Road.

The construction of a segment of Charles Street between Three Mile Road and Carlton Drive, and the conversion of Charles Street between Carlton Drive and Yout Street from a local street to an arterial street, may be expected to provide relief to Douglas Avenue between Four Mile Road and Yout Street, which otherwise would have been provided by the extension of Three Mile Road. Douglas Avenue between Three Mile Road and Yout Street currently provides, with on-street parking prohibitions, four traffic lanes on an undivided cross-section, and has a design capacity of 17,000 vehicles per average weekday. It currently carries traffic volumes of 17,500 to 22,200 vehicles per average weekday, and is forecast to carry 21,000 to 26,000 vehicles per average weekday without the extension of Three Mile Road.

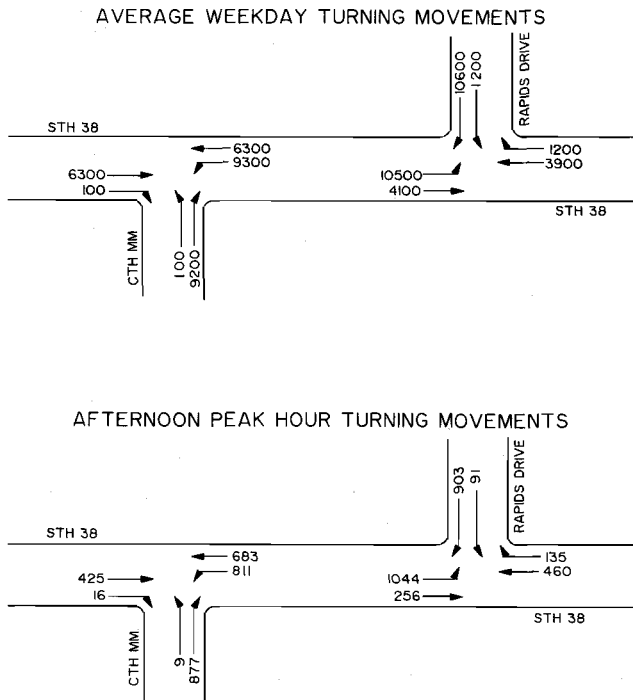
The use of Charles Street as an alternative to the Three Mile Road extension to provide relief to Douglas Avenue was proposed by the City of Racine. This alternative would require the construction of a segment of Charles Street between Three Mile Road and Carlton Drive, at an estimated cost of \$245,000—including right-of-way, as well as the conversion of Charles Street from Three Mile Road to Goold Street from a local residential street to an arterial street. Charles Street currently has an urban cross-section with a pavement width of 48 feet

between its northern terminus and North Street with parking permitted, and a pavement width of 36 feet with parking permitted between North Street and Yout Street. In order for Charles Street to operate as an arterial, parking would need to be prohibited on one side of Charles Street between North Street and Goold Street, and traffic control would need to be modified so that Charles Street traffic is controlled only at its intersections with other arterial streets, including Three Mile Road, South Street, and Goold Street. This would require the removal of stop signs on Charles Street at Carlton Drive, North Street, and Melvin Street, and the installation of stop signs on these cross streets with their intersections with Charles Street. Traffic on Charles Street between Three Mile Road and Goold Street would be anticipated to increase from a current 1,000 to 3,000 vehicles per average weekday to 4,000 to 6,000 vehicles per average weekday if it were converted to an arterial street.

The other major improvement that would be considered as part of a plan of alternative improvements to the proposed Three Mile Road extension is the widening and realignment of STH 38 and Rapids Drive between CTH MM and Green Bay Road. These roadways currently carry 27,400 to 32,500 vehicles per average weekday, and without the extension of Three Mile Road are anticipated to carry 30,000 to 37,000 vehicles per average weekday, exceeding their design capacity of 25,000 to 35,000 vehicles per average weekday. The Three Mile Road extension would have enabled these arterial roadways to operate within their design capacity, and would have removed a substantial number of turning movements from attendant arterial intersections. The present roadway configuration results in a substantial number of turning movements, as shown in Figure 1. It is estimated that 18,500 vehicles per average weekday, or about 60 percent of the traffic at the intersection of CTH MM and STH 38, is oriented between CTH MM and STH 38 to and from the east. It should also be noted that about 21,100 vehicles per average weekday, or about 67 percent of the traffic at the intersection of Rapids Drive and STH 38, are required to turn, as this traffic is oriented between Rapids Drive and STH 38 to and from the west. The extension of Three Mile Road would have removed traffic from both these intersections and affected street segments, and all the traffic removed—about

Figure 1

**EXISTING TURNING MOVEMENTS AT
THE INTERSECTIONS OF CTH MM AND STH 38
AND RAPIDS DRIVE AND STH 38**



Source: SEWRPC.

4,000 vehicles per average weekday in the year 2000—would have made turning movements. As an alternative improvement to the extension of Three Mile Road, this intersection could be realigned to reduce turning movements and selected street segments widened to provide adequate traffic capacity. A potential realignment-widening is shown on Map 9. It would have an estimated construction cost of \$2.8 million, including right-of-way acquisition costs of \$1.3 million—this alternative would require the acquisition of three businesses and one residence. This intersection realignment would combine the intersections of STH 38 and CTH MM, and of STH 38 and Rapids Drive, into one intersection, and in so doing convert approximately 14,500 existing left-turn movements on an average weekday at these intersections into through traffic movements, and convert approximately 14,500 existing right-turn movements on an average weekday into through traffic movements.

An option to this potential improvement is the realignment and extension of Green Bay Road over the Root River to directly connect to CTH MM, as shown on Map 10. This option would have an estimated cost of \$2.4 million, including right-of-way acquisition—it would require the acquisition of seven residences and the conversion of Old Mill Road from a local street to an arterial street. This potential realignment and extension of Green Bay Road may be expected to remove about 4,000 vehicles per average weekday from the congested segment of STH 38 between Rapids Drive and CTH MM, and from the intersection of Green Bay Road and Rapids Drive; and to convert 4,000 vehicle turn movements per average weekday to through traffic movements at the intersection of STH 38 and CTH MM.

To summarize, three improvements could be undertaken as alternatives to the extension of Three Mile Road. One of these improvements is the widening and improvement of Four Mile Road from Charles Street to STH 31, which would assist in carrying traffic that may be expected to use Four Mile Road if Three Mile Road were not extended. Another improvement is the conversion of Charles Street to an arterial street and the construction of a segment of Charles Street between Three Mile Road and Carlton Drive. An extended Charles Street may provide some relief to Douglas Avenue and, in so doing, provide the relief that would otherwise be provided by the extension of Three Mile Road. The third improvement—improvements to the intersections of STH 38 and CTH MM, STH 38 and Rapids Drive, and Rapids Drive and Green Bay Road—would serve to reduce turning movements and traffic at these congested intersections, as would the extension of Three Mile Road.

The extension of Three Mile Road has an estimated construction cost of \$1.8 to \$2.4 million, depending upon the alternative alignment considered. The construction cost of the three alternative improvements to the extension of Three Mile Road would range from \$4.5 to \$4.9 million. The Three Mile Road extension would be disruptive in that it would sever the property of St. Monica's Senior Citizens Home, as well as sever Armstrong Park. The principal disruptions that would be caused by the alternative improvements to Three Mile Road would be the conversion of Charles Street between Three Mile Road and Goold Street from a local to an arterial

street, and the construction of improvements at the intersections of CTH MM and STH 38, and Rapids Drive and STH 38, which would entail the acquisition of three businesses and one residence, or of seven residences, depending upon the option selected. It should be noted that while the three alternative improvements to the extension of Three Mile Road would assist in carrying traffic that would otherwise utilize Three Mile Road, they would not be able to provide the principal benefit of the Three Mile Road extension, which is a reduction in the spacing of arterial facilities and Root River crossings in this portion of the Racine area from about two miles to one mile.

The Commission staff recommended that the extension of Three Mile Road between Green Bay Road and STH 31 be retained as a proposal in the long-range plan. In this respect, it is recognized that implementation of this proposal may have to be postponed until traffic congestion increases in the area sufficiently to change public opinion about the need for the roadway extension, and about the need for the improvement changes by the owners of the two most affected properties—St. Monica's Senior Citizens Home and Armstrong Park. The alternative improvements to Three Mile Road would have a substantially greater capital cost than the extension of Three Mile Road and would entail disruption of existing land uses, as would the Three Mile Road extension. The alternative improvements, however, would not provide the same level of benefits as the extension of Three Mile Road. With the retention of the extension of Three Mile Road on the jurisdictional plan, it is recommended that the three alternative improvements identified herein not be added to the long-range plan. It may be desirable for the short segment of Charles Street between Three Mile Road and Carlton Drive to be extended; however, it should be extended as a local street, and the stretch of Charles Street between Three Mile Road and Yout Street should operate as a local street.

At its meeting of January 20, 1989, the Advisory Committee removed the extension of Three Mile Road between Green Bay Road and STH 31 from the jurisdictional highway system plan, and added as a replacement improvement the reconstruction and realignment of the intersection of CTH MM and Rapids Drive at STH 38 to directly connect CTH MM and Rapids Drive. In addition,

the Committee recommended the following changes in jurisdictional responsibility: Four Mile Road between CTH K and STH 31 was recommended to be a county trunk highway; Four Mile Road between STH 31 and Main Street was recommended to be a local trunk highway; N. Main Street between Four Mile Road and Three Mile Road was recommended to be a local trunk highway; Three Mile Road between STH 32 and Green Bay Road was recommended to be a local trunk highway; and Six Mile Road, Novak Road, Five and One-Half Mile Road, and Charles Street between STH 32 and Four Mile Road were recommended to be local trunk highways.

Extension of Memorial Drive Between Chickory Road and CTH KR

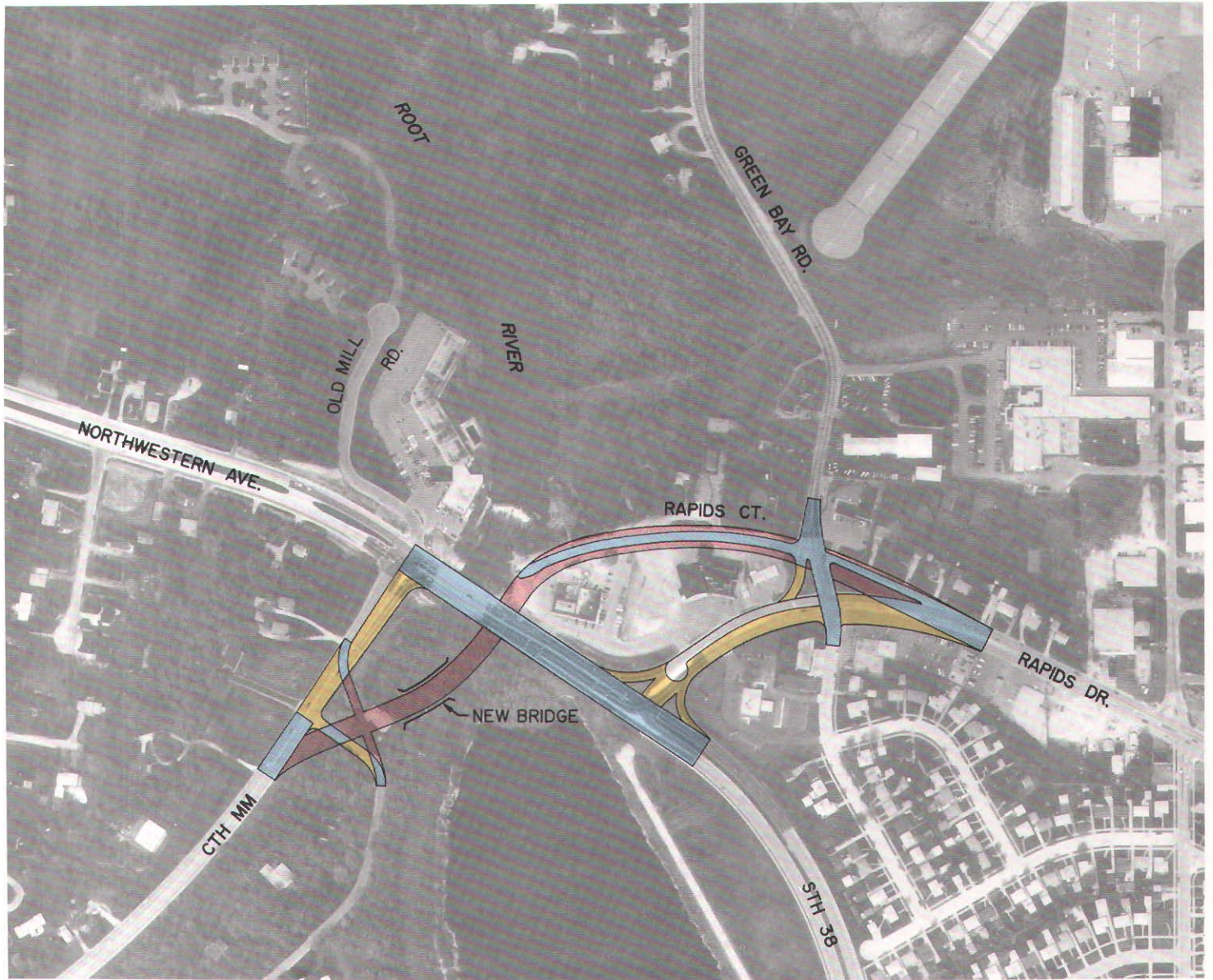
The City of Racine representative requested that consideration be given to adding to the adopted jurisdictional highway system plan the extension of Memorial Drive from Chickory Road to CTH KR as a local trunk arterial highway. Memorial Drive between Durand Avenue and Chickory Road serves a City of Racine industrial park, and its extension to CTH KR would provide direct access from the industrial park to CTH KR, which provides direct access to IH 94. The proposed arterial extension would also provide a desirable spacing of north-south arterials as the area bounded by Chickory Road on the north, a Chicago & North Western Railway line on the east, CTH KR on the south, and Lathrop Avenue on the west is converted to urban development. The estimated cost of this roadway extension is \$1.7 million, including right-of-way, based upon an 80-foot-wide right-of-way and a two-traffic-lane roadway on an urban cross-section with a pavement width of 48 feet. At its meeting of January 20, 1989, the Advisory Committee approved this addition to the system plan.

CTH KR Between STH 31 and STH 32




The City of Racine representative asked that consideration be given to extending the four-lane improvement of CTH KR between IH 94 and STH 31 recommended in SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County. In the memorandum report, this recommendation was not made in order to provide adequate traffic capacity to meet anticipated traffic volumes, but rather to provide an appropriate southern gateway from IH 94 to the City of Racine and Racine County, and to provide a northern gateway to

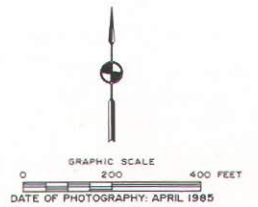
Map 9

POTENTIAL REALIGNMENT AND WIDENING OF THE INTERSECTIONS OF CTH MM AND STH 38 AND STH 38 AND RAPIDS DRIVE AS AN ALTERNATIVE TO THE EXTENSION OF THREE MILE ROAD



LEGEND

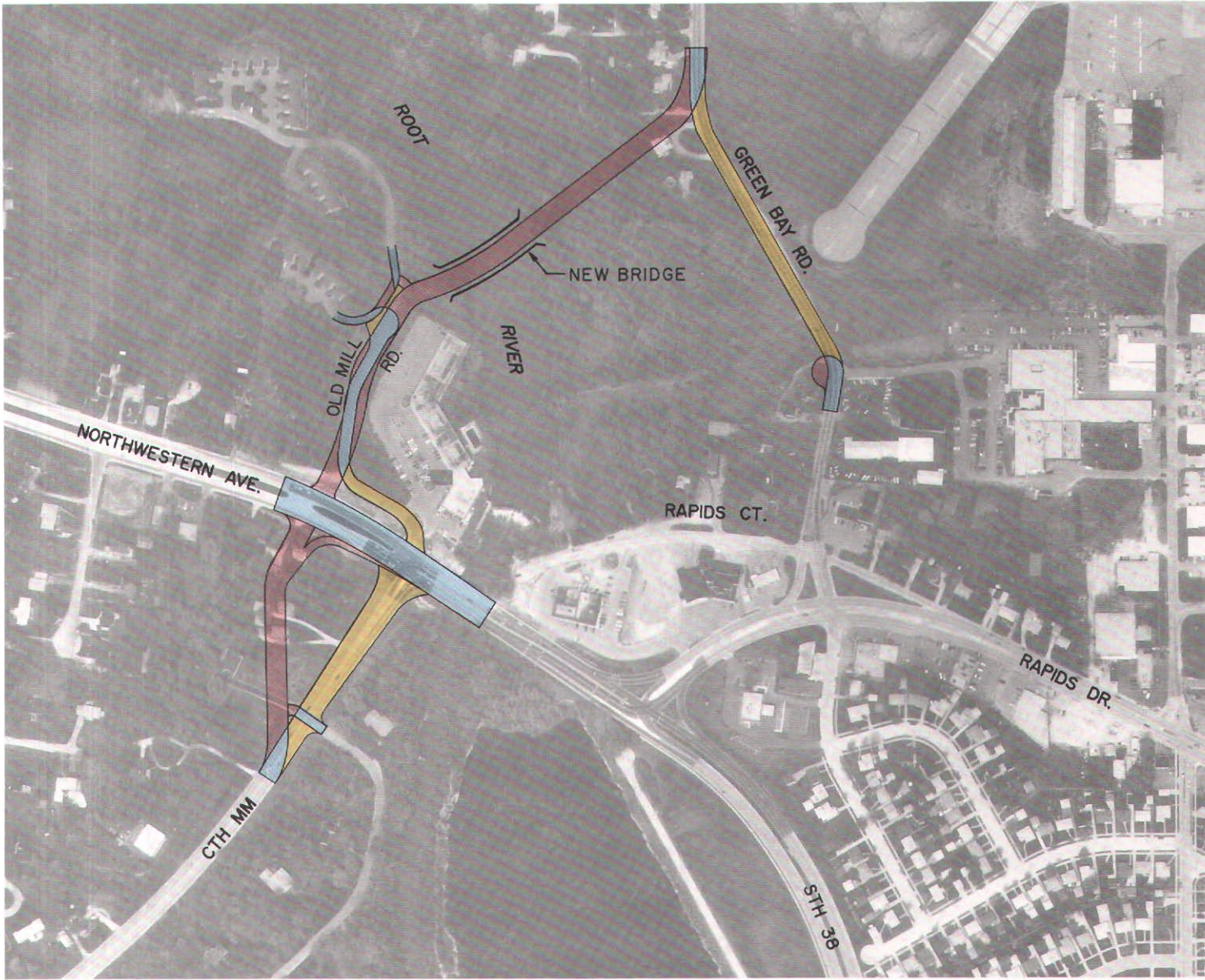
-  EXISTING PAVEMENT TO BE REMOVED
-  EXISTING PAVEMENT TO BE RECONSTRUCTED
-  NEW PAVEMENT






Source: SEWRPC.

Map 10

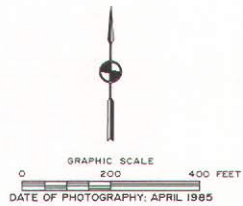
OPTION TO THE POTENTIAL IMPROVEMENT OF THE INTERSECTIONS OF CTH MM AND STH 38 AND STH 38 AND RAPIDS DRIVE



LEGEND

-  EXISTING PAVEMENT TO BE REMOVED
-  EXISTING PAVEMENT TO BE RECONSTRUCTED
-  NEW PAVEMENT

Source: SEWRPC.



Kenosha County and the City of Kenosha. The City of Racine representative suggested that this gateway improvement of CTH KR be extended for 2.8 miles from STH 31 to STH 32. The estimated construction cost of this roadway extension is \$4 million, including right-of-way costs. The extension of the proposed CTH KR gateway to Racine and Kenosha Counties should be considered appropriate, as the University of Wisconsin-Parkside and the City of Racine Industrial Park along Memorial Drive would have direct access to the state trunk highway route. The extension would entail the acquisition of seven residences. Because the state trunk highway route along CTH KR has been recommended in order to provide a high-quality route across Racine County, it will be essential for the levels and units of government affected to preserve 100 to 130 feet of right-of-way along the proposed route. At its meeting of January 20, 1989, the Advisory Committee approved this addition to the system plan.

Extension of Mt. Pleasant Street

The City of Racine representative requested that dropping the extension of Mt. Pleasant Street from its current terminus north of South Street to Three Mile Road be considered. This stretch of roadway, which was proposed under the original jurisdictional highway system plan and its revision in 1978, would provide relief to the segment of Douglas Avenue (STH 32) between South Street and Three Mile Road. This roadway extension, however, is no longer feasible because of the extension of the Batten Field principal runway and construction of attendant taxiway in 1982. Therefore, at its meeting of January 20, 1989, the Advisory Committee removed this extension of Mt. Pleasant Street from the jurisdictional highway system plan.

Extension of Melvin Street Between Green Bay Road and Mt. Pleasant Street

The City of Racine representative requested that consideration be given to eliminating the extension of Melvin Street south of Batten Field between Green Bay Road and Mt. Pleasant Street from the jurisdictional highway system plan. The extension of Melvin Street would be expected to carry about 3,000 vehicles per average weekday under current conditions and 5,000 vehicles per average weekday under planned, year 2000 land use and transportation system conditions. The traffic carried by Melvin Street would otherwise be carried primarily by

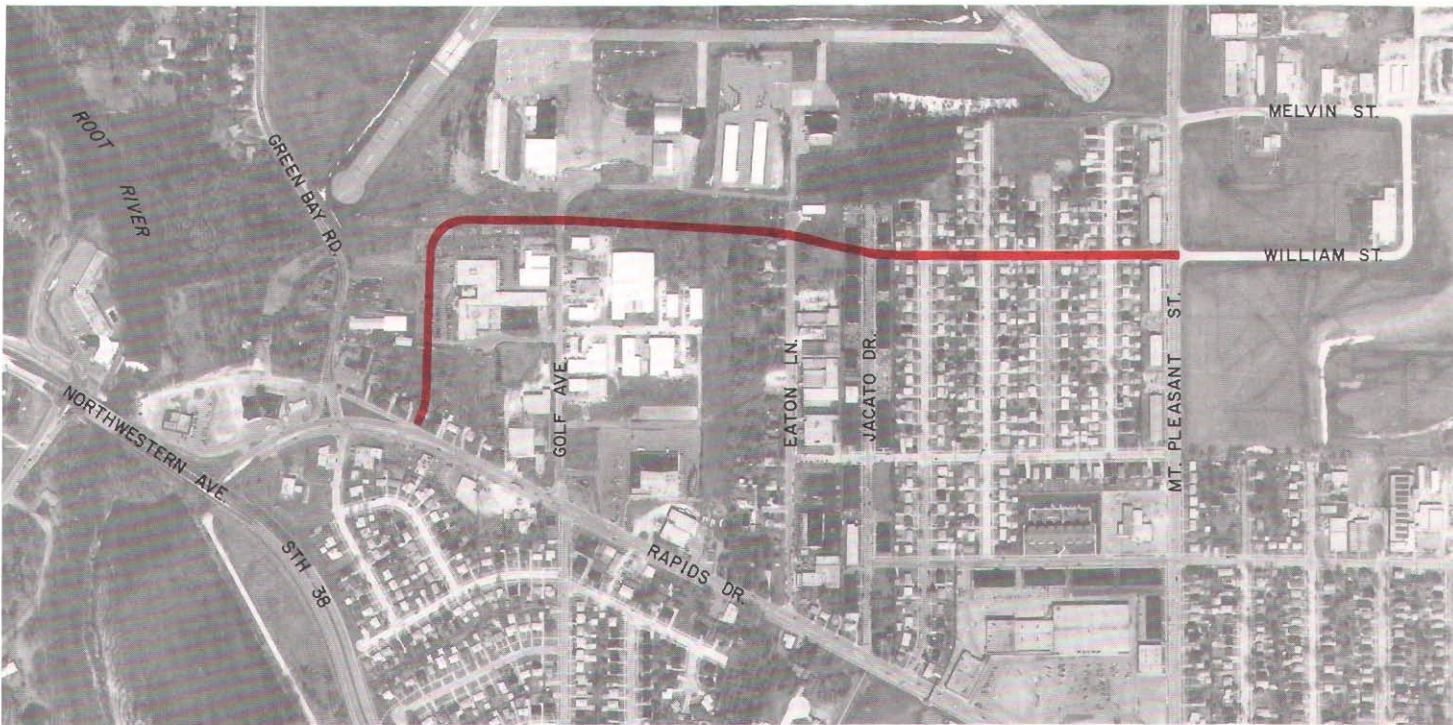
Rapids Drive between Green Bay Road and Mt. Pleasant Street. Rapids Drive, with on-street parking prohibitions, provides four traffic lanes with a two-way left-turn lane, and currently carries approximately 19,000 vehicles per average weekday, which approaches its design capacity, and is forecast to carry about 23,000 vehicles per average weekday, which exceeds its design capacity. The extension of Melvin Street would permit Rapids Drive to operate within its design capacity under current and future conditions, as the extension may be expected to remove about 4,000 vehicles per average weekday from Rapids Drive, or slightly more than the amount of traffic that the Three Mile Road extension would remove from Rapids Drive.

The long-planned alignment of Melvin Street in the current jurisdictional highway system plan would extend Melvin Street easterly from Green Bay Road beginning about 500 feet north of the intersection of Green Bay Road with Rapids Drive, and then along the Batten Field existing and long-planned southern boundary to Mt. Pleasant Street. The westernmost segment of Melvin Street would have been located generally about 300 feet away from the centerline of the southwest airport approach (Runway 04), and thus would have provided adequate clearance for a nonprecision approach. However, because the southwest approach to the airport (Runway 04) was established in 1980 as the precision approach to the airport—a departure from the recommendation in the original regional airport system plan that the northeast approach (Runway 22) be the precision approach—the extension of Melvin Street must now be located at least 500 feet from the centerline of the runway and through an area of extensive commercial and industrial development, as shown on Map 11. In addition, because Batten Field is no longer planning to acquire substantial residential development along its southeastern boundary, the easterly portion of the extension may entail substantial property acquisition. As an alternative, the easterly extension of Melvin Street could be located on Williams Street from Jacato Drive to Mt. Pleasant Street. Williams Street is now a local residential street and would need to be converted to an arterial.

The extension of Melvin Street has an estimated cost of \$1.8 million, including right-of-way costs, assuming the new segment of Melvin Street between Rapids Drive and Jacato Drive would

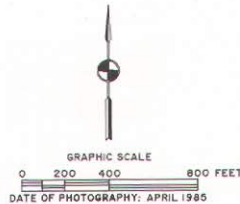
Map 11

POTENTIAL ALIGNMENT FOR THE EXTENSION OF MELVIN STREET



LEGEND

— PROPOSED ALIGNMENT OF MELVIN STREET



Source: SEWRPC.

be constructed to a 48-foot-wide urban cross-section with 80 feet of right-of-way to provide the necessary two traffic lanes, and that Williams Street would be converted to an arterial street. The prohibition of parking would be required on one side of Williams Street, which has a pavement width of 36 feet. This potential alignment for the extension of Melvin Street is shown on Map 11. At its meeting of January 20, 1989, the Advisory Committee removed the extension of Melvin Street from the jurisdictional highway plan because of the disruption of its now required alignment. Melvin Street had been recommended as a new county trunk highway and was part of a proposed county trunk highway route which would have been extended via Mt. Pleasant Street and South Street to Main Street. With the deletion of Melvin Street, the

Advisory Committee recommends that the segments of Green Bay Road, Rapids Drive, Mt. Pleasant Street, and South Street between STH 38 and Main Street currently proposed to be county trunk highways be changed on the plan to local arterial facilities.

STH 38 Jurisdictional Changes
Between County Line and CTH K

STH 38 in Racine County is currently routed from the Milwaukee County-Racine County line over Howell Road to Six Mile Road, then along Six Mile Road to Northwestern Avenue, and then along Northwestern Avenue to CTH K. The current jurisdictional highway system plan recommends that this route no longer be a state trunk highway. As shown on Map 12, it is recommended in the jurisdictional highway plan

that the segment of Howell Road from the Milwaukee County-Racine County line to Six Mile Road be converted to a county trunk highway and constitute an extension of CTH H; that Six Mile Road between Howell Road and Northwestern Avenue be converted to a local arterial trunk highway; and that Northwestern Avenue between Six Mile Road and CTH K be under local jurisdiction, with only the segment between CTH K and Four Mile Road being an arterial highway, and the segment between Four Mile Road and Six Mile Road being a nonarterial highway. The current jurisdictional highway system plan recommends that the present routing of STH 38 be eliminated, principally because the proposed north-south arterial along the Chicago & North Western Railway line would replace the current route of STH 38. The proposed north-south arterial would be located within one and one-half miles of the current route of STH 38 north of Seven Mile Road, and within one-half mile of the current route of STH 38 between Seven Mile Road and CTH K.

A proposed change in the routing of STH 38 is being considered by Racine County and the Wisconsin Department of Transportation. The current routing of STH 38 on Howell Road and Six Mile Road between the Milwaukee County-Racine County line and Northwestern Avenue would remain; then the present routing would be changed by routing STH 38 along Six Mile Road between Northwestern Avenue and STH 31. The stretch of Northwestern Avenue that is currently the route for STH 38 between Six Mile Road and CTH K would become a county trunk highway.

At its meeting of January 20, 1989, the Advisory Committee recommended that this proposed jurisdictional change be considered an interim change to the ultimate change recommended in the jurisdictional highway plan. This interim change in the routing of STH 38 would remain in effect until the north-south arterial is constructed as a state trunk highway in Racine County; a state trunk highway is extended as proposed in the jurisdictional plan along CTH K to IH 94; and the routing of STH 38 in Milwaukee County is eliminated. It is recommended that the interim routing of STH 38 over Howell Road and Six Mile Road not be added to the jurisdictional highway plan as a state trunk highway because the routing over Howell Road is within one and one-half miles of the proposed north-south arterial state trunk highway.

Chickory Road Extension Between Meachem Road and Taylor Avenue

A representative of the Town of Mt. Pleasant suggested the removal of the extension of Chickory Road between Meachem Road and Taylor Avenue to Braun Road, as such extension would require extensive property acquisition and have limited potential for implementation. The removal of this extension from the jurisdictional highway system plan could result in travel indirection, which may be expected to increase in the future, particularly with the proposed location of the county business park along STH 31 at Braun Road. Chickory Road and Braun Road, however, are recommended to be local arterials and the traffic affected would therefore be local traffic. The extension of Chickory Road was removed from the jurisdictional highway system plan by the Advisory Committee at its meeting on January 20, 1989.

STH 11 East of IH 94

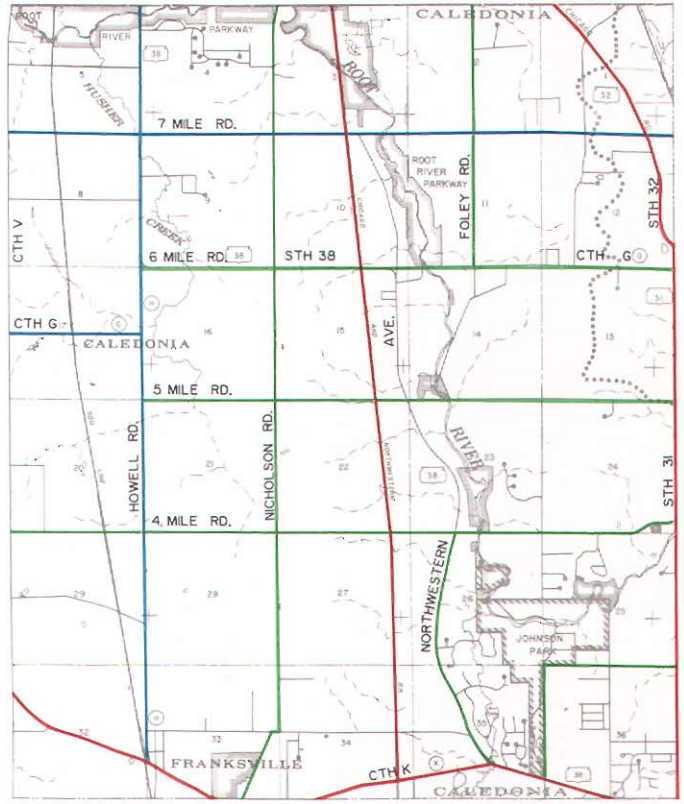
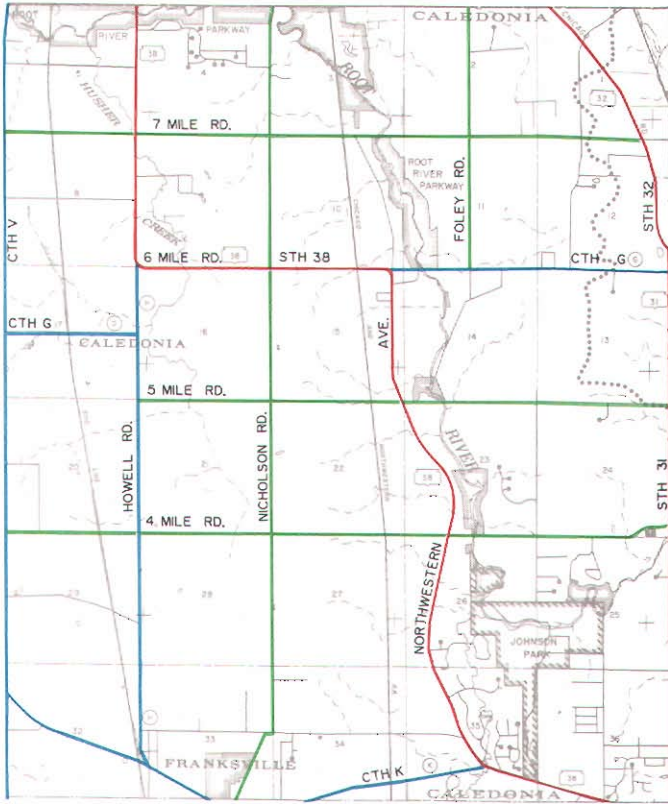
The current jurisdictional highway plan recommends that the present routing of STH 11 from a point about 0.5 mile west of CTH N in the Town of Dover to STH 32 be converted to a county trunk highway; and that CTH KR and Schroeder Road and its extension to STH 11 be converted to a state trunk highway. The new routing of the state trunk highway via CTH KR and Schroeder Road is one to two miles south of existing STH 11 west of IH 94, and approximately two miles south of the existing routing of STH 11 east of IH 94. The transfer of the state trunk highway routing from STH 11 to CTH KR was recommended to permit a bypass of the communities of Union Grove and Sturtevant, and to provide a high-quality state trunk highway route west of IH 94 through Racine County, and east of IH 94 to the City of Racine. That routing is proposed to be extended from STH 31 to STH 32 in this report.

The existing routing of STH 11 east of IH 94 meets all requirements for a state trunk highway in terms of traffic volume, trip length, and type of land uses served, including major retail and service and industrial centers. This routing is not proposed to remain a state trunk highway for the principal reason that CTH KR permits a higher quality route to be developed as a southern gateway to the City of Racine and northern gateway to the City of Kenosha. Also, STH 20 is located approximately one and one-half miles north of the existing route of STH 11 east of

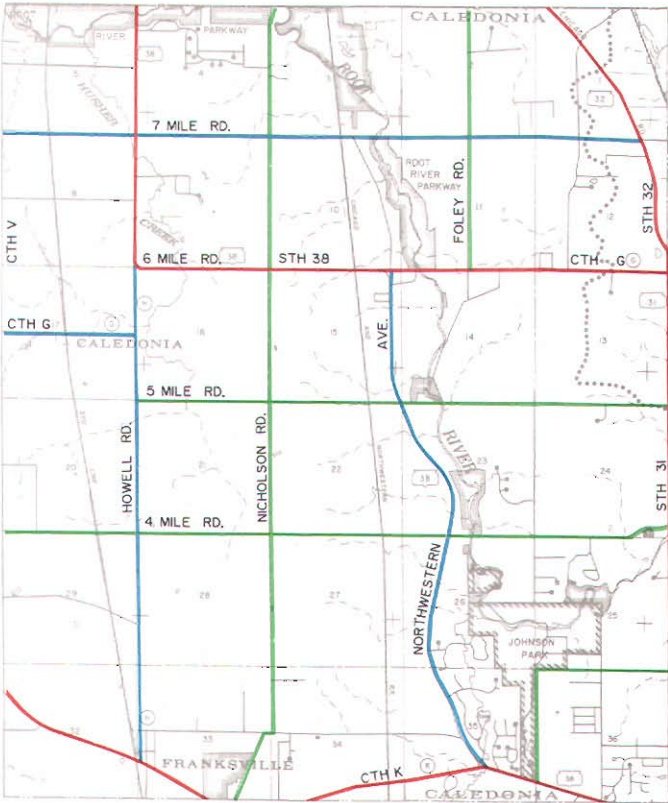
JURISDICTIONAL RESPONSIBILITY OF STH 38 BETWEEN MILWAUKEE COUNTY-RACINE COUNTY LINE AND CTH K: EXISTING JURISDICTIONAL PLAN-RECOMMENDED CHANGE AND CURRENTLY PROPOSED CHANGE

EXISTING

CURRENT JURISDICTIONAL PLAN RECOMMENDED CHANGE

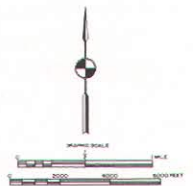


CURRENT PROPOSED CHANGE



LEGEND

- STATE TRUNK HIGHWAY
- COUNTY TRUNK HIGHWAY
- LOCAL TRUNK HIGHWAY



IH 94, and the spacing standard for state trunk highways is two miles. At its meeting of January 20, 1989, the Advisory Committee reaffirmed the long-planned change in jurisdictional responsibility for this segment of STH 11.

Extensions of Eight Mile Road

The adopted jurisdictional highway plan includes two long-planned extensions to Eight Mile Road, one located between CTH G and W. Muskego Dam Drive, and the other between 60th Street and CTH U. The extension of Eight Mile Road from CTH G to W. Muskego Dam Drive is a desirable arterial street extension to support planned urban development in the Town of Norway. Planned urban development at medium densities should be provided with one-mile spacing of arterials. The extension of Eight Mile Road provides the necessary arterial spacing in the Town of Norway, and serves a county arterial function by providing a route across Racine County via Seven Mile Road, CTH G, the extended Eight Mile Road, Rolfson Road, and Denoon Road between STH 164 in Waukesha County and STH 32. It should be noted that the need for this county trunk highway may be expected to become evident with continuing urban development in the Town of Norway and the Town of Caledonia. At its meeting of January 20, 1989, the Advisory Committee reaffirmed the long-planned conversion to a county trunk highway of this extension of Eight Mile Road, as well as Rolfson Road and Denoon Road, as recommended in the adopted county jurisdictional highway system plan.

The proposed extension of Eight Mile Road between 60th Street and CTH U would provide a continuous arterial along the Milwaukee County-Racine County line from IH 94 to USH 45. This extension, and the designation of the segment of Eight Mile Road from IH 94 to USH 45 as an arterial, was first recommended in the original jurisdictional highway plans for Racine County and Milwaukee County to provide an arterial facility to serve low-density development in the southern portion of the City of Franklin and the northern portion of the Town of Raymond, as envisioned in the Commission's design year 1990 land use plan. This development did not occur, and updated regional land use plans do not propose urban development in the southern portion of the City of Franklin and northern portion of the Town of Raymond. Accordingly, at its meeting of Janu-

ary 20, 1989, the Advisory Committee recommended that this extension of Eight Mile Road be deleted from the long-range plan, and that Eight Mile Road between IH 94 and USH 45 no longer be designated as an arterial facility on the long-range plan. The segments of Eight Mile Road between IH 94 and USH 45 would therefore continue to function as nonarterial facilities and be the responsibility of the affected local units of government.

CTH K

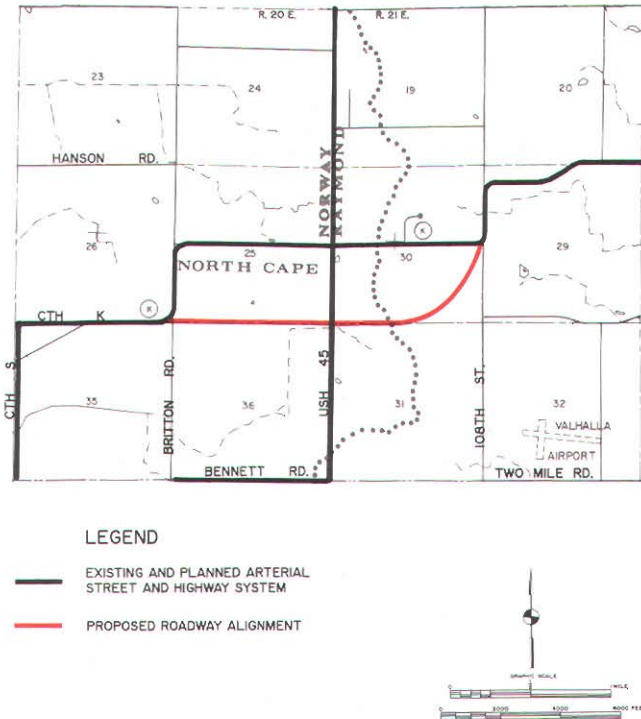
County Trunk Highway K west of IH 94 is recommended to be a state trunk highway, and, along with STH 164 in Waukesha County, to provide a major connection between the Racine area and the Waukesha area. A portion of CTH K west of IH 94 has long been recommended to be constructed on new alignment to eliminate four 90-degree turns. The adopted regional transportation system plan shows a conceptual alignment, recognizing that the exact location of the proposed new stretch of roadway would need to be identified in a preliminary engineering study. This preliminary study should be conducted by the Wisconsin Department of Transportation, as the roadway is a proposed state trunk highway. There may be roadway realignments other than the one shown on the jurisdictional highway plan which would minimize right-of-way costs and the number of structures to be taken. A potential realignment is shown on Map 13. At its meeting of January 20, 1989, the Advisory Committee recommended that the jurisdictional highway plan be revised to suggest the alignment shown on Map 13, recognizing that the preliminary engineering study for the reconstruction of CTH K will need to explore a range of alternative new alignments to eliminate the existing jog in CTH K, and that the study may propose a different location for the new alignment.

Seven Mile Road

Seven Mile Road is currently on the county trunk highway system between CTH S and USH 45. It has long been proposed as part of the jurisdictional highway plan for addition to the county trunk highway system between USH 45 and STH 32. Seven Mile Road, together with Eight Mile Road, would then provide a direct route across Racine County. The current county trunk highway route across the northern portion of Racine County is CTH G, which between USH 45 and STH 32 follows an indirect route using Six Mile Road, 51st Street, Five and One-

Map 13

POTENTIAL OPTION FOR THE SEGMENT OF CTH K TO BE CONSTRUCTED ON NEW ALIGNMENT



Source: SEWRPC.

Half Mile Road, and Howell Road. It has been recommended in the jurisdictional highway plan that the route of CTH G between USH 45 and IH 94 be dropped from the county trunk highway system, and that the route be considered a nonarterial facility. East of IH 94, it has been recommended that the CTH G between IH 94 and Howell Road (CTH H) remain on the county trunk highway system, as it provides connection from eastern Racine County to IH 94. Finally, it has been recommended that the section of CTH G between STH 31 and Northwestern Avenue be converted from a county trunk highway to a local trunk arterial highway.

At its meeting of January 20, 1989, the Advisory Committee reaffirmed the recommendations in the adopted county jurisdictional highway system plan with one exception: The Advisory Committee recommended that Six Mile Road between Howell Road and STH 31 remain a county trunk highway, rather than being converted to a local trunk highway. This stretch of Six Mile Road warrants designation as a county trunk highway based on traffic volume. In

addition, Six Mile Road provides an additional connection from the urban development in the eastern portion of Racine County to IH 94.

City of Burlington Bypass

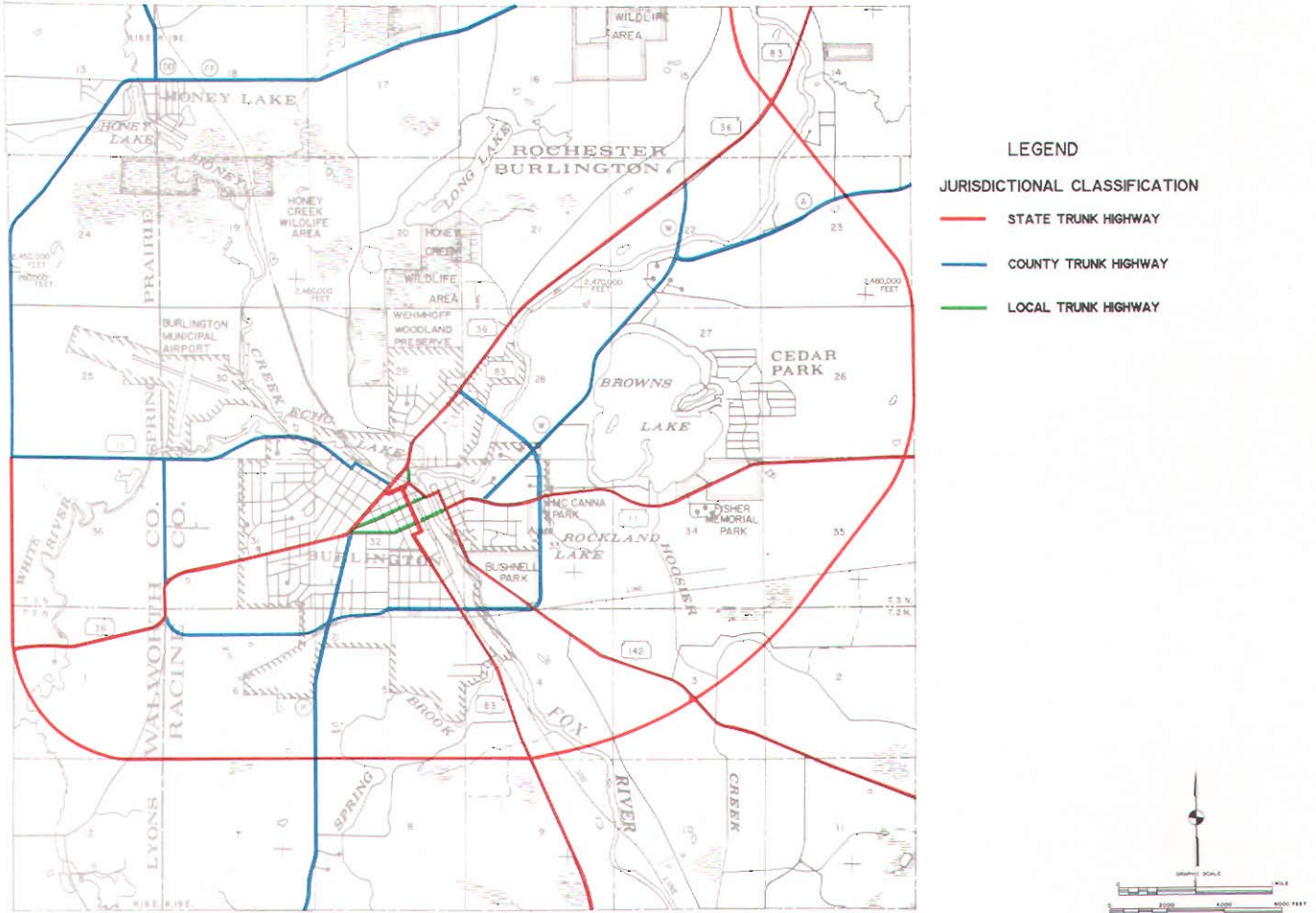
The City of Burlington representative requested that inclusion in the county jurisdictional highway system plan of a facility which could serve as a "bypass" of the City of Burlington be considered. The original county jurisdictional highway system plan, adopted in 1975, recommended both an inner and an outer bypass in the Burlington area, as shown on Map 14. The revised jurisdictional highway system plan adopted in 1978, shown on Map 15, did not include the outer bypass because of public opposition expressed at public informational meetings and hearings on the plan. The alignment of the inner bypass shown on the adopted jurisdictional highway system plan has not been preserved by the City which, contrary to the plan, sanctioned the development of an elderly housing complex in the bed of the proposed inner bypass north of STH 11. In response to the City's request, the costs and benefits of both an inner and an outer bypass were again investigated.

An inner and an outer bypass in the Burlington area represent alternative transportation improvements, as each may be expected to remove traffic from existing arterial streets in the Burlington area. However, the type of traffic removed from arterial streets by each type of bypass may be expected to vary, with the outer bypass principally removing through traffic, and the inner bypass removing traffic traveling between the City of Burlington and other areas of the Region, particularly the Milwaukee and Racine areas. Portions of the inner bypass may also be expected to carry some traffic entirely internal to the City of Burlington.

A survey was conducted of existing traffic in the Burlington area which may be expected to use a bypass facility. Such traffic includes through traffic, or traffic with both trip origins and destinations outside the City of Burlington but traveling through the City of Burlington; and internal-external traffic, or traffic that has one trip end within the City of Burlington and the other trip end outside the City. The roadside interview survey was conducted on May 17 to 19, 1988, on all major arterials entering and exiting the City of Burlington: STH 36, STH 11, STH 142, STH 83, and CTH P. The drivers of approximately 10 percent of the vehicles exiting

Map 14

ORIGINAL RACINE COUNTY YEAR 1990 JURISDICTIONAL HIGHWAY SYSTEM PLAN FOR THE BURLINGTON AREA PREPARED IN 1966



Source: SEWRPC.

Burlington on the survey dates were interviewed to determine the origin and destination of their trips.

Based on the survey findings, it is estimated that, on an average weekday, 7,700 through vehicle trips are made in the Burlington area; and 33,500 internal-external vehicle trips are made. The pattern of the through traffic is provided in Table 5 and Figure 2; the pattern of the existing internal-external traffic is provided in Table 6 and Figure 3. Internal vehicle trips—that is, trips with both trip ends within the City of Burlington—were estimated to total 26,000 per average weekday.

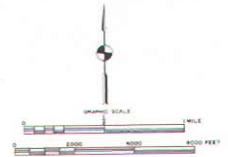
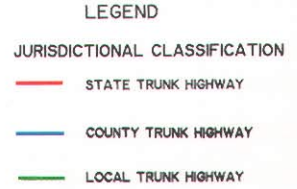
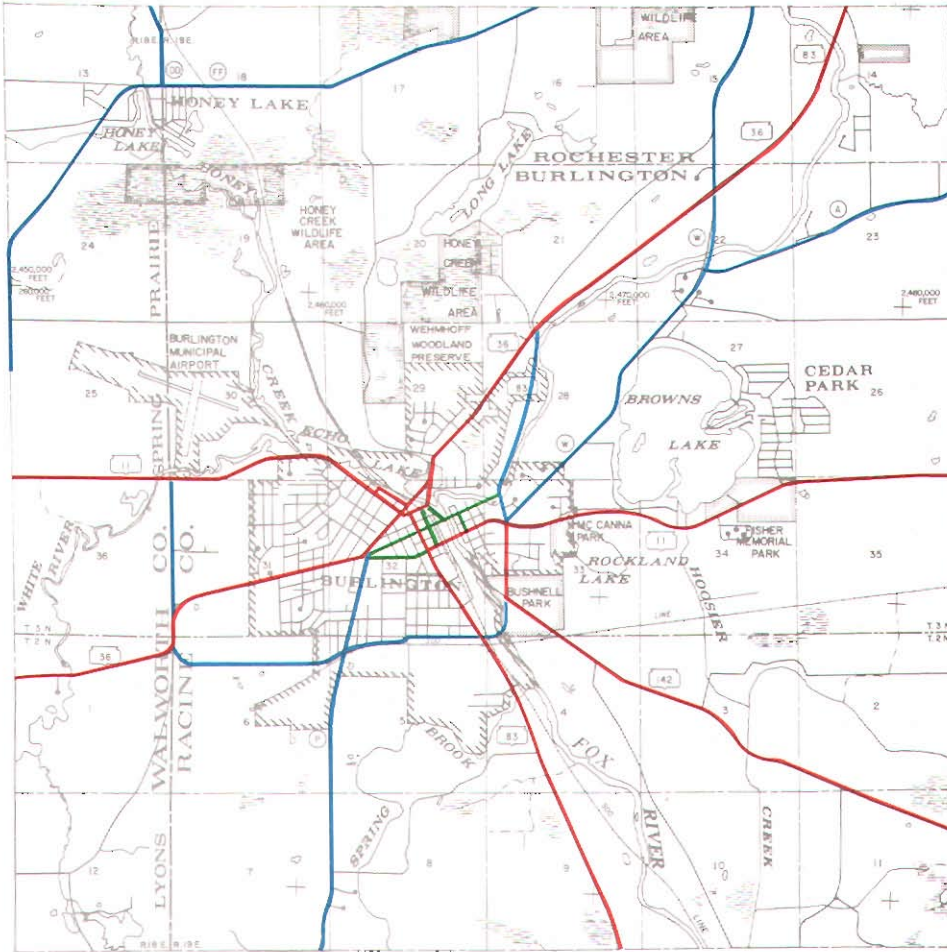
The distribution of through and internal-external traffic on an average weekday on City of Burlington streets is shown on Map 16. Of the

estimated 7,700 through trips made on an average weekday within the Burlington area, about 1,000, or about 13 percent, are truck trips. Of the estimated 33,500 internal-external trips made on an average weekday, about 3,000, or 9 percent, are truck trips. The existing distribution of the through and internal-external truck trips on City of Burlington streets is shown on Map 17.

The estimated total average weekday traffic—through, internal-external, and internal—on Burlington area arterial streets is shown on Map 18. All Burlington area arterial streets currently provide two traffic lanes. Those arterial facilities carrying traffic volumes which exceed or approach design capacity and, as a consequence, experience congestion are shown on Map 19.

Map 15

RACINE COUNTY YEAR 2000 JURISDICTIONAL HIGHWAY SYSTEM PLAN AS AMENDED IN 1978 FOR THE BURLINGTON AREA



Source: SEWRPC.

Table 5

PATTERN OF EXISTING THROUGH TRAFFIC IN THE BURLINGTON AREA

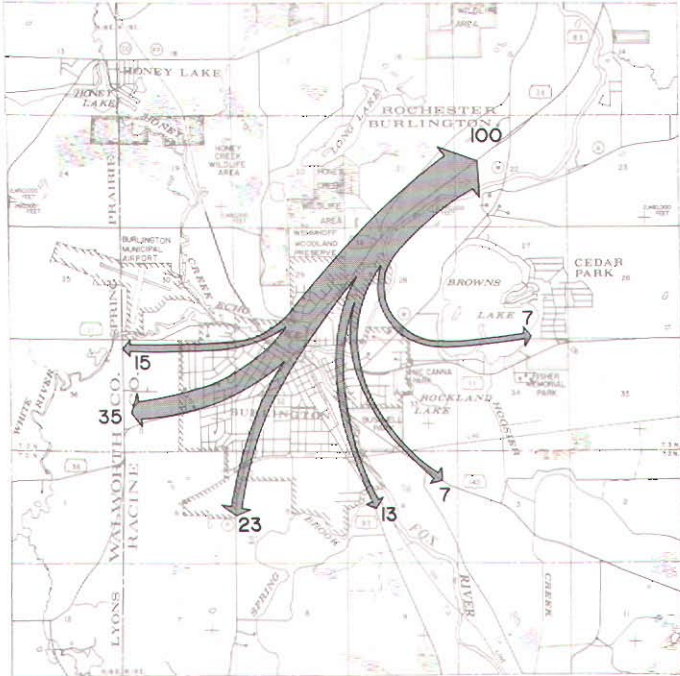
Location of Other End of Trip	Estimated Vehicle Through Trips Traveling on an Average Weekday Through the City of Burlington on Each Roadway Entering/Leaving the City of Burlington						
	STH 36 North	STH 36 South	STH 11 East	STH 11 West	STH 83	STH 142	CTH P
STH 36 North of Burlington	--	1,110	220	480	420	240	720
STH 36 South of Burlington	1,110	--	690	60	120	240	190
STH 11 East of Burlington	220	690	--	1,020	300	290	610
STH 11 West of Burlington	480	60	1,020	--	140	440	200
STH 83	420	120	300	140	--	30	40
STH 142	240	240	290	440	30	--	90
CTH P	720	190	610	200	40	90	--
Total Through Trips	3,190	2,410	3,130	2,340	1,050	1,330	1,850

Source: SEWRPC.

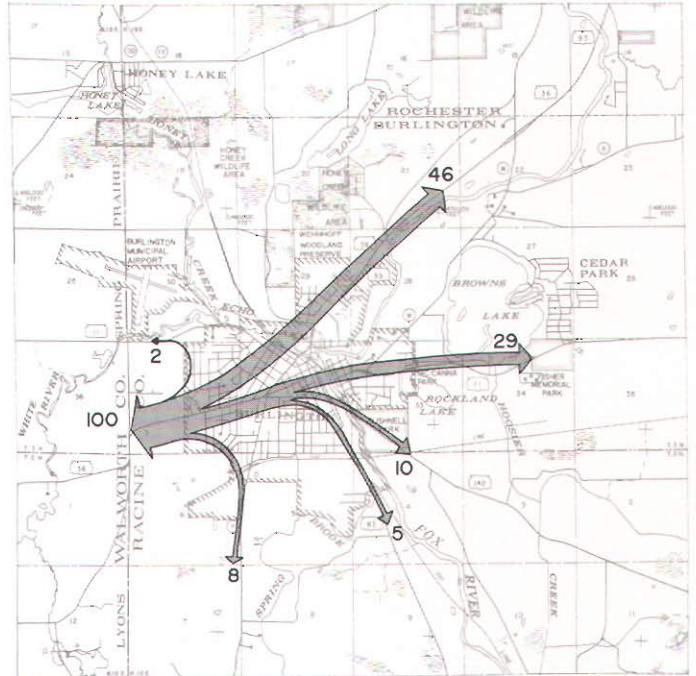
Figure 2

PATTERN OF THROUGH TRIPS IN THE BURLINGTON AREA

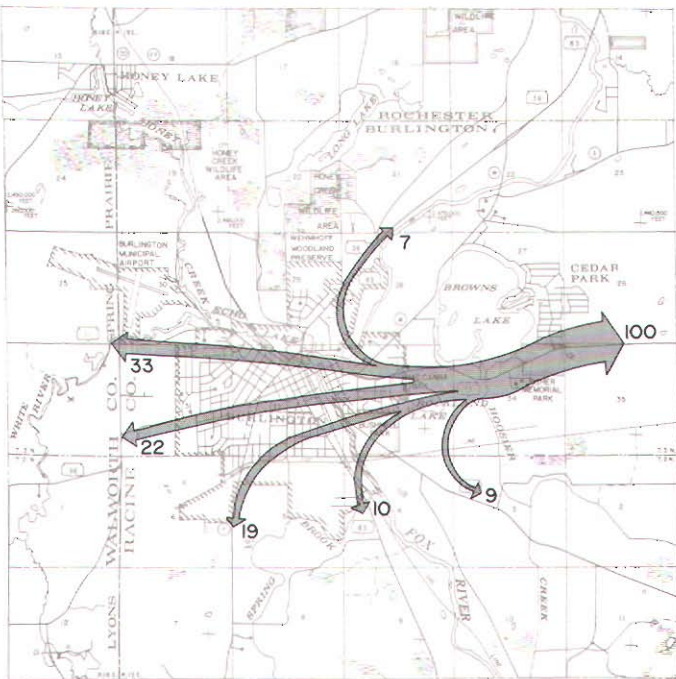
STH 36 (N. OF BURLINGTON)—3,190 VEHICLE TRIPS



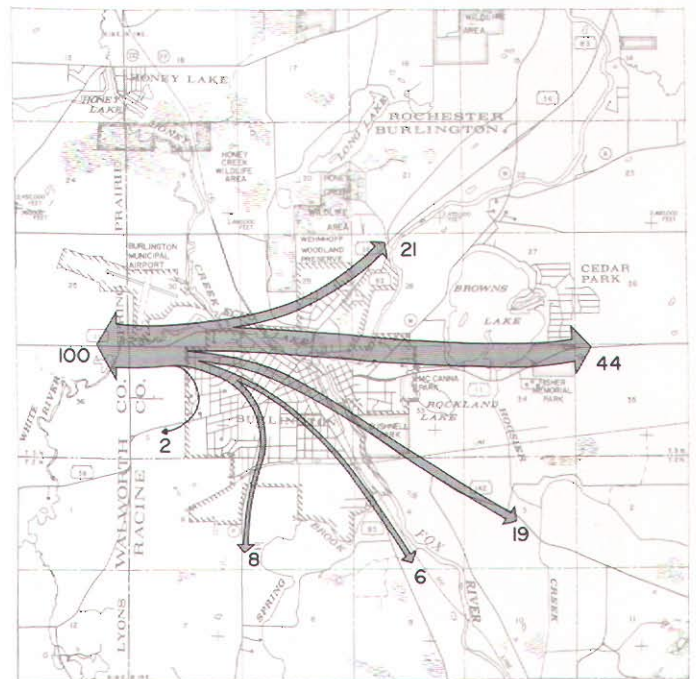
STH 36 (S. OF BURLINGTON)—2,410 VEHICLE TRIPS



STH 11 (E. OF BURLINGTON)—3,130 VEHICLE TRIPS



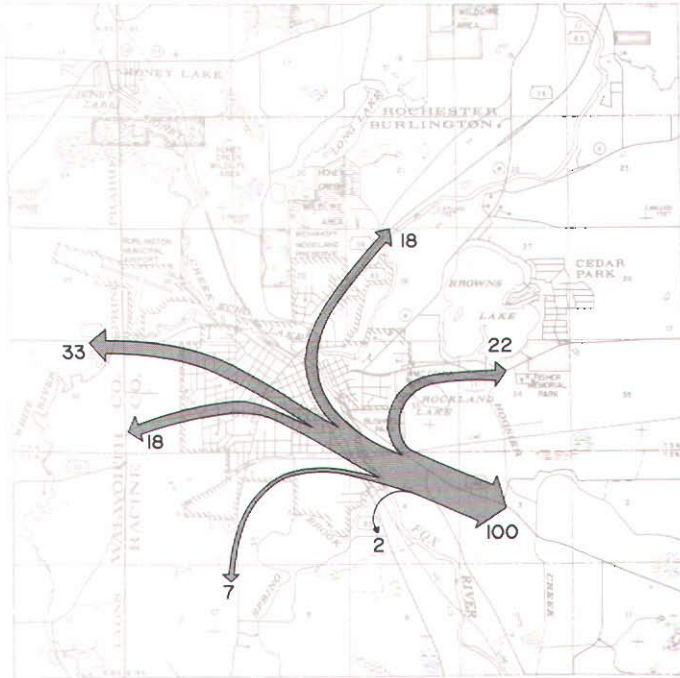
STH 11 (W. OF BURLINGTON)—2,340 VEHICLE TRIPS



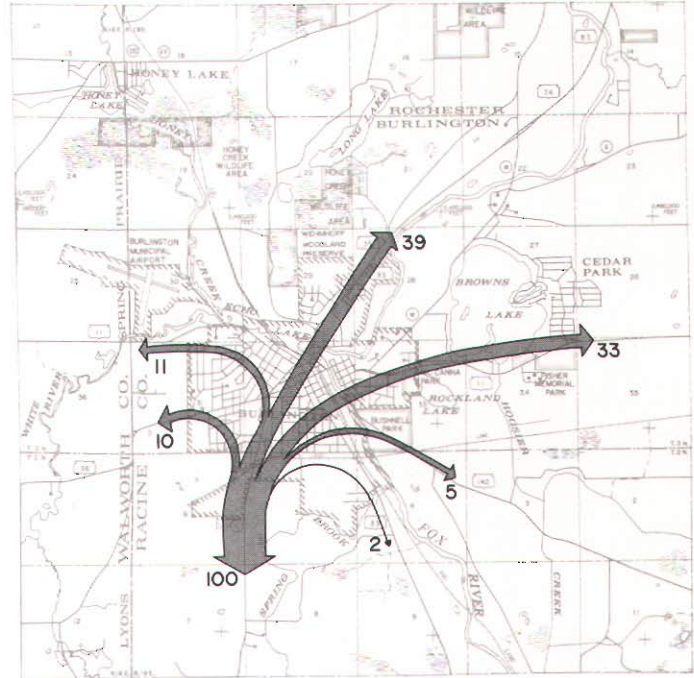
Source: SEWRPC.

Figure 2 (continued)

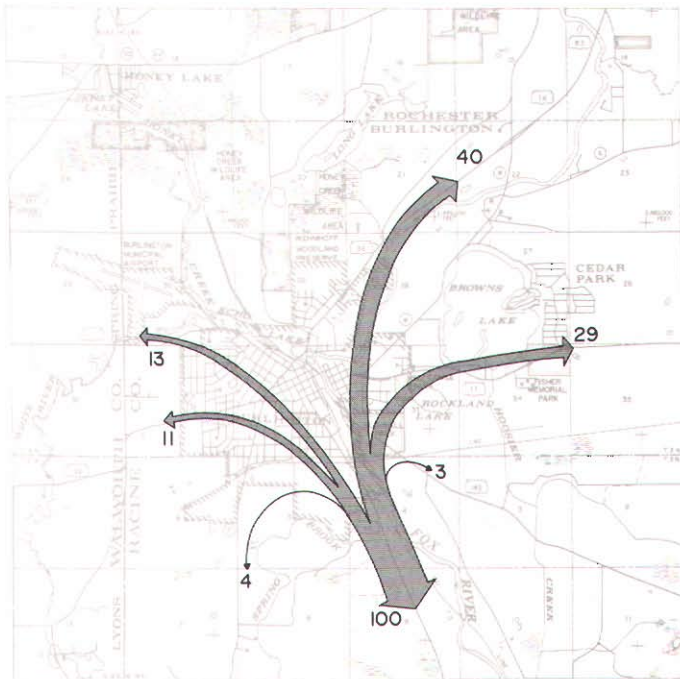
STH 142 (S. OF BURLINGTON)—1,330 VEHICLE TRIPS



CTH P (S. OF BURLINGTON)—1,850 VEHICLE TRIPS



STH 83 (S. OF BURLINGTON)—1,050 VEHICLE TRIPS



LEGEND

← 15
 PERCENTAGE OF THROUGH TRIPS USING
 STATE TRUNK HIGHWAYS 36, 11, 142, 83,
 AND COUNTY TRUNK HIGHWAY P TO ENTER/
 LEAVE THE CITY OF BURLINGTON

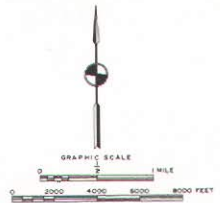
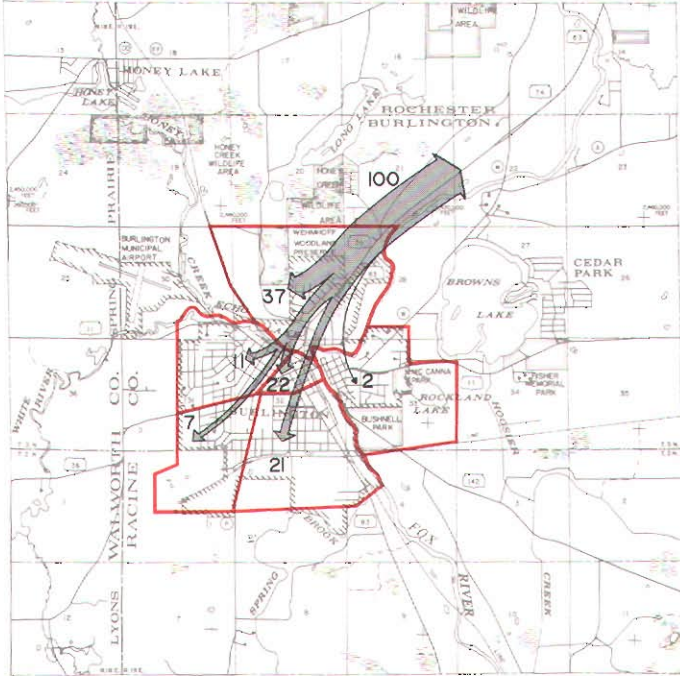


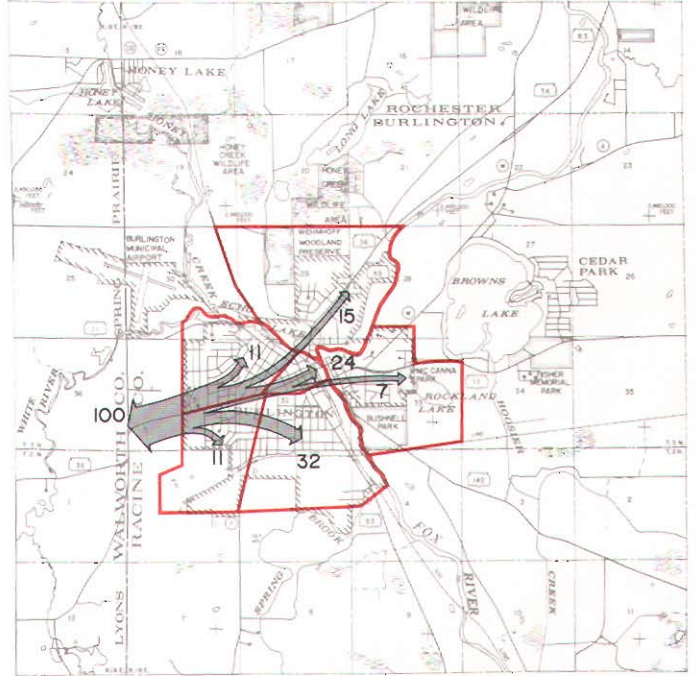
Figure 3

PATTERN OF EXISTING INTERNAL-EXTERNAL TRAFFIC IN THE BURLINGTON AREA

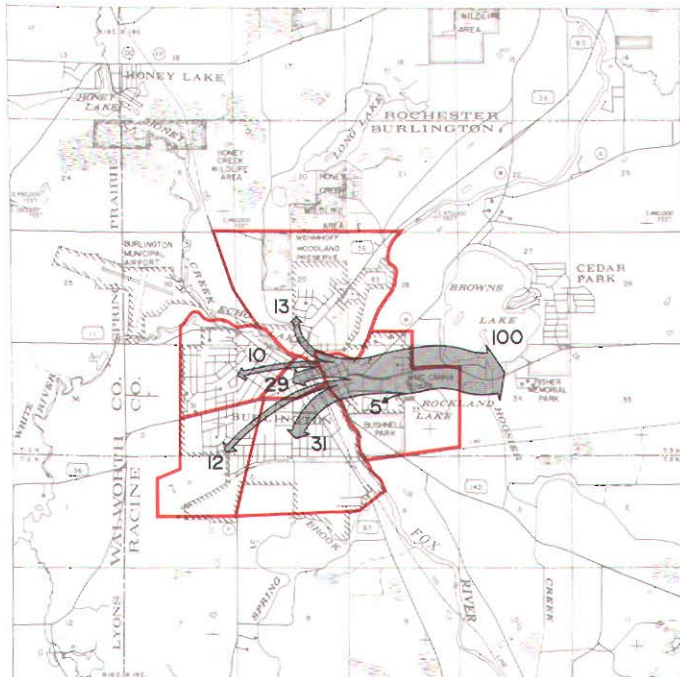
STH 36 (N. OF BURLINGTON)—7,920 VEHICLE TRIPS



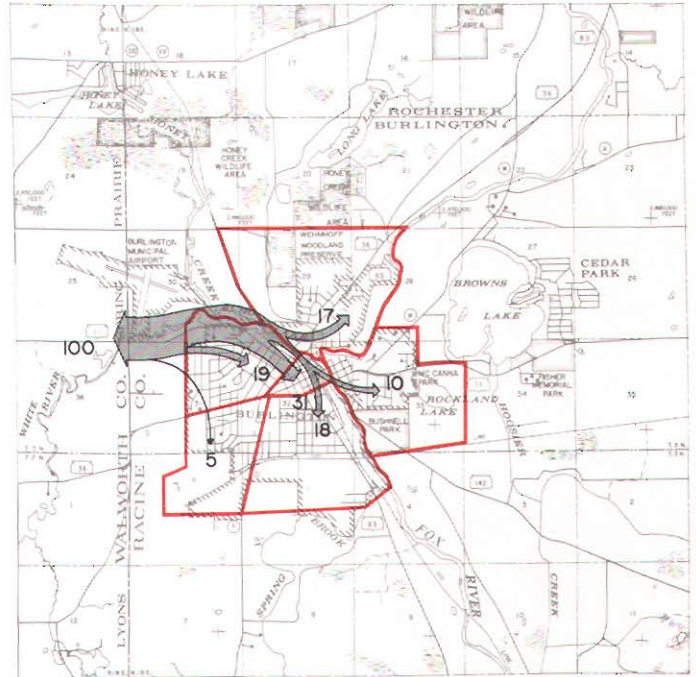
STH 36 (S. OF BURLINGTON)—5,100 VEHICLE TRIPS



STH 11 (E. OF BURLINGTON)—6,660 VEHICLE TRIPS



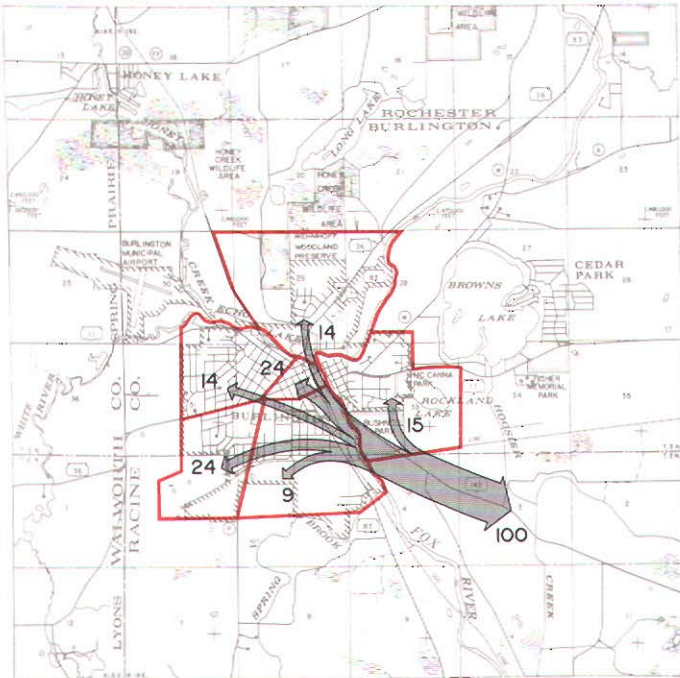
STH 11 (W. OF BURLINGTON)—2,670 VEHICLE TRIPS



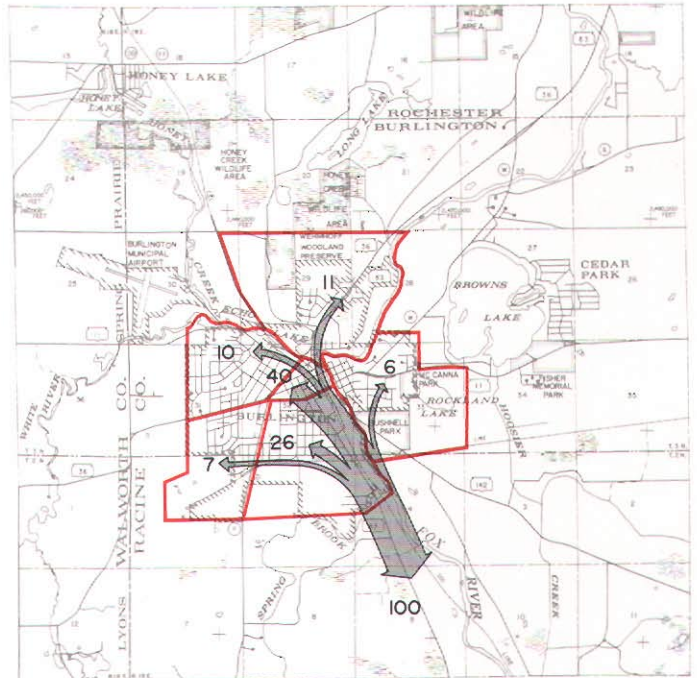
Source: SEWRPC.

Figure 3 (continued)

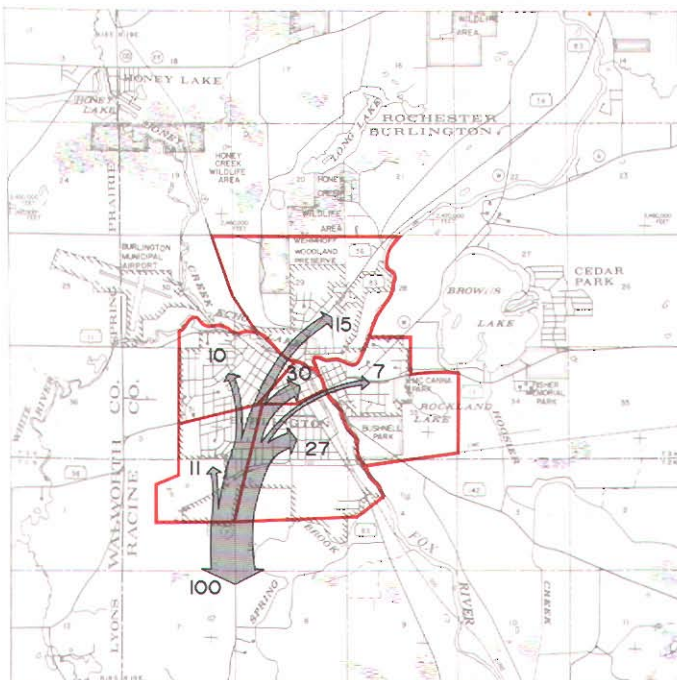
STH 142 (S. OF BURLINGTON)—2,650 VEHICLE TRIPS



STH 83 (S. OF BURLINGTON)—4,190 VEHICLE TRIPS



CTH P (S. OF BURLINGTON)—4,330 VEHICLE TRIPS



LEGEND

← 15
 PERCENTAGE OF TRIPS ORIGINATING IN OR DESTINED TO VARIOUS SUBAREAS WITHIN THE CITY OF BURLINGTON AREA USING STATE TRUNK HIGHWAYS 35, 11, 142, AND 83, AND COUNTY TRUNK HIGHWAY P

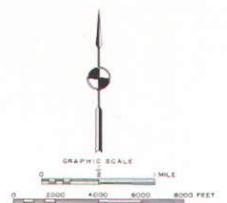


Table 6

PATTERN OF EXISTING INTERNAL-EXTERNAL TRAFFIC IN THE BURLINGTON AREA

Roadway	Estimated Internal-External Vehicle Trips on an Average Weekday Traveling on This Roadway Segment
STH 36 North of Burlington	7,920
STH 36 South of Burlington	5,100
STH 11 East of Burlington	6,660
STH 11 West of Burlington	2,670
STH 83	4,190
STH 142	2,650
CTH P	4,330
Total	33,520

Source: SEWRPC.

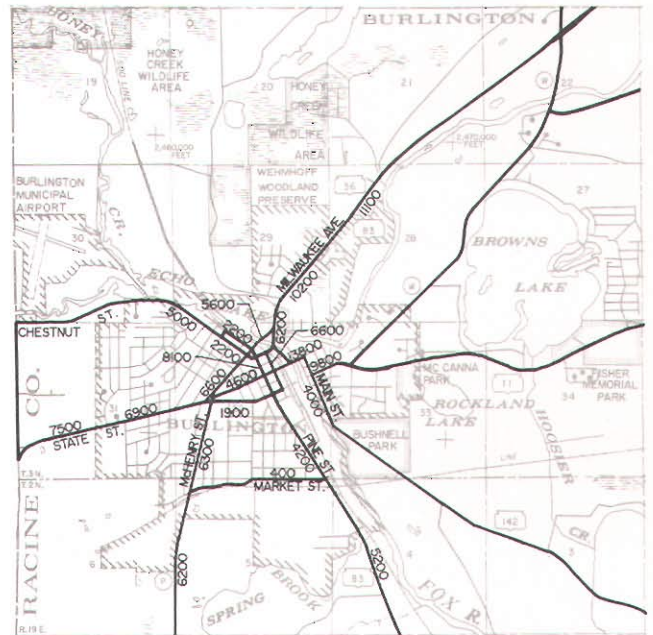
Forecast year 2010 traffic in the City of Burlington—assuming no arterial street improvements—is shown on Map 20. Those arterial facilities in the City of Burlington that may be expected to experience traffic congestion by the year 2010 assuming no arterial highway improvements are shown on Map 21.

The potential of alternative bypass facilities to remove existing and forecast traffic from City of Burlington arterial streets, and to resolve the identified traffic congestion problems, was carefully evaluated. Alternative bypasses considered included an inner bypass located to the east, south, and west of the City, generally near the current corporate limits of the City; an outer bypass located to the east, south, and west of the City, generally one to two miles beyond the corporate limits of the City; and an outer bypass located to the north of the City, generally one to two miles beyond the corporate limits of the City. The alternative alignments considered for an inner bypass are shown on Map 22, and for an outer bypass on Map 23.

Description of Alternatives: Alternative O-1 is an outer bypass located generally along the alignment proposed by the original county

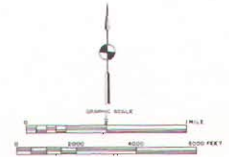
Map 16

ESTIMATED TOTAL EXISTING THROUGH AND INTERNAL-EXTERNAL VEHICLE TRAVEL ON AN AVERAGE WEEKDAY IN THE CITY OF BURLINGTON



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- 7500 EXISTING AVERAGE WEEKDAY THROUGH AND INTERNAL-EXTERNAL VEHICLE TRAFFIC VOLUME

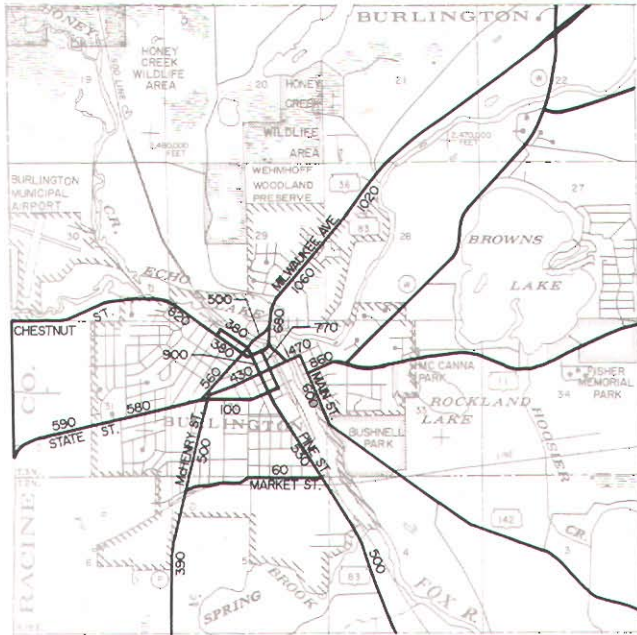


Source: SEWRPC.

jurisdictional highway system plan adopted in 1975. The bypass would connect all state and county trunk highways through the City: STH 36, STH 11, STH 83, STH 142, and CTH P. The bypass would begin at a new intersection located on STH 36 about 0.8 mile north of CTH W. The alignment would cross the Fox River channel on a bridge having a span of about 300 feet. The bridge would entail placing the roadway on fill for about 100 feet of the about 400-foot width of the floodway of the Fox River at this location. The alignment would then be located east of Cedar Park Estates and Fairfield Subdivision on the east side of Browns Lake through agricultural lands. The alignment would again cross the Fox River channel west of STH 142 on a bridge having a span of about 250 feet. The bridge would entail placing the roadway on fill for about 1,100 feet of the 1,350-foot width of the floodway of the Fox River at

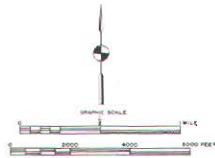
Map 17

ESTIMATED EXISTING THROUGH AND INTERNAL-EXTERNAL TRUCK TRAVEL ON AN AVERAGE WEEKDAY IN THE BURLINGTON AREA



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- 7500 EXISTING AVERAGE WEEKDAY THROUGH AND INTERNAL-EXTERNAL TRUCK TRAFFIC VOLUME



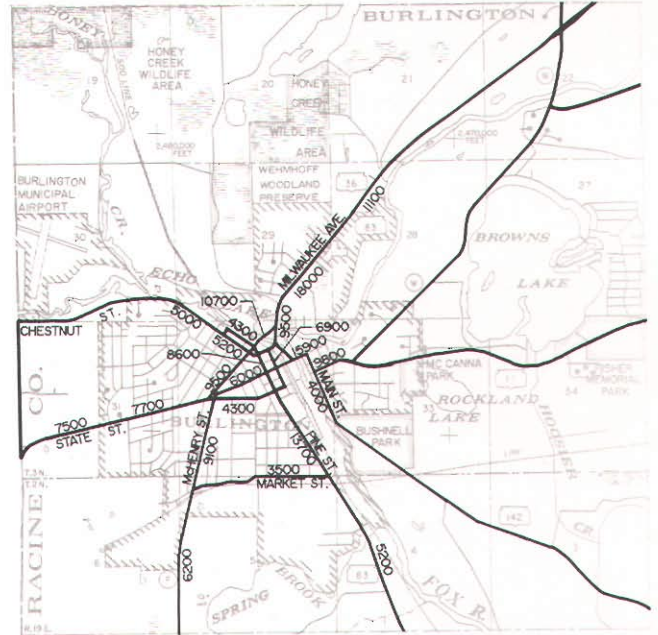
Source: SEWRPC.

this location. The alignment would then be located along the southern boundary of the planned Burlington industrial park. A third bridge—having a span of about 100 feet—would be required to cross the White River. The bridge would entail placing the roadway on fill for about 800 feet of the 900-foot width of the floodway of the White River at this location. The alignment would continue north about one mile west of Mormon Road to STH 11. Alternative O-1 would consist of a four-lane divided rural cross-section on 130 feet of right-of-way, but could be constructed in stages beginning with a two-lane undivided rural cross-section.

Alternative O-2 is an outer bypass located north northeast and west of the City, connecting STH 36 and STH 11. This alternative would begin at an intersection with STH 11 about 0.75 mile west of Crossway Road, and then run north

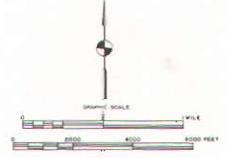
Map 18

ESTIMATED EXISTING AVERAGE WEEKDAY TRAFFIC IN THE BURLINGTON AREA



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- 7500 EXISTING AVERAGE WEEKDAY TRAFFIC VOLUME

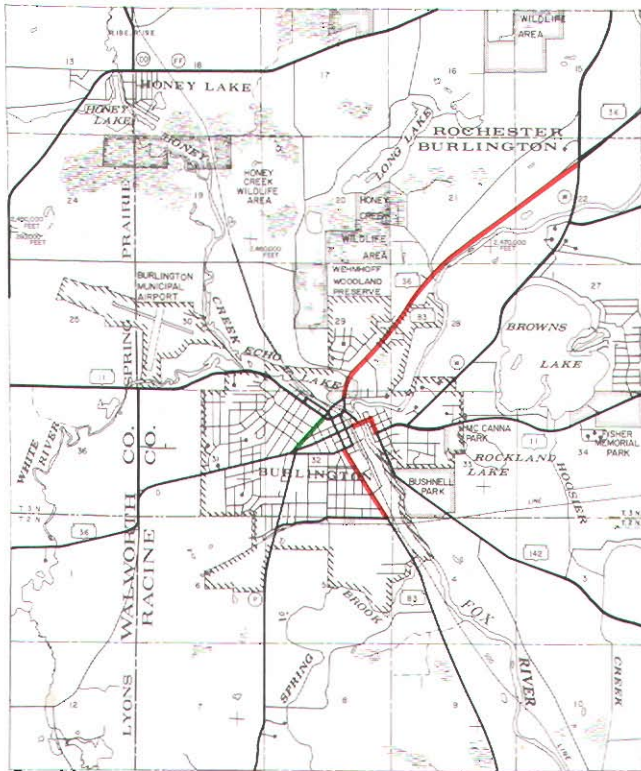


Source: SEWRPC.

to the east of Cedar Park Estates and Fairfield Subdivision on the east side of Browns Lake through agricultural lands to Ketterhagen Road. The alignment would continue along Ketterhagen Road for about 0.6 mile, and then along a westerly extension of this road across the Fox River channel on a bridge having a span of about 200 feet. The bridge would entail placing the roadway on fill for about 500 feet of the 700-foot width of the floodway of the Fox River at this location. The alignment would intersect with STH 36 and would follow the alignment of STH 36 southwest for about 1.0 mile to Droster Avenue, where it would then be located on Droster Avenue and its westerly extension north of Bear Meadows Subdivision and through the Wehmhoff Woodland Preserve to Spring Prairie Road. The alignment would then follow Spring Prairie Road for 2.3 miles, and then CTH DD to the south for 0.3 mile. The facility would then be

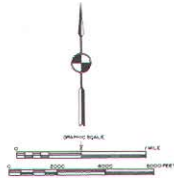
Map 19

BURLINGTON AREA ARTERIAL STREETS ESTIMATED TO CARRY AVERAGE WEEKDAY TRAFFIC VOLUMES EXCEEDING THEIR DESIGN CAPACITY: 1988



LEGEND

- ARTERIAL STREET VOLUME AT OR OVER DESIGN CAPACITY
- ARTERIAL STREET VOLUME APPROACHING DESIGN CAPACITY
- ARTERIAL STREET VOLUME NOT APPROACHING DESIGN CAPACITY



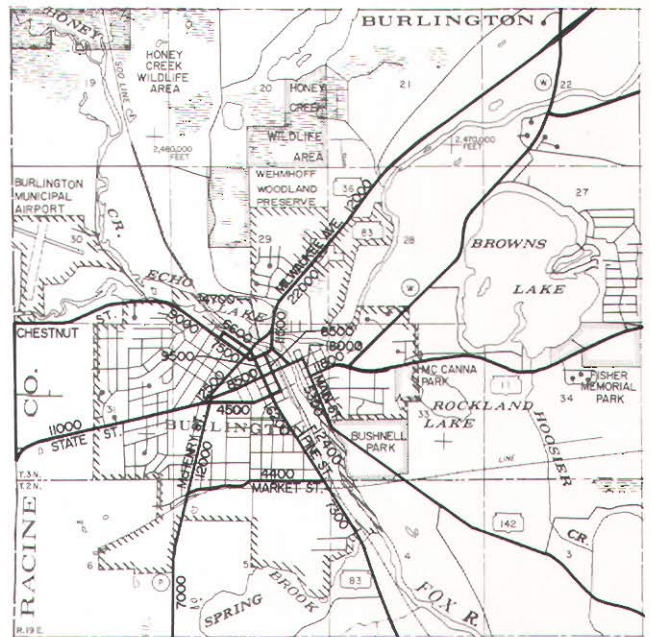
Source: SEWRPC.

located along new roadway extended south of CTH DD and continue to STH 36. With the exception of the segment of this alternative located on STH 36, and the segment from Droster Avenue to the Wehmhoff Woodland Preserve which would have a four-lane undivided urban cross-section, Alternative O-2 would be a two-lane rural cross-section on 66 feet of right-of-way.

Alternative I-1 is an inner bypass route following the alignment proposed under the revised county jurisdictional highway system plan adopted in 1978. This alternative would begin at a new intersection located on STH 36 south of

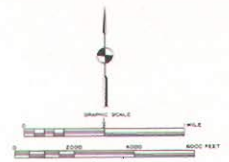
Map 20

FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC IN THE BURLINGTON AREA



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- 8500 FORECAST YEAR 2010 AVERAGE WEEKDAY TRAFFIC VOLUME

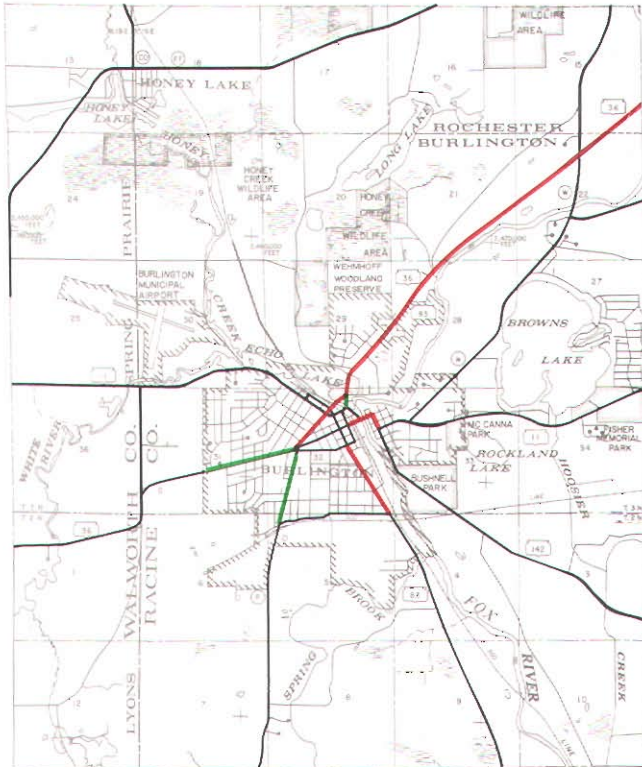


Source: SEWRPC.

Teut Road, and would utilize the abandoned electric interurban railway right-of-way presently used for power transmission by the Wisconsin Electric Power Company, and as a recreational trail. This alternative would then traverse Riverside Park and cross the Fox River channel on a bridge having a span of about 300 feet. The bridge would entail placing the roadway on fill for about 900 feet of the 1,200-foot width of the floodway of the Fox River at this location. The alignment would then run east of the Riverview Manor housing for the elderly, requiring the acquisition and demolition of two single-family homes. The alignment would intersect State Street (STH 11) opposite Chapel Terrace, and entail the relocation of S. Browns Lake Drive (CTH W) to intersect State Street opposite an extension of Ridgeview Drive. Alternative I-1 would continue south on Chapel Terrace, a residential land access street, for its entire length of 0.33 mile, and then extend

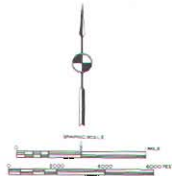
Map 21

**BURLINGTON AREA ARTERIAL
STREETS EXPECTED TO CARRY FORECAST
YEAR 2010 TRAFFIC VOLUMES WHICH WILL
EXCEED THEIR DESIGN CAPACITY ASSUMING
NO ARTERIAL SYSTEM IMPROVEMENTS**



LEGEND

- ARTERIAL STREET VOLUME AT OR OVER DESIGN CAPACITY
- ARTERIAL STREET VOLUME APPROACHING DESIGN CAPACITY
- ARTERIAL STREET VOLUME NOT APPROACHING DESIGN CAPACITY



Source: SEWRPC.

through the western portion of Bushnell Park in the Town of Burlington to a new intersection with Bushnell Road (STH 142), and continue through Bushnell Park to a second Fox River crossing. The bridge would have a span of about 350 feet and would entail placing the roadway on fill for about 550 feet of the 900-foot width of the floodway of the Fox River at this location. The acquisition and demolition of the Burlington Wholesale Groceries complex would be required to connect the bypass alignment to Market Street at Pine Street (STH 83). The alignment would use the existing segment of Market Street between Pine Street (STH 83) and McHenry Street (CTH P) and its long-planned westerly

extension to STH 36, as officially mapped by the City of Burlington. The last segment of Alternative I-1 would utilize Mormon Road to connect STH 36 with STH 11. All new sections of Alternative I-1—and all other inner bypass alternatives—would be constructed with a four-lane undivided urban cross-section on 66 feet of right-of-way.

All the other inner bypass alternatives would follow the same alignment as Alternative I-1 south and west of the City of Burlington—that is, all inner bypass alternatives would use Market Street and its planned westerly extension between Pine Street (STH 83) and STH 36, and Mormon Road between STH 36 and STH 11.

Alternative I-2 would largely follow existing streets for the remainder of its alignment. It would utilize CTH W between STH 36 and STH 11, and Chapel Terrace south of STH 11. It would utilize new alignment only to connect the southern terminus of Chapel Terrace to Market Street through Bushnell Park. The necessary bridge over the Fox River would have a span of about 350 feet and entail placing the roadway on fill for about 550 feet of the 900-foot width of the floodway of the Fox River at this location.

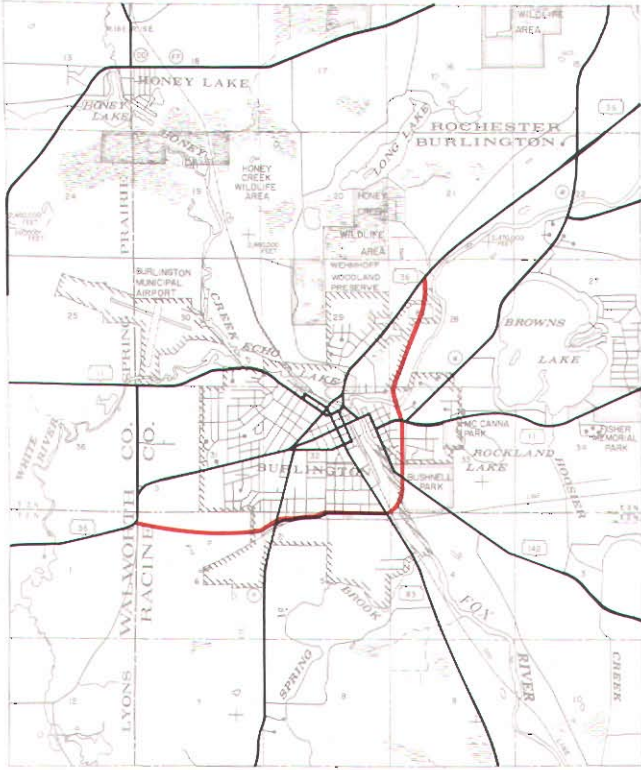
Alternative I-2A is a subalternative to Alternative I-2. It would differ only in that it would include a new roadway connecting CTH W to STH 36 north of the City of Burlington corporate limits. Alternative I-2A would cross the Fox River channel on a bridge having a span of about 200 feet. The bridge would entail placing the roadway on fill for about 600 feet of the 800-foot width of the Fox River at this location. The new roadway would traverse agricultural lands northeast of the Browns Lake Golf Course.

Another of the inner bypass alternatives, Alternative I-3, would utilize CTH W south of STH 36, and then follow new alignment west of Browns Lake and east of Burlington Cemetery. The alignment would be located in an unused portion of the cemetery and in agricultural lands east of Clover Drive to STH 11. This alternative would then be located through McCanna Park and a multi-family residential area on Meadow Lane, requiring the acquisition and demolition of two condominium buildings, including 20 residential housing units. The alignment would then be located on the east side of Bushnell Park and connect to Market Street at Pine Street (STH 83). Alternative I-3 would cross the Fox River chan-

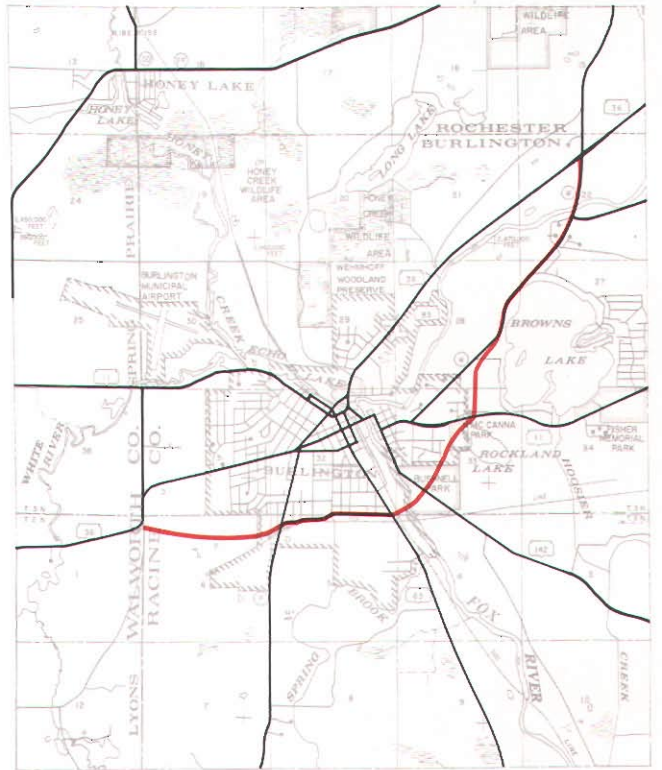
Map 22

ALTERNATIVE INNER BYPASS ALIGNMENTS FOR THE CITY OF BURLINGTON

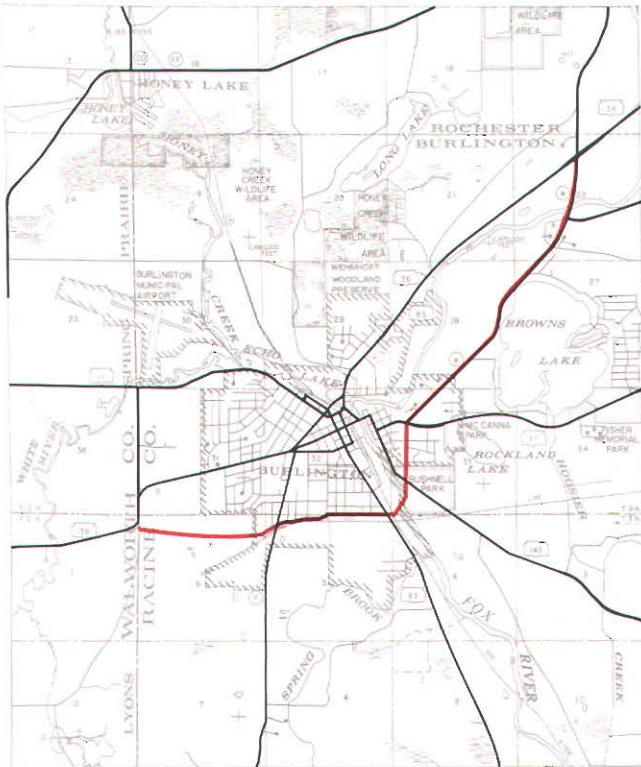
ALTERNATIVE I-1



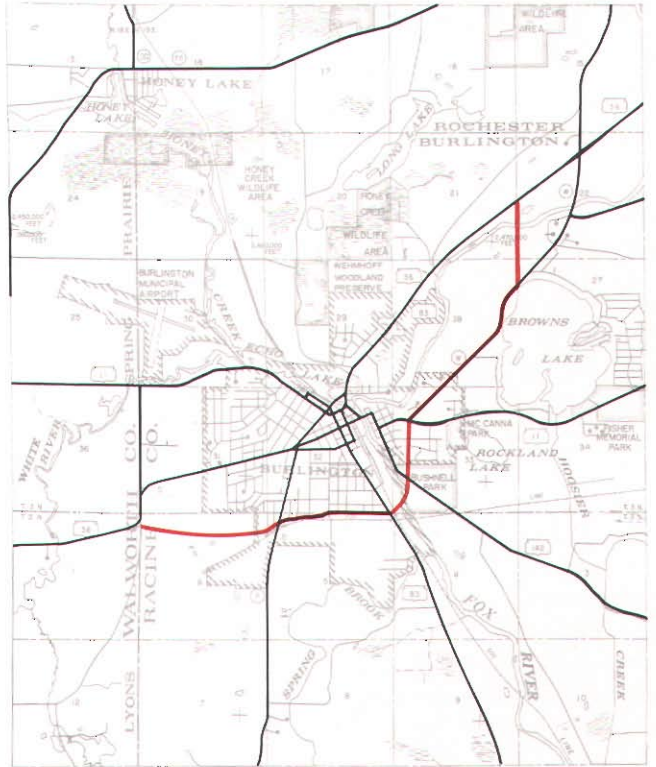
ALTERNATIVE I-3



ALTERNATIVE I-2

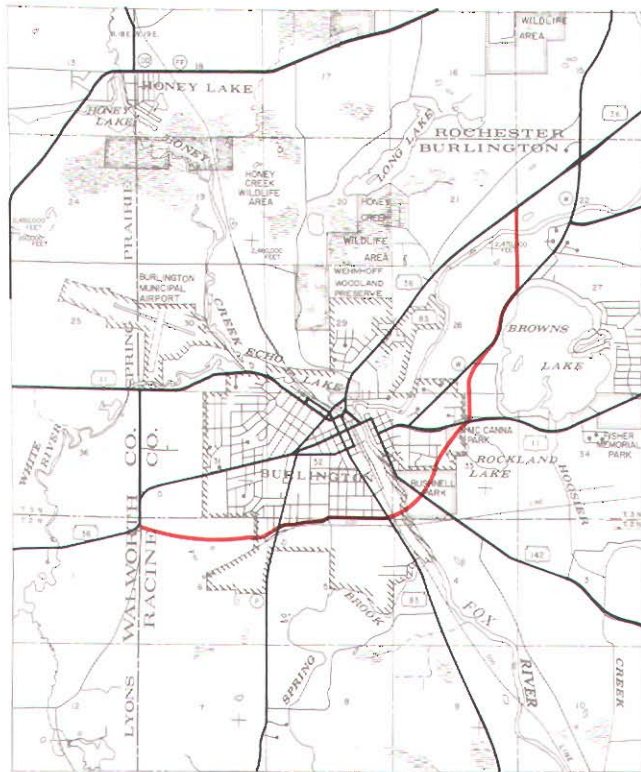


ALTERNATIVE I-2A



Map 22 (continued)

ALTERNATIVE I-3A



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- PROPOSED ALIGNMENT



Source: SEWRPC.

nel on a bridge with a span of about 300 feet, and would entail placing the roadway on fill for 200 feet of the 500-foot width of the floodway at this section.

Alternative I-3A is a subalternative to Alternative I-3. It would differ only in that a new roadway would be utilized to connect CTH W and STH 36, as under Alternative I-2A.

Evaluation of Alternatives: Table 7 presents an evaluation of the benefits and costs of the various alternatives considered. The information provided includes the expected total traffic and truck traffic that the bypass may be expected to carry; the total traffic and truck traffic that may be expected to be removed from City of Burlington arterial streets; and the reduction in traffic

congestion and the need to widen and prohibit parking on City of Burlington streets. The estimated capital costs of each bypass alternative are also presented, including both construction and right-of-way costs; and the disruption that would result from implementation of each alternative in terms of number and type of structures required to be taken is indicated, as is the right-of-way that would be required.

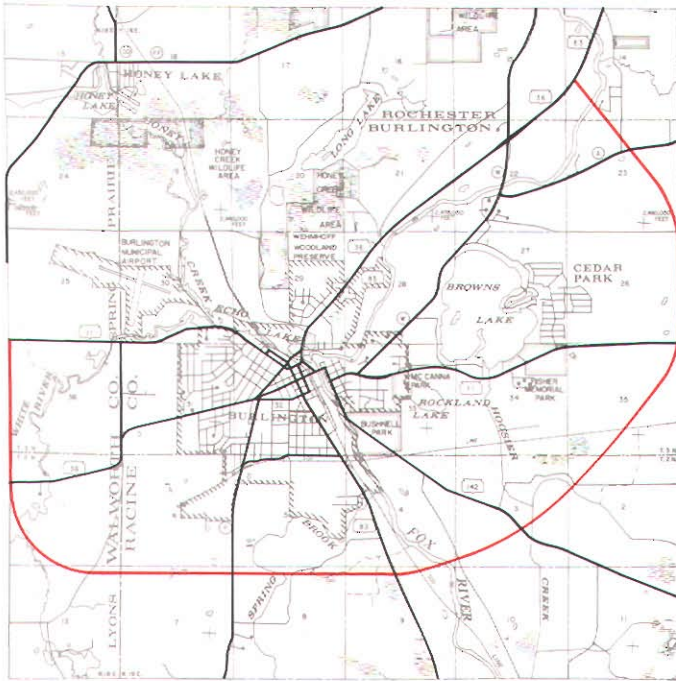
Inner Bypass Alternatives: All five inner bypass alternatives may be expected to carry about the same amount of traffic and provide similar relief to city streets. With the implementation of any of the inner bypass alternatives, forecast year 2010 traffic on City of Burlington arterial streets may be expected to be no greater than, and in many cases less than, the current level of traffic carried by those streets, with the exception of Milwaukee Avenue, which would be expected to carry 2,000 to 3,000 more vehicles per average weekday in the year 2010 than in 1988; Chestnut Street and Commerce Street, which may be expected to carry about 1,000 more vehicles per average weekday than in 1988; and Market Street, which may be expected to carry about 5,000 more vehicles per average weekday than in 1988. The implementation of an inner bypass alternative may be expected to eliminate the need to improve STH 11 (Jefferson Street and Main Street) between Dodge Street and State Street; and McHenry Street (CTH P) between State Street (CTH P) and Market Street. The estimated capital costs of the inner bypass alternatives range from \$3.8 to \$7.0 million. Each of the inner bypass alternatives would result in some disruption of existing land use, including parklands and residential and commercial land uses.

Alternative I-2 is the best of the inner bypass alternatives considered, as it provides similar traffic benefits as the other alternatives at the lowest capital cost and with the least disruption to existing land uses. The estimated capital cost of Alternative I-2 is \$3.8 million, which compares to the capital costs of the other alternatives of \$4.8 to \$7.0 million. Alternative I-2 would entail the least disruption of existing land uses, as it would utilize CTH W between STH 36 and STH 11, and Chapel Terrace between STH 11 and its southern terminus. There would be some negative impacts on Chapel Terrace, as this street currently functions as a residential land access, or local, street, and would function as an arterial street under Alternative I-2. The existing

Map 23

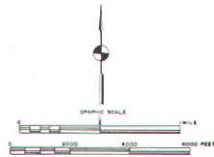
ALTERNATIVE OUTER BYPASS ALIGNMENTS FOR THE CITY OF BURLINGTON

ALTERNATIVE O-1

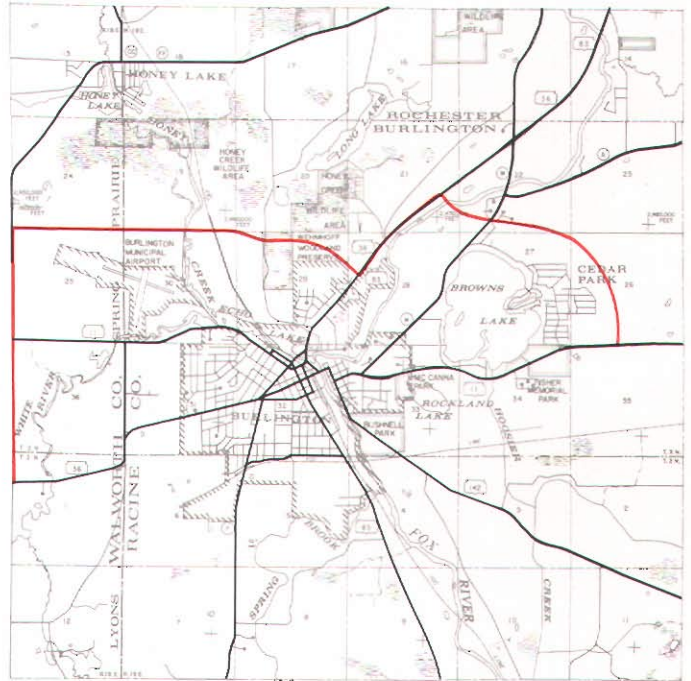


LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- PROPOSED ALIGNMENT

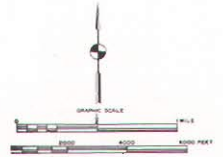


ALTERNATIVE O-2



LEGEND

- EXISTING ARTERIAL STREET AND HIGHWAY SYSTEM
- PROPOSED ALIGNMENT



Source: SEWRPC.

traffic volume on Chapel Terrace would be expected to increase from an estimated 1,500 vehicles per average weekday to 5,800 vehicles per average weekday upon the implementation of Alternative I-2; and the traffic volume would be expected to increase to 6,600 by the year 2010. The bypass would, as under all the alternatives, pass through Bushnell Park. Specifically, the bypass would reduce the park in size from about 95 to 94 acres and would be located in the west portion of the park, which is not extensively used for active recreational uses. The inner bypass Alternative I-2 would require the acquisition and removal of the Burlington Wholesale Groceries complex to provide a connection to Market Street. West of Pine Street (STH 83),

Alternative I-2 would have the same impact as the other inner bypass alternatives, as it would follow the same alignment.

Outer Bypass Alternatives: Alternative O-1 is the best of the outer bypass alternatives considered. The outer bypass along the long-proposed route to the east, south, and west of the City of Burlington may be expected to carry substantially more traffic than the proposed bypass to the north of the City—that is, up to 5,000 vehicles per average weekday more than the northern outer bypass. Both alternative outer bypasses may be expected to remove traffic from STH 36 within the City of Burlington, but only the bypass to the south of the City—Alternative

Table 7

EVALUATION OF BURLINGTON BYPASS ALTERNATIVES

Evaluation Measure			Outer Bypass Alternatives							
			Alternative O-1: Outer Bypass Route East, South and West of City				Alternative O-2: Outer Bypass Route North, Northeast, and West of City			
Benefits			1988		Forecast Year 2010		1988		Forecast Year 2010	
Traffic Impacts			Total	Truck	Total	Truck	Total	Truck	Total	Truck
<ul style="list-style-type: none"> Estimated and Forecast Average Weekday Daily Traffic Volume on Bypass Route 										
<u>Segments of Bypass</u>										
East of City			3,400 to 6,400	480 to 920	5,700 to 8,600	800 to 1,240	--	--	--	--
South of City			6,000 to 8,300	880 to 1,240	8,500 to 10,800	1,250 to 1,610	--	--	--	--
West of City			2,800 to 6,000	480 to 780	4,000 to 8,500	690 to 1,110	1,800	190	2,500	260
North of City			--	--	--	--	3,200	430	5,000	670
<ul style="list-style-type: none"> Traffic on City Arterial Streets (average weekday daily traffic) 			"No Build" Alternative 2010		1988	Forecast Year 2010	1988	Forecast Year 2010		
Street	Existing 1988									
STH 36 (Milwaukee Avenue) Bridge Street to Northern Corporate Limits Kane Street to Bridge Street	15,700 to 18,800 10,500 to 12,500	19,500 to 24,000 14,200 to 15,500	12,500 to 15,400 8,100 to 9,700	15,000 to 19,500 10,800 to 12,200	13,100 to 15,300 8,600 to 10,700	15,400 to 18,900 11,300 to 12,700				
STH 36 (State Street) McHenry Street to Kendrick Avenue	7,700	11,000	3,100	4,300	6,200	8,600				
STH 11 (Jefferson and Main Streets) Dodge Street to State Street	15,900	18,000	9,100	9,500	13,400	14,700				
STH 11 (Chestnut Street) Pleasant Avenue to Milwaukee Avenue	5,000 to 5,200	7,500 to 9,000	3,300 to 4,500	6,600 to 7,200	2,900 to 4,400	6,300 to 6,400				
STH 11 (Commerce Street) Milwaukee Avenue to Kendall Street	4,300	6,600	3,600	5,700	3,200	4,200				
CTH P (McHenry Street) State Street to Market Street	9,100	12,000	6,400	8,300	9,000	11,900				
STH 83 (Pine Street) State Street to Market Street	10,400 to 13,700	12,400 to 16,200	9,800 to 11,700	10,500 to 13,100	10,400 to 13,700	12,400 to 16,200				
Bridge Street Milwaukee Avenue to Chestnut Street	9,500	11,500	7,800	9,200	8,100	9,800				
Market Street McHenry Street to Pine Street	3,500	4,400	3,100	4,100	3,500	4,400				
Downtown One-Way Pair Pine Street—Chestnut Street to State Street Dodge Street—State Street to Chestnut Street	7,700 6,900	9,000 8,000	5,900 6,700	6,800 7,500	7,700 5,500	9,000 6,200				
<ul style="list-style-type: none"> Truck Traffic on Arterial Streets at City Corporate Limits 			"No Build" Alternative 2010		1988	Forecast Year 2010	1988	Forecast Year 2010		
Street	Existing 1988									
Main Street (STH 142) State Street (STH 11) Milwaukee Avenue (STH 36) Chestnut Street (STH 11) State Street (STH 36) McHenry Street (CTH P) Pine Street (STH 83)	580 960 1,250 790 590 640 980	750 1,070 1,690 1,040 810 1,210 1,630	220 370 800 370 240 470 720	250 400 930 470 280 640 880	580 740 910 440 520 640 980	750 790 1,160 560 700 1,210 1,630				

Table 7 (continued)

Evaluation Measure		Outer Bypass Alternatives	
		Alternative O-1: Outer Bypass Route East, South and West of City	Alternative O-2: Outer Bypass Route North, Northeast, and West of City
Needed Street Improvements Under Each Alternative			
	"No Build" Alternative 2010		
<ul style="list-style-type: none"> • STH 36—Milwaukee Avenue and State Street Milwaukee Avenue from Northern Corporate Limits to Southern Terminus of Wegge Road 	Widen to provide four traffic lanes with median	Widen to provide four traffic lanes with median	Widen to provide four traffic lanes with median
Milwaukee Avenue from Southern Terminus of Wegge Road to Grove Street	Widen to provide four traffic lanes with two-way left-turn lanes	Prohibit parking and provide left-turn lane at street intersections	Prohibit parking and provide left-turn lane at street intersections
Milwaukee Avenue from Grove Street to Bridge Street	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	Prohibit parking to provide four through traffic lanes	Prohibit parking to provide four through traffic lanes
Milwaukee Avenue from Bridge Street to Commerce Street	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	None	None
Milwaukee Avenue from Commerce Street to Kane Street	Prohibit parking to provide four through traffic lanes	None	None
<ul style="list-style-type: none"> • STH 11—Jefferson Street and Main Street Jefferson and Main Streets Between Dodge Street and State Street 	Widen and improve horizontal alignment to provide four traffic lanes	None	Widen and improve horizontal alignment to provide four traffic lanes
<ul style="list-style-type: none"> • CTH P—McHenry Street McHenry Street Between Milwaukee Avenue and Market Street 	Prohibit parking and widen to provide four traffic lanes	None	None
<ul style="list-style-type: none"> • STH 83—Pine Street Pine Street from State Street to Southern Corporate Limits 	Prohibit parking to provide four traffic lanes	None	Prohibit parking to provide four traffic lanes
<ul style="list-style-type: none"> • Bridge Street Bridge Street from Chestnut Street to Milwaukee Avenue 	Prohibit parking and widen to provide four traffic lanes	None	None
Costs			
<ul style="list-style-type: none"> • Capital Costs 			
Construction		\$6,030,000	\$2,925,300
Right-of-Way		131,100	217,000
Total		\$6,161,100 ^a	\$3,142,300
<ul style="list-style-type: none"> • Disruption (property taking) 			
Number and Type of Structures		None	Three residences
Right-of-Way Required		130-foot-wide right-of-way 10.4 miles in length	66-foot-wide right-of-way 4.9 miles in length
		New alignment through agricultural lands east, south, and west of City from STH 36 to STH 11	New alignment through agricultural lands east of Browns Lake from STH 11 to Ketterhagen Road; use existing Ketterhagen Road alignment; new alignment through agricultural and residential lands north of CTH W to STH 36; use existing STH 36 alignment; new alignment through agricultural lands north of STH 36 from end of Droster Avenue to Wehmhoff Woodland Preserve to Spring Prairie Road; use existing Spring Prairie Road and CTH DD alignment; new alignment through agricultural lands to STH 36

Table 7 (continued)

Evaluation Measure			Inner Bypass Alternatives											
			Alternative I-1: Inner Bypass Route Along Bike Path from STH 36 to Fox River, Connecting on New Alignment to Chapel Terrace, and Then on New Alignment from Chapel Terrace to Market Street and Extending Market Street to Mormon Road				Alternative I-2: Inner Bypass Route on CTH W, Chapel Terrace; New Alignment Connecting Chapel Terrace to Market Street and Extending Market Street to Mormon Road				Alternative I-2A: Inner Bypass Route on New Alignment Northeast of Browns Lake Golf Course, Connecting STH 36 to CTH W, and Then on CTH W, Chapel Terrace, and New Alignment to Market Street, and an Extension of Market Street to Mormon Road			
Benefits			1988		Forecast Year 2010		1988		Forecast Year 2010		1988		Forecast Year 2010	
Traffic Impacts			Total		Truck		Total		Truck		Total		Truck	
• Estimated and Forecast Average Weekday Daily Traffic Volume on Bypass Route														
Segments of Bypass			Total		Truck		Total		Truck		Total		Truck	
East of City			3,100 to 7,100	360 to 570	4,100 to 9,500	480 to 810	3,600 to 5,800	100 to 390	3,700 to 6,600	100 to 460	3,300 to 5,800	160 to 390	3,500 to 6,600	170 to 460
South of City			6,200 to 7,000	570 to 770	8,300 to 8,700	760 to 960	5,900 to 6,200	570 to 610	7,000 to 7,400	680 to 730	5,900 to 6,200	570 to 610	7,000 to 7,400	680 to 730
West of City			1,100 to 3,500	100 to 300	3,500 to 5,300	320 to 450	1,100 to 3,500	100 to 300	1,400 to 5,100	130 to 440	1,100 to 3,500	100 to 300	1,400 to 5,100	130 to 440
North of City			--	--	--	--	--	--	--	--	--	--	--	--
• Traffic on City Arterial Streets (average weekday daily traffic)			"No Build" Alternative 2010		Forecast Year 2010		1988		Forecast Year 2010		1988		Forecast Year 2010	
Street	Existing 1988		1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010
STH 36 (Milwaukee Avenue) Bridge Street to Northern Corporate Limits Kane Street to Bridge Street	15,700 to 18,800 10,500 to 12,500	19,500 to 24,000 14,200 to 15,500	13,600 to 15,700 10,200 to 12,000	18,400 to 20,500 13,800 to 14,900	15,200 to 17,700 10,200 to 12,000	18,600 to 21,100 13,800 to 14,900	15,400 to 18,000 10,400 to 12,200	18,800 to 21,400 14,100 to 15,100						
STH 36 (State Street) McHenry Street to Kendrick Avenue	7,700	11,000	4,700	6,700	4,700	6,700	4,700	6,700	4,700	6,700	4,700	6,700	4,700	6,700
STH 11 (Jefferson and Main Streets) Dodge Street to State Street	15,900	18,000	8,100	9,000	9,000	9,800	8,400	9,100						
STH 11 (Chestnut Street) Pleasant Avenue to Milwaukee Avenue	5,000 to 5,200	7,500 to 9,000	4,100 to 5,100	6,600 to 7,200	4,100 to 5,100	6,600 to 7,200	4,100 to 5,100	6,600 to 7,200						
STH 11 (Commerce Street) Milwaukee Avenue to Kendall Street	4,300	6,600	3,800	5,700	3,800	5,700	3,800	5,700						
CTH P (McHenry Street) State Street to Market Street	9,100	12,000	7,200	9,300	7,200	9,300	7,200	9,300						
STH 83 (Pine Street) State Street to Market Street	10,400 to 13,700	12,400 to 16,200	10,400 to 11,300	10,800 to 12,500	11,500 to 12,400	12,500 to 13,400	11,500 to 12,400	12,500 to 13,400						
Bridge Street Milwaukee Avenue to Chestnut Street	9,500	11,500	6,400	7,400	8,400	9,000	8,400	9,000						
Market Street McHenry Street to Pine Street	3,500	4,400	6,200	8,300	6,200	8,300	6,200	8,300						
Downtown One-Way Pair Pine Street—Chestnut Street to State Street Dodge Street—State Street to Chestnut Street	7,700 6,900	9,000 8,000	5,400 4,900	8,200 5,400	6,000 5,900	6,500 6,500	6,000 5,600	6,500 6,200						
• Truck Traffic on Arterial Streets at City Corporate Limits			"No Build" Alternative 2010		Forecast Year 2010		1988		Forecast Year 2010		1988		Forecast Year 2010	
Street	Existing 1988		1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010	1988	Forecast Year 2010
Main Street (STH 142) State Street (STH 11) Milwaukee Avenue (STH 36) Chestnut Street (STH 11) State Street (STH 36) McHenry Street (CTH P) Pine Street (STH 83)	580 960 1,250 790 590 640 980	750 1,070 1,690 1,040 810 1,210 1,630	370 530 950 710 380 640 980	460 540 1,150 900 480 1,210 1,630	390 630 1,180 710 380 640 980	490 640 1,600 900 480 1,210 1,630	390 540 1,140 710 380 640 980	490 550 1,540 900 480 1,210 1,630						

Table 7 (continued)

Evaluation Measure	Inner Bypass Alternatives			
	Alternative I-1: Inner Bypass Route Along Bike Path from STH 36 to Fox River, Connecting on New Alignment to Chapel Terrace, and Then on New Alignment from Chapel Terrace to Market Street and Extending Market Street to Mormon Road	Alternative I-2: Inner Bypass Route on CTH W, Chapel Terrace; New Alignment Connecting Chapel Terrace to Market Street and Extending Market Street to Mormon Road	Alternative I-2A: Inner Bypass Route on New Alignment Northeast of Browns Lake Golf Course, Connecting STH 36 to CTH W, and Then on CTH W, Chapel Terrace, and New Alignment to Market Street, and an Extension of Market Street to Mormon Road	
Needed Street Improvements Under Each Alternative	"No Build" Alternative 2010			
<ul style="list-style-type: none"> • STH 36—Milwaukee Avenue and State Street Milwaukee Avenue from Northern Corporate Limits to Southern Terminus of Wegge Road • Milwaukee Avenue from Southern Terminus of Wegge Road to Grove Street • Milwaukee Avenue from Grove Street to Bridge Street • Milwaukee Avenue from Bridge Street to Commerce Street • Milwaukee Avenue from Commerce Street to Kane Street • STH 11—Jefferson Street and Main Street Jefferson and Main Streets Between Dodge Street and State Street • CTH P—McHenry Street McHenry Street Between Milwaukee Avenue and Market Street • STH 83—Pine Street Pine Street from State Street to Southern Corporate Limits • Bridge Street Bridge Street from Chestnut Street to Milwaukee Avenue 	<p>Widen to provide four traffic lanes with median</p> <p>Widen to provide four traffic lanes with two-way left-turn lanes</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking to provide four through traffic lanes</p> <p>Widen and improve horizontal alignment to provide four traffic lanes</p> <p>Prohibit parking and widen to provide four traffic lanes</p> <p>Prohibit parking to provide four traffic lanes</p> <p>Prohibit parking and widen to provide four traffic lanes</p>	<p>Widen to provide four traffic lanes with median</p> <p>Prohibit parking and provide left-turn lane at street intersection</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking to provide four through traffic lanes</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p>	<p>Widen to provide four traffic lanes with median</p> <p>Prohibit parking and provide left-turn lane at street intersection</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking to provide four through traffic lanes</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p>	<p>Widen to provide four traffic lanes with median</p> <p>Prohibit parking and provide left-turn lane at street intersection</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes</p> <p>Prohibit parking to provide four through traffic lanes</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p> <p>None</p>
<p>Costs</p> <ul style="list-style-type: none"> • Capital Costs <ul style="list-style-type: none"> Construction Right-of-Way Total • Disruption (property taking) <ul style="list-style-type: none"> Number and Type of Structures Right-of-Way Required 	<p>\$6,258,800</p> <p>729,500</p> <p>\$6,988,300</p> <p>Three residences</p> <p>One commercial structure</p> <p>One storage building</p> <p>66-foot-wide right-of-way 2.5 miles in length</p> <p>New alignment on bike path (WEPCo right-of-way) and through Riverside Park; through Riverview Manor housing for the elderly property and residential lands adjacent; uses existing Chapel Terrace; new alignment from end of Chapel Terrace through Bushnell Park; through commercial land use to Market Street; uses existing Market Street alignment; new alignment from end of Market Street through industrial and agricultural land uses to STH 36; uses existing Mormon Road alignment to STH 11</p>	<p>\$3,281,200</p> <p>494,600</p> <p>\$3,775,800</p> <p>One residence</p> <p>One commercial structure</p> <p>One storage building</p> <p>66-foot-wide right-of-way 1.2 miles in length</p> <p>Uses existing CTH W and Chapel Terrace alignment from STH 36 to end of Chapel Terrace; new alignment through Bushnell Park; through commercial land uses to Market Street; uses existing Market Street alignment; new alignment from end of Market Street through industrial and agricultural land uses to STH 36; uses existing Mormon Road alignment to STH 11</p>	<p>\$4,294,700</p> <p>501,800</p> <p>\$4,796,500</p> <p>One residence</p> <p>One commercial structure</p> <p>Three storage buildings</p> <p>66-foot-wide right-of-way 1.8 miles in length</p> <p>New alignment through agricultural lands to CTH W; uses existing CTH W and Chapel Terrace alignment to end of Chapel Terrace; new alignment through Bushnell Park; through commercial land uses to Market Street; uses existing Market Street alignment; new alignment from end of Market Street through industrial and agricultural land uses to STH 36; uses existing Mormon Road alignment to STH 11</p>	

Table 7 (continued)

Evaluation Measure	Inner Bypass Alternatives							
	Alternative I-3: Inner Bypass Route on CTH W; and Then on Alignment East of Clover Drive and Through McCanna and Bushnell Parks; and Then on New Alignment Connecting to Market Street and Extending Market Street to Mormon Road				Alternative I-3A: Inner Bypass Route on New Alignment Northeast of Browns Lake Golf Course Connecting STH 36 to CTH W, and Then Along CTH W; and New Alignment East of Clover Drive and Through McCanna and Bushnell Parks Connecting to Market Street and Extending Market Street to Mormon Road			
	1988		Forecast Year 2010		1988		Forecast Year 2010	
Benefits								
Traffic Impacts								
• Estimated and Forecast Average Weekday Daily Traffic Volume on Bypass Route	1988		Forecast Year 2010		1988		Forecast Year 2010	
Segments of Bypass	<u>Total</u>	<u>Truck</u>	<u>Total</u>	<u>Truck</u>	<u>Total</u>	<u>Truck</u>	<u>Total</u>	<u>Truck</u>
East of City	3,600 to 4,200	100 to 390	3,700 to 5,100	100 to 460	3,900 to 4,000	220 to 360	4,000 to 5,000	230 to 450
South of City	5,600 to 5,800	570 to 600	7,000 to 7,400	680 to 730	5,300 to 5,500	560 to 570	6,600 to 7,000	700 to 730
West of City	1,100 to 3,400	100 to 290	1,400 to 5,100	130 to 440	1,100 to 2,900	100 to 250	1,400 to 4,400	130 to 380
North of City	--	--	--	--	--	--	--	--
• Traffic on City Arterial Streets (average weekday daily traffic)		"No Build" Alternative 2010	1988	Forecast Year 2010	1988	Forecast Year 2010		
Street	Existing 1988							
STH 36 (Milwaukee Avenue) Bridge Street to Northern Corporate Limits	15,700 to 18,800	19,500 to 24,000	15,200 to 17,700	18,600 to 21,100	15,700 to 17,500	19,200 to 20,900	10,500 to 12,300	14,200 to 15,300
Kane Street to Bridge Street	10,500 to 12,500	14,200 to 15,500	10,200 to 12,000	13,800 to 14,900	10,500 to 12,300	14,200 to 15,300		
STH 36 (State Street) McHenry Street to Kendrick Avenue	7,700	11,000	4,900	7,000	4,900	7,000		
STH 11 (Jefferson and Main Streets) Dodge Street to State Street	15,900	18,000	9,100	9,900	8,500	9,100		
STH 11 (Chestnut Street) Pleasant Avenue to Milwaukee Avenue	5,000 to 5,200	7,500 to 9,000	4,100 to 5,100	6,600 to 7,200	4,100 to 5,100	6,600 to 7,200		
STH 11 (Commerce Street) Milwaukee Avenue to Kendall Street	4,300	6,600	3,800	5,700	3,800	5,700		
CTH P (McHenry Street) State Street to Market Street	9,100	12,000	7,200	9,300	7,200	9,300		
STH 83 (Pine Street) State Street to Market Street	10,400 to 13,700	12,400 to 16,200	11,500 to 12,400	12,500 to 13,400	11,500 to 12,400	12,500 to 13,400		
Bridge Street Milwaukee Avenue to Chestnut Street	9,500	11,500	8,400	9,000	7,800	8,400		
Market Street McHenry Street to Pine Street	3,500	4,400	5,600	7,500	5,500	7,500		
Downtown One-Way Pair Pine Street—Chestnut Street to State Street	7,700	9,000	6,000	6,500	6,000	6,500		
Dodge Street—State Street to Chestnut Street	6,900	8,000	5,500	6,100	5,300	5,900		
• Truck Traffic on Arterial Streets at City Corporate Limits		"No Build" Alternative 2010	1988	Forecast Year 2010	1988	Forecast Year 2010		
Street	Existing 1988							
Main Street (STH 142)	580	750	380	480	360	490		
State Street (STH 11)	960	1,070	640	650	550	560		
Milwaukee Avenue (STH 36)	1,250	1,690	1,180	1,600	1,140	1,540		
Chestnut Street (STH 11)	790	1,040	710	900	710	900		
State Street (STH 36)	590	810	380	480	430	480		
McHenry Street (CTH P)	640	1,210	640	1,210	640	1,210		
Pine Street (STH 83)	980	1,630	980	1,630	980	1,630		

Table 7 (continued)

Evaluation Measure		Inner Bypass Alternatives	
		Alternative I-3: Inner Bypass Route on CTH W; and Then on Alignment East of Clover Drive and Through McCanna and Bushnell Parks; and Then on New Alignment Connecting to Market Street and Extending Market Street to Mormon Road	Alternative I-3A: Inner Bypass Route on New Alignment Northeast of Browns Lake Golf Course Connecting STH 36 to CTH W, and Then Along CTH W; and New Alignment East of Clover Drive and Through McCanna and Bushnell Parks Connecting to Market Street and Extending Market Street to Mormon Road
<u>Needed Street Improvements Under Each Alternative</u>			
"No Build" Alternative 2010			
<ul style="list-style-type: none"> • STH 36—Milwaukee Avenue and State Street Milwaukee Avenue from Northern Corporate Limits to Southern Terminus of Wegge Road 	Widen to provide four traffic lanes with median	Widen to provide four traffic lanes with median	Widen to provide four traffic lanes with median
Milwaukee Avenue from Southern Terminus of Wegge Road to Grove Street	Widen to provide four traffic lanes with two-way left-turn lanes	Prohibit parking and provide left-turn lane at street intersections	Prohibit parking and provide left-turn lane at street intersections
Milwaukee Avenue from Grove Street to Bridge Street	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes
Milwaukee Avenue from Bridge Street to Commerce Street	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes	Prohibit parking and widen at Bridge Street intersection to provide four through traffic lanes and turn lanes
Milwaukee Avenue from Commerce Street to Kane Street	Prohibit parking to provide four through traffic lanes	Prohibit parking to provide four through traffic lanes	Prohibit parking to provide four through traffic lanes
<ul style="list-style-type: none"> • STH 11—Jefferson Street and Main Street Jefferson and Main Streets Between Dodge Street and State Street 	Widen and improve horizontal alignment to provide four traffic lanes	None	None
<ul style="list-style-type: none"> • CTH P—McHenry Street McHenry Street Between Milwaukee Avenue and Market Street 	Prohibit parking and widen to provide four traffic lanes	None	None
<ul style="list-style-type: none"> • STH 83—Pine Street Pine Street from State Street to Southern Corporate Limits 	Prohibit parking to provide four traffic lanes	None	None
<ul style="list-style-type: none"> • Bridge Street Bridge Street from Chestnut Street to Milwaukee Avenue 	Prohibit parking and widen to provide four traffic lanes	None	None
<u>Costs</u>			
<ul style="list-style-type: none"> • Capital Costs 			
Construction		\$4,069,300	\$4,609,700
Right-of-Way		1,071,000	1,078,200
Total		\$5,140,300	\$5,687,900
<ul style="list-style-type: none"> • Disruption (property taking) 			
Number and Type of Structures		Two residences One commercial structure One storage building	Two residences One commercial structure Three storage buildings
Right-of-Way Required		66-foot-wide right-of-way 2.1 miles in length	66-foot-wide right-of-way 2.7 miles in length
		Uses existing CTH W alignment; new alignment through cemetery and agricultural lands to STH 11; through McCanna Park, residential property, and Bushnell Park; through commercial land uses to Market Street; uses existing Market Street alignment; new alignment from end of Market Street through industrial and agricultural land uses to STH 36; uses existing Mormon Road alignment to STH 11	New alignment through agricultural lands to CTH W; uses existing CTH W; new alignment through cemetery and agricultural lands to STH 11; through McCanna Park, residential property, and Bushnell Park; through commercial land uses to Market Street; uses existing Market Street alignment; new alignment from end of Market Street through industrial and agricultural land uses to STH 36; uses existing Mormon Road alignment to STH 11

^aThe first stage of Alternative O-1 would be construction with a two-lane undivided rural cross-section at a cost of \$6,161,100. By the year 2010, Alternative O-1 would require a four-lane divided rural cross-section on 130 feet of right-of-way at an additional cost of \$3,511,100, for a total of \$9,672,200.

Source: SEWRPC.

O-1—may be expected to remove a significant volume of traffic from STH 11 (Jefferson and Main Streets) between Dodge Street and State Street; and Pine Street (STH 83) between State Street and Market Street. Only Alternative O-1 would eliminate the need to prohibit parking and widen these street segments. Alternative O-1 would also provide a greater reduction in truck traffic on city arterial streets—100 to 400 trucks per average weekday on each arterial street concerned. Thus, Alternative O-1 provides more substantial traffic relief than the northern bypass alternative—Alternative O-2—and, significantly, would provide relief to every arterial facility in the City of Burlington. Alternative O-1 would have a higher capital cost than Alternative O-2. The initial capital cost of Alternative O-1 would be approximately \$6.2 million to provide the needed two-lane arterial, compared to the estimated capital cost of Alternative O-2 of \$3.1 million. In addition, Alternative O-1 would require—at least in the segment between STH 36 east of the City and STH 36 west of the City—eventual widening to four lanes, at an additional cost of \$3.5 million.

Comparison of Inner and Outer Bypass Alternatives: A comparison of Alternative O-1, the best outer bypass alternative, with Alternative I-2, the best inner bypass alternative, indicates that the Alternative O-1 outer bypass alternative would have substantially greater benefits. Alternative O-1 would carry more traffic—2,000 to 3,000 more vehicles per average weekday; and more truck traffic—300 to 600 more vehicles per average weekday. Alternative O-1 would thus provide more relief to city streets than the inner bypass alternative. In particular, the outer bypass alternative may be expected to remove sufficient traffic from Milwaukee Avenue between Kane Street and Bridge Street, eliminating the need to provide four traffic lanes on this facility and thereby permitting the retention of on-street parking; and eliminating the need to widen Milwaukee Avenue at the intersection of Bridge Street to provide four traffic lanes and turn lanes. Both the outer bypass Alternative O-1 and the inner bypass Alternative I-2 would abate traffic congestion on Bridge Street between Dodge Street and Milwaukee Avenue, and would eliminate the need to prohibit parking on Pine Street (STH 83) between State Street and Market Street.

The outer bypass Alternative O-1 would have a substantially greater capital cost, estimated at \$6.1 million, for the initial two lanes, and an additional \$3.5 million to provide four traffic lanes by the year 2010. The estimated capital cost of the inner bypass Alternative I-2 is \$3.8 million. Alternative O-1 would require more right-of-way, as it calls for new right-of-way 130 feet in width for a length of 10.4 miles; while Alternative I-2 would require only 1.2 miles of new right-of-way 66 feet in width. However, Alternative I-2 would route the traffic removed from selected City of Burlington streets to existing streets such as Market Street, CTH W, and Chapel Terrace—a residential land access street. Also, the outer bypass and inner bypass alternatives differ in that the outer bypass alternative would require the acquisition of agricultural land, but would not entail the removal of any residences or other structures; Alternative I-2, the inner bypass alternative, would require the removal of one residence, one commercial structure, and one storage building, and would entail the acquisition of new right-of-way through Bushnell Park.

Recommendation: A number of City of Burlington arterial streets currently carry traffic volumes that approach or exceed design capacity by up to 6,000 vehicles per average weekday, including Milwaukee Avenue between the northern corporate limits and Bridge Street; Jefferson and Main Streets (STH 11) between Dodge and State Streets; and Pine Street (STH 83) between State Street and Market Street. These arterials warrant parking prohibition and widening. With future increases in traffic, additional arterial streets in the City may be expected to require such action by the year 2010, including Milwaukee Avenue between Bridge Street and Kane Street; McHenry Street (CTH P) between State Street and Market Street; and Bridge Street between Milwaukee Avenue and Chestnut Street.

In an attempt to reduce the need to improve these city arterials, alternative inner bypasses of the City of Burlington were proposed and evaluated, along with two alternative outer bypasses, one to the east, south, and west of the City and the other to the north, northeast, and northwest of the City. Of these inner and outer bypass alternatives, only one—Alternative O-1, the outer bypass along the long-proposed route to the east,

south, and west of the City—would remove sufficient traffic so that traffic volumes on city arterials would be no greater in the year 2010, and generally would be less, than traffic volumes on those streets in 1988. The only city arterial with an anticipated year 2010 traffic volume exceeding existing design capacity is the stretch of Milwaukee Avenue (STH 36) between Bridge Street and the city northern corporate limits. The only city arterials with an anticipated year 2010 traffic volume approaching design capacity are the stretch of Milwaukee Avenue (STH 36) between Kane Street and Bridge Street, and Pine Street (STH 83) between State Street and Market Street. The outer bypass alternative would remove substantially more traffic from city streets—2,000 to 3,000 vehicles per average weekday—than any other alternative, and substantially more truck traffic—300 to 600 vehicles per average weekday. The alternative does have the highest capital cost of all the bypass alternatives considered—specifically, an initial cost of \$6.1 million to provide a high-speed, two-lane arterial bypass, and an additional cost of \$3.5 million to expand the bypass to a four-lane divided facility by the year 2010. The alternative would not entail the removal of any residences or other structures, but would require a substantial right-of-way acquisition 130 feet wide and 10.4 miles in length, largely through agricultural lands. It was recommended by the Commission staff that the outer bypass Alternative O-1 be added to the county jurisdictional highway system plan as a state trunk highway.

Other recommended arterial street improvements in the City of Burlington, as shown on Map 24, include:

- The provision of four traffic lanes on Milwaukee Avenue (STH 36) between Bridge Street and the northern corporate limits (parking prohibition can provide the four traffic lanes between Bridge Street and the southern terminus of Wegge Road, although widening may be needed for turn lanes).
- The western extension of Market Street between McHenry Street (CTH P) and STH 36.

It is recommended that a number of changes other than the addition of the outer bypass be made with respect to the jurisdictional highway system plan in the Burlington area. Recom-

mended on the current county jurisdictional highway plan, but proposed to be deleted from the plan, are the following:

- The extension of State Street over the Fox River.
- The extension of the inner bypass from Pine Street (STH 83) and Market Street to Milwaukee Avenue (STH 36).

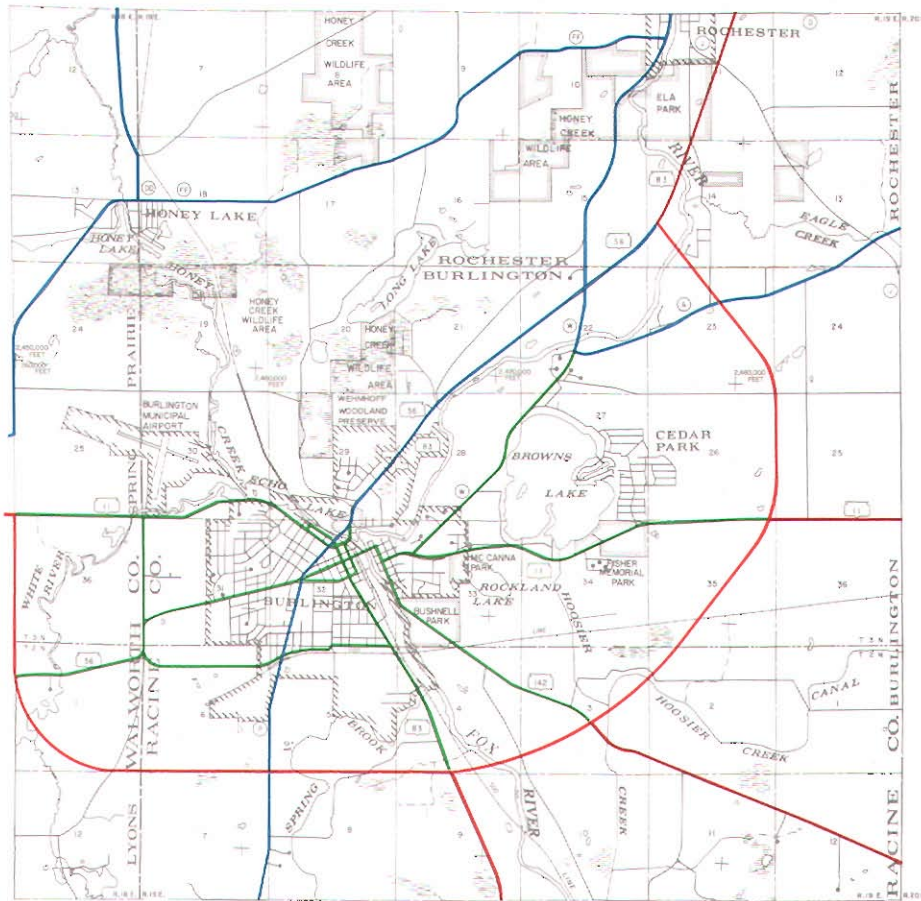
While both these arterial facilities may be expected to have some traffic benefits, they would also have substantial costs. Moreover, with the implementation of the outer bypass, these two arterial facilities would not be needed to eliminate traffic congestion in the City of Burlington. The principal benefit of the State Street extension would be the elimination of some circuitous travel and turning movements. The principal benefits of the completion of the inner bypass are that it would provide for more direct travel; provide an additional crossing of the Fox River; result in a more desirable bridge spacing of about one mile within the City; and reduce traffic on Pine Street (STH 83) and Milwaukee Avenue (STH 36) by an additional 1,000 to 2,000 vehicles per average weekday.

Both these arterial facilities would have substantial capital costs, estimated at \$0.9 million for the State Street extension and up to \$5.7 million for the inner bypass extension depending upon the alignment selected, including construction costs and right-of-way. Also, land development has occurred in the path of each of these potential facilities since they were first proposed. The extension of the inner bypass would entail location of the roadway within Bushnell Park and the conversion of the function of Chapel Terrace from a local street to an arterial street.

On January 20, 1989, the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County unanimously recommended that a Burlington area outer bypass be added to the preliminary new Racine County jurisdictional highway system plan. At an intergovernmental meeting held on May 11, 1989, between Racine County, the City of Burlington, the Town of Burlington, the Town of Rochester, the Town of Spring Prairie, and the Southeastern Wisconsin Regional Planning Commission, the Commission staff was asked to identify and evaluate alternative potential alignments for an outer bypass of the Burlington

Map 24

PRELIMINARY RECOMMENDED JURISDICTIONAL
HIGHWAY SYSTEM PLAN FOR CITY OF BURLINGTON AREA^a



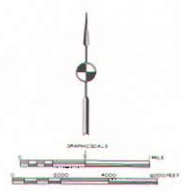
LEGEND

- JURISDICTIONAL CLASSIFICATION**
- STATE TRUNK HIGHWAY
 - COUNTY TRUNK HIGHWAY
 - LOCAL TRUNK HIGHWAY

^aTHE CHANGES TO THE CURRENT JURISDICTIONAL HIGHWAY SYSTEM PLAN IN THE BURLINGTON AREA INCLUDE:

- FUNCTIONAL**
- ADDITION OF OUTER BYPASS.
 - DELETION OF INNER BYPASS SEGMENT FROM MILWAUKEE AVENUE (STH 36) TO PINE STREET (STH 83).
 - DELETION OF STATE STREET EXTENSION.

- JURISDICTIONAL**
- NEW OUTER BYPASS TO BE STATE TRUNK HIGHWAY.
 - MARKET STREET AND MORMON ROAD TO BE LOCAL TRUNK ARTERIALS.
 - ALL CURRENT STATE TRUNK HIGHWAY ROUTES WITHIN CITY OF BURLINGTON AND WITHIN OUTER BYPASS TO BE LOCAL AND COUNTY TRUNK ARTERIALS.



Source: SEWRPC.

area. The recommended alignment for the outer bypass discussed above had been selected to minimize travel time on the bypass and the acquisition of homes or businesses. It would, however, entail the acquisition of farmland and the division of farms. The alignment for the Burlington area outer bypass identified in the this jurisdictional highway system plan update is consistent with the alignment of such a bypass recommended in the original Racine County jurisdictional highway system plan adopted by Racine County on December 2, 1975, and documented in SEWRPC Planning Report No. 22, A Jurisdictional Highway System Plan for Racine County.

A final determination of the alignment for the outer bypass will require a preliminary engineering study, including a full environmental assessment of the alternative alignments. At the conclusion of this preliminary study, and follow-

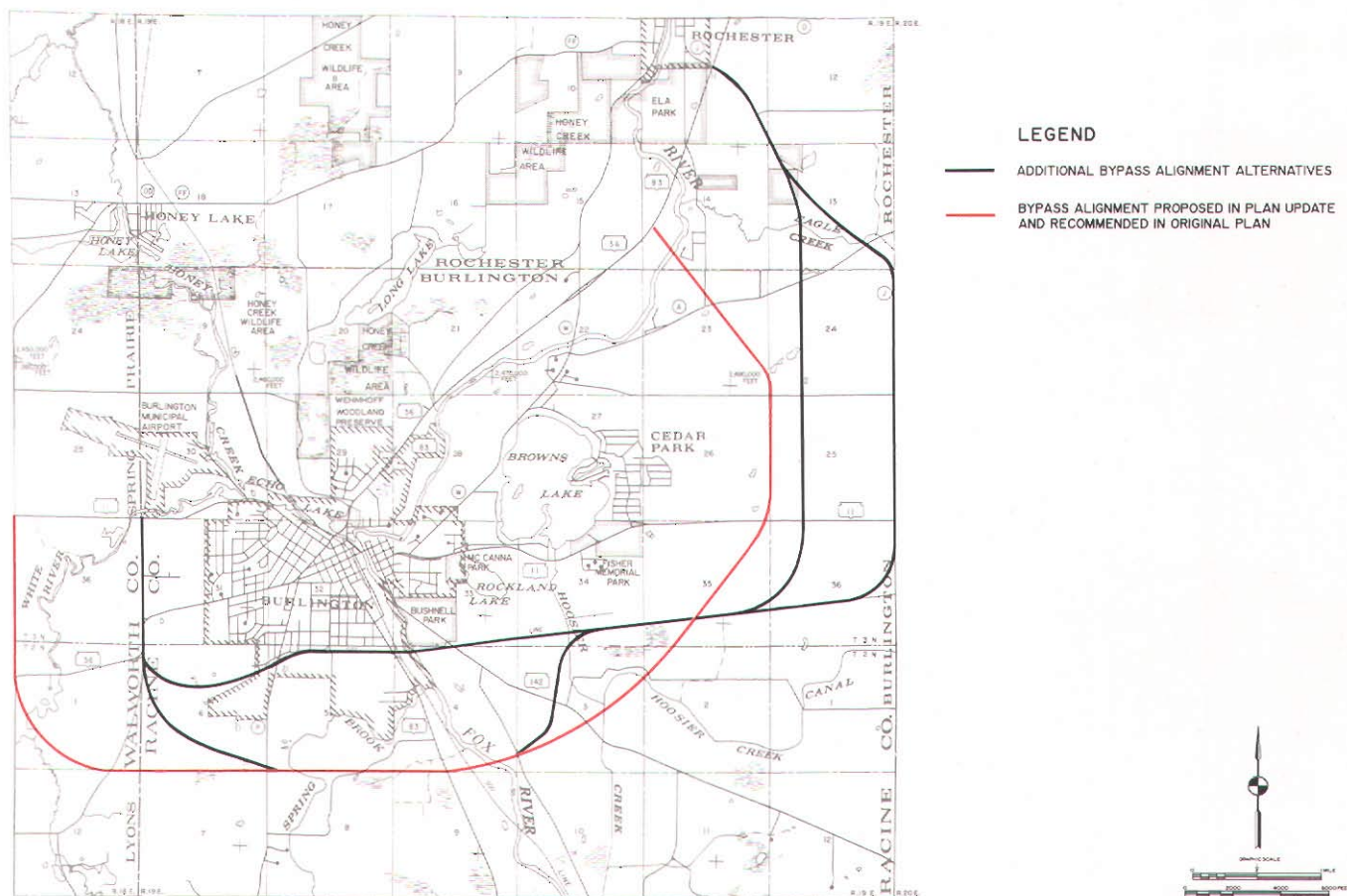
ing required public hearings, a final decision will be made by the implementing agency—probably the Wisconsin Department of Transportation—with respect to the alignment and location of the bypass.

The principal purpose of the county jurisdictional highway system plan study was to identify the existing and potential traffic problems in the County; to review a wide range of alternatives for the abatement of those problems; and to recommend one of the best alternatives for adoption and implementation.

To review, the alternatives considered for the Burlington bypass included widening existing Burlington streets and removing on-street parking; constructing a new inner bypass to the east and south of the City; constructing a new outer bypass to the north of the City; and constructing a new outer bypass to the east and south of the

Map 25

ALTERNATIVE ALIGNMENTS FOR THE BURLINGTON AREA OUTER BYPASS



Source: SEWRPC.

City. Based upon an evaluation of those alternatives, the Advisory Committee, as indicated above, made a preliminary recommendation that an outer bypass located to the east and south of the City be incorporated in the new county plan. As part of this recommendation, a proposed alignment for the outer bypass was recommended, recognizing that any decision regarding the alignment for the outer bypass, and for the implementation of the bypass, would have to be reconsidered in a subsequent preliminary engineering study as noted above.

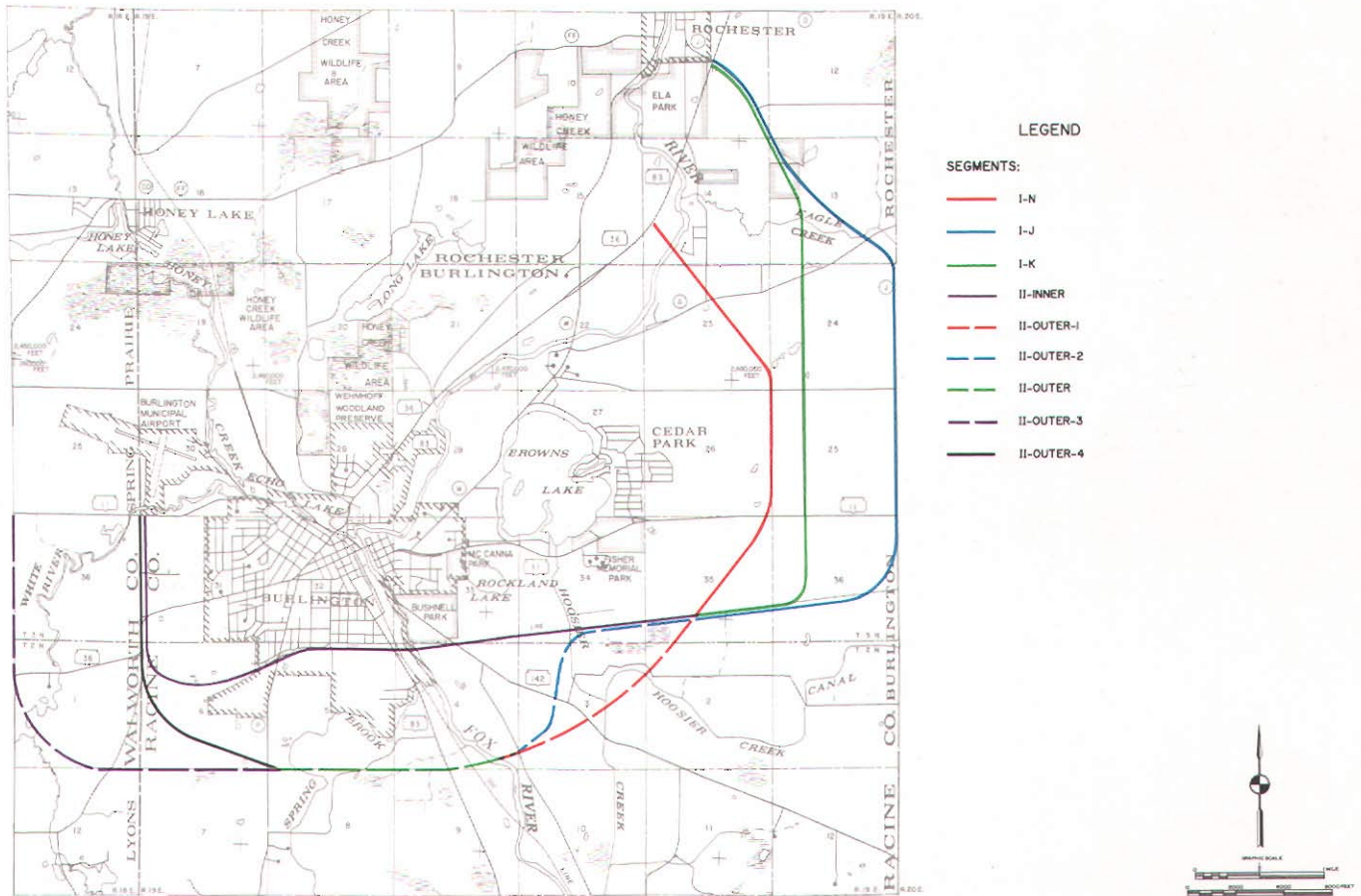
Nevertheless, at the intergovernmental meeting held on May 11, 1989, the units of government present requested that additional consideration be given to potential alternative bypass alignments as part of the county jurisdictional highway system plan update. This memoran-

dum identifies and evaluates such alternative alignments, including those suggested at the intergovernmental meeting.

Alternative Outer Bypass Alignments: The initially recommended alternative alignment for the outer bypass is shown on Map 25, along with the other alternatives considered, including those suggested at the intergovernmental meeting. The alternative alignments are identified by segment on Map 26; and the information required for a comparative evaluation of the alternatives by segment is set forth in Table 8, including information on estimated construction costs; disruption, including number and type of structures required to be taken and right-of-way acquisition requirements; and travel distances and travel times.

Map 26

ALTERNATIVE ALIGNMENTS FOR THE BURLINGTON AREA OUTER BYPASS BY SEGMENT



Source: SEWRPC.

Three alternative alignments were identified on the east side of the Burlington area: an alternative at a new location along the alignment initially proposed for the bypass; an alternative along CTH J, Crossway Road, and the Soo Line Railroad right-of-way; and an alternative along CTH J and the Soo Line right-of-way.

Two alternative alignments were proposed to the south of the Burlington area. One is the alignment initially proposed for the bypass on new location. The second is an inner alignment along the Soo Line Railroad and Market Street extended.

The alternatives identified to the west of the Burlington area include an alternative along the initially recommended alignment located in Walworth County on new location, and an alternative located along Mormon Road.

When these alternatives are combined by segment, a total of 15 alternatives may be identified. These 15 alternatives are shown on Map 27, and the information required for a comparative evaluation of these alternatives is presented in Table 9, including information on estimated construction costs, disruption, and travel times and distances.

Careful review of the alternative alignments indicates that the alternatives that include an inner bypass route along the Soo Line Railroad, Market Street, and Market Street extended within the City of Burlington should be rejected from further consideration (N-, K-, and J-inner alternatives). The inner bypass route alternatives would result in an increase in the capital cost of the Burlington area bypass of \$5 million to \$6 million, or 40 to 50 percent. This increase

Table 8

EVALUATION OF BURLINGTON AREA OUTER BYPASS ALTERNATIVES BY SEGMENT

Evaluation Measure	Alternatives for Segment East of Burlington Area Between STH 36 and Soo Line Railroad Right-of-Way			Alternatives for Segment South and West of Burlington Area Between Soo Line Railroad Right-of-Way and STH 11					
	Alternative I-N Original Bypass Alignment on New Location	Alternative I-J Alignment on CTH J and Soo Line Right-of-Way	Alternative I-K Alignment on CTH J, Crossway Road, and Soo Line Right-of-Way	Alternative II-1-Outer				Alternative II-Inner	
				Options: Soo Line Right-of-Way to Fox River		Fox River to CTH P Original Bypass Alignment on New Location at Southern Boundary of Planned Industrial Park	Options: CTH P to STH 11		
				II-Outer 1 Original Bypass on New Location	II-Outer 2 Alignment on Soo Line Right-of-Way and New Location		II-Outer 3 Original Bypass Alignment on New Location in Walworth County		II-Outer 4 Alignment Along Mormon Road
Disruption (property taking) Number and Type of Structures	None	None	1 single-family residence	None	None	None	None	1 commercial business 6 single-family residences 1 barn	3 apartment buildings (77 dwelling units) 15 single-family residences 7 commercial businesses 1 barn
Right-of-Way Required	New 130-foot-wide right-of-way, 3.2 miles in length 3.2 miles of new alignment through agricultural lands. Requires taking 130-foot by 400-foot strip of primary environmental corridor	New 130-foot-wide right-of-way, 2.0 miles in length; widening of CTH J right-of-way from 66 to 130 feet for 4.3 miles Uses existing CTH J alignment to STH 11; 0.8 mile of new alignment through agricultural lands to Soo Line right-of-way; utilizes 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 1.2 miles Minimizes dividing of farm properties	New 130-foot-wide right-of-way, 2.2 miles in length; widening of CTH J right-of-way from 66 to 130 feet for 1.1 miles; widening of Crossway Road right-of-way from 50 to 130 feet for 1.9 miles Uses existing 1.1 miles of CTH J alignment and 0.8 mile of new alignment through agricultural lands to connect to Crossway Road and CTH A; uses existing Crossway Road alignment from CTH A to STH 11; 1.0 mile of new alignment through agricultural lands to Soo Line right-of-way; utilizes 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 0.4 mile Minimizes dividing of farm properties	New 130-foot-wide right-of-way, 2.0 miles in length 2.0 miles of new alignment through agricultural lands. Requires taking 130-foot by 1,000-foot strip of primary environmental corridor	New 130-foot-wide right-of-way, 2.3 miles in length Utilizes 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 0.8 mile; 1.5 miles of new alignment through agricultural lands to the Fox River. Requires taking of 130-foot by 1,500-foot strip of primary environmental corridor Minimizes dividing of farm properties	New 130-foot-wide right-of-way, 1.9 miles in length 1.9 miles of new alignment principally through agricultural lands along the southern boundary of planned industrial park. Requires taking 130-foot by 8,000-foot strip of primary environmental corridor	New 130-foot-wide right-of-way, 3.3 miles in length 3.3 miles of new alignment through agricultural lands. Requires taking 130-foot by 8,000-foot strip of primary environmental corridor	New 130-foot-wide right-of-way, 1.5 miles in length; widening of Mormon Road right-of-way from 66 to 130 feet for 1.1 miles 1.5 miles of new alignment through agricultural lands and 1.1 miles of widened Mormon Road right-of-way from STH 36 to STH 11. Requires taking 130-foot by 4,000-foot strip of primary environmental corridor Minimizes dividing of farm properties Requires taking one historic residence on Mormon Road, as well as land for widened right-of-way	New 130-foot-wide right-of-way, 4.8 miles in length; widening of Mormon Road right-of-way from 66 to 130 feet for 1.1 miles Utilizes 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands to STH 83; utilizes 57 feet of Wisconsin Central right-of-way and 73 feet of residential land and commercial land uses and Market Street to the City of Burlington corporate limits; 0.9 mile of new alignment through industrial and open lands to Mormon Road; uses existing Mormon Road alignment from STH 36 to STH 11. Requires taking 130-foot by 3,000-foot strip of primary environmental corridor Minimizes dividing of farm properties Market Street between Kane Street and CTH P is converted to portion of bypass route Randolph, Emerson, and Hawthorn Streets will end in cul-de-sac or loop at bypass Bypass will abut elementary school Requires taking one historic residence on Mormon Road, as well as land for widened right-of-way
Cost Construction	\$2,700,000	\$1,350,000	\$2,520,000	\$1,200,000	\$1,310,000	\$2,030,000	\$2,180,000	\$1,480,000	\$ 6,360,000
Right-of-Way	40,000	52,000	49,000	25,000	29,000	24,000	42,000	26,000	4,500,000
Total ^a	\$2,740,000	\$1,402,000	\$2,569,000	\$1,225,000	\$1,339,000	\$2,054,000	\$2,222,000	\$1,506,000	\$10,860,000
Distance (miles) . . .	4.6 ^b	6.3	5.2	2.0	2.3	1.9	3.3	3.6 ^d	6.9 ^d
Travel Time (minutes)	5.0 ^c	6.9	5.7	2.2	2.5	2.1	3.6	4.3 ^e	9.7 ^e

^a Costs shown are for initial two-lane bypass, except for the section of Alternative II-2 between the Fox River and the City of Burlington west corporate limits, where a four-lane section is assumed to be constructed as the initial section. Total cost for each segment for completion of ultimate four-lane bypass between STH 11 east and STH 36 south is as follows:

I-N	\$3,060,000	II-1	\$2,030,000	II-3	\$ 3,300,000
I-J	\$1,310,000	II-2	\$2,260,000	II-4	\$ 2,170,000
I-K	\$3,450,000	II-Outer	\$3,370,000	II-Inner	\$13,240,000

(Fox River to CTH P)

^b Includes 1.4 miles on STH 36.

^c Includes 1.5 minutes traveling on STH 36.

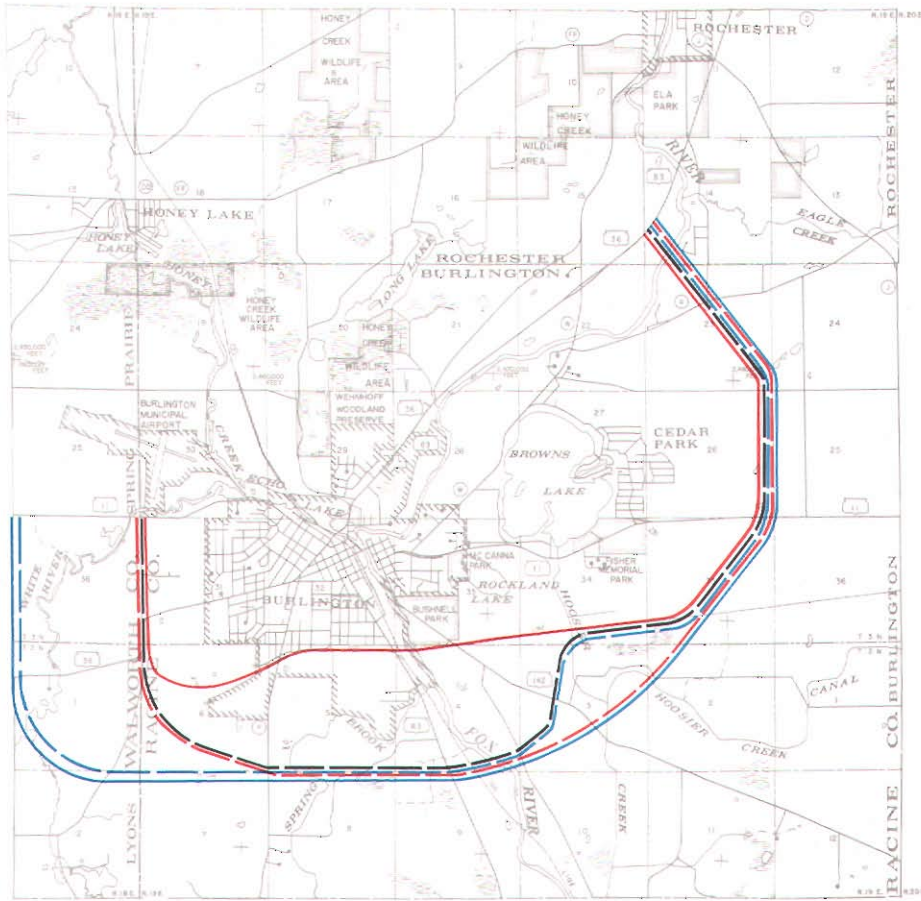
^d Includes 1.0 mile on STH 11.

^e Includes 1.1 minutes traveling on STH 11

Source: SEWRPC.

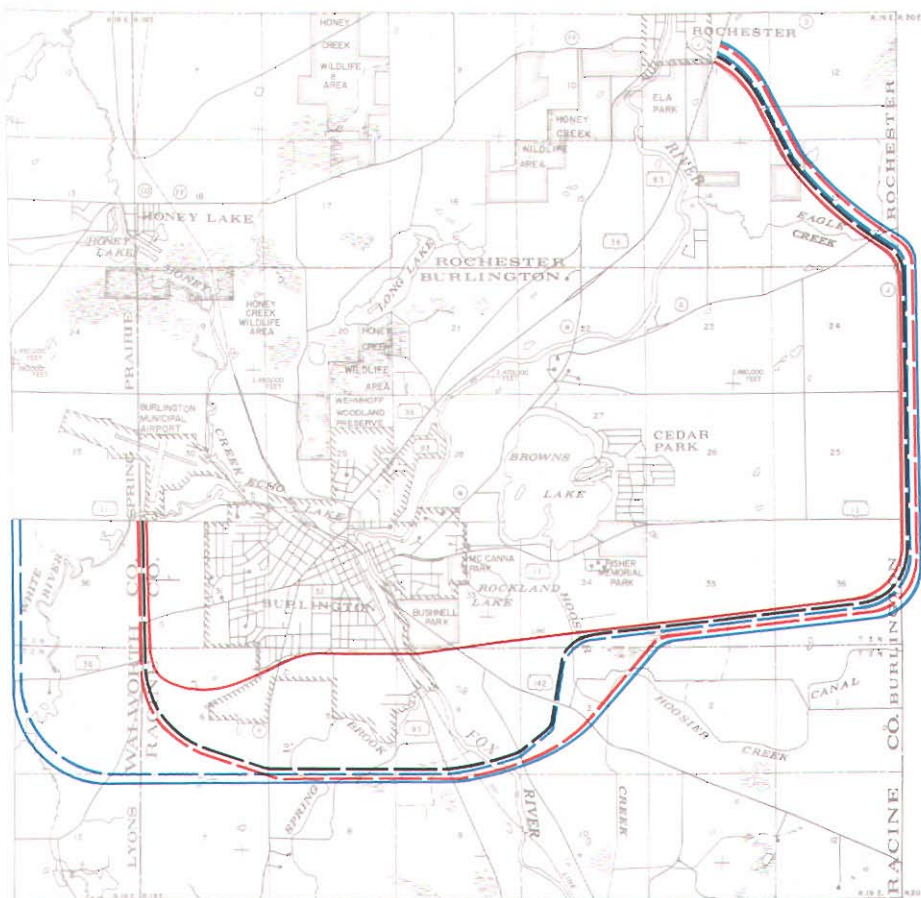
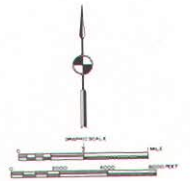
Map 27

ALTERNATIVE COMBINATIONS OF ALIGNMENTS FOR THE BURLINGTON AREA OUTER BYPASS



LEGEND

- N-INNER
- N-OUTER - 1-3
- - - N-OUTER - 1-4
- - - N-OUTER - 2-3
- - - N-OUTER - 2-4

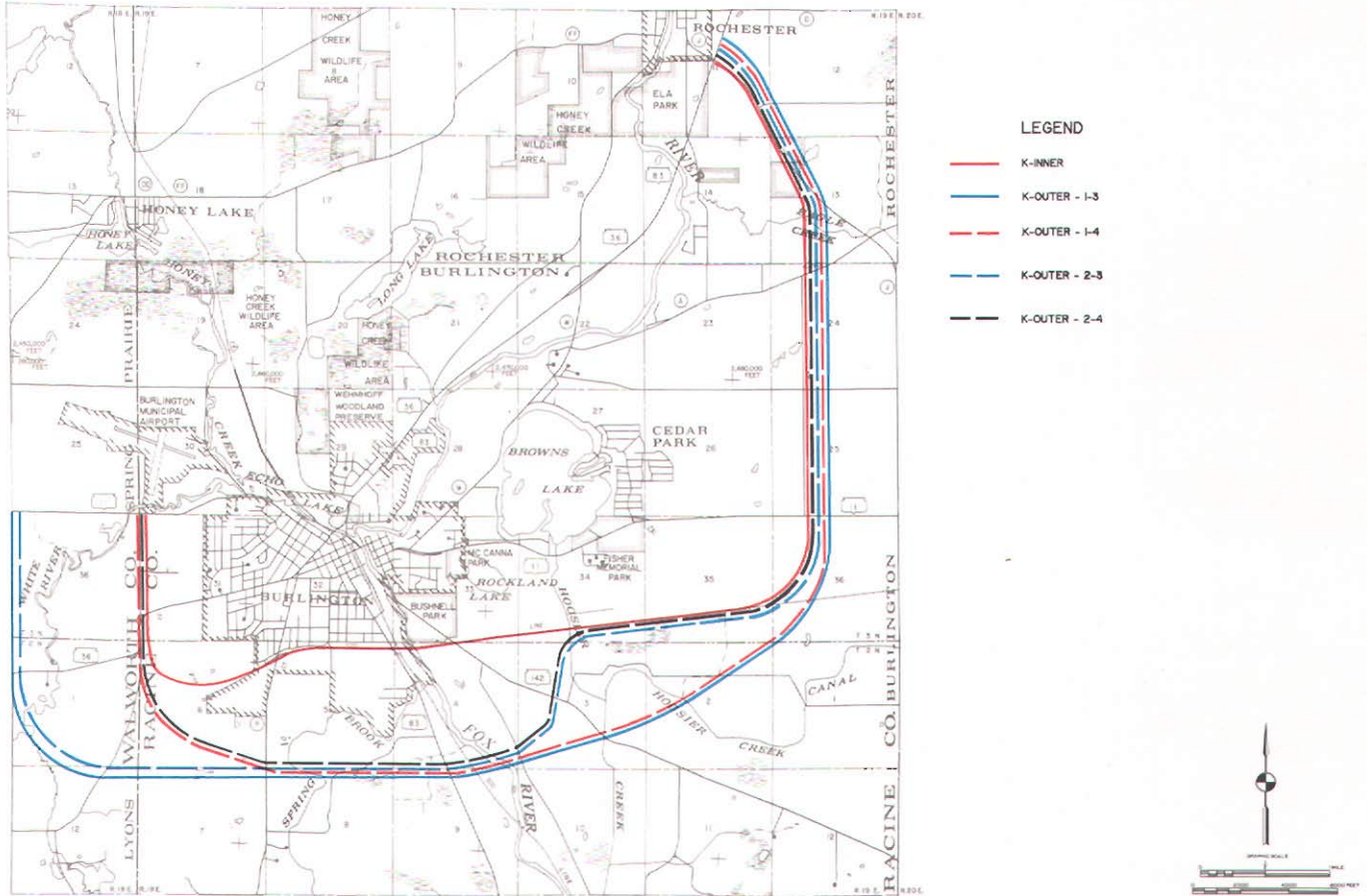


LEGEND

- J-INNER
- J-OUTER - 1-3
- - - J-OUTER - 1-4
- - - J-OUTER - 2-3
- - - J-OUTER - 2-4



Map 27 (continued)



Source: SEWRPC.

is principally the result of the substantial right-of-way cost entailed in the acquisition of residential and commercial development. In addition, the inner bypass route would abut an existing public elementary school. Also, the inner bypass route would add up to three minutes of travel time to the route.

It was also recommended that the alternatives that would utilize Crossway Road be rejected (K-inner and -outer alternatives). Crossway Road is a local residential street; for use as a bypass it would require conversion to a high-standard arterial, with attendant construction costs and impacts on abutting residences. The alternative that would utilize CTH J rather than Crossway Road would be superior, as CTH J currently has a high-standard arterial cross-section, and its two traffic lanes may be expected to be adequate to accommodate traffic to the year 2010 between STH 11 and STH 36. The only advantage of the alternatives including Crossway Road is that

they would have somewhat less indirection and a shorter travel time than those using CTH J, but the reduction in travel time would be only about one minute.

One of the remaining alternatives is the alignment initially recommended in this county jurisdictional plan update (N-outer 1-3), which is the same alignment proposed for the outer bypass in the original county jurisdictional highway system plan adopted in 1975. The remaining alternatives include the use of Mormon Road rather than new alignment in Walworth County to the west of Burlington; the use of CTH J and Soo Line Railroad right-of-way rather than new alignment to the east of Burlington; and, between the Fox River and the Soo Line right-of-way, the use of the Soo Line right-of-way and a segment of new location rather than all new location. Compared to the remaining alternatives, the initially recommended alternative alignment would provide reduced

Table 9

EVALUATION OF COMBINATIONS OF ALTERNATIVE ALIGNMENTS FOR THE BURLINGTON AREA OUTER BYPASS

Evaluation Criteria	Alternatives on New Alignment Between STH 36 and Soo Line Right-of-Way											
	N-Inner Alternative	N-Outer Alternatives										
		N-1-3		N-1-4		N-2-3		N-2-4				
Number and Type of Structures	3 apartment buildings (77 dwelling units) 15 single-family residences 7 commercial businesses 1 barn	None		6 single-family residences 1 commercial business 1 barn		None		6 single-family residences 1 commercial business 1 barn				
Right-of-Way Required	New 130-foot-wide right-of-way, 8.0 miles in length; 64-foot widening of Mormon Road right-of-way for 1.1 miles 3.2 miles of new alignment through agricultural lands from STH 36 to Soo Line right-of-way; 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 2.3 miles to STH 83; 57-foot-wide strip of Wisconsin Central right-of-way and 73-foot-wide strip of residential, commercial, and industrial lands for 1.5 miles from STH 83 to city limits, including a segment of Market Street between Kane Street and CTH P; new alignment through industrial and other rural land for 0.8 mile from city limits to Mormon Road; and widening of Mormon Road through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 3,400-foot strip of primary environmental corridor Reduces taking and dividing of farm properties Requires taking one historic building on Mormon Road and land for right-of-way Market Street between Kane Street and CTH P is converted to portion of bypass route Randolph, Emerson, and Hawthorn Streets will end in cul-de-sac or loop at bypass. Bypass will abut elementary school	New 130-foot-wide right-of-way, 10.4 miles in length 10.4 miles of new alignment principally through agricultural lands east, south, and west of the City. Requires taking 130-foot by 15,400-foot strip of primary environmental corridor		New 130-foot-wide right-of-way, 8.6 miles in length; 64-foot widening of Mormon Road right-of-way for 1.1 miles 8.6 miles of new alignment principally through agricultural lands from STH 36 to Mormon Road; and widening of Mormon Road through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 13,400-foot strip of primary environmental corridor Reduces taking and dividing of farm properties Requires taking one historic building on Mormon Road and land for right-of-way		New 130-foot-wide right-of-way, 10.7 miles in length 3.2 miles of new alignment through agricultural lands from STH 36 to Soo Line right-of-way; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural land for 0.4 mile; new alignment for 7.1 miles through agricultural lands to STH 11. Requires taking 130-foot by 15,900-foot strip of primary environmental corridor Reduces taking and dividing of farm properties		New 130-foot-wide right-of-way, 8.9 miles in length; 64-foot widening of Mormon Road right-of-way for 1.1 miles 3.2 miles of new alignment through agricultural lands from STH 36 to Soo Line right-of-way; 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural land for 0.4 mile; new alignment for 5.3 miles through agricultural lands to Mormon Road; and widening of Mormon Road through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 13,900-foot strip of primary environmental corridor Reduces taking and dividing of farm properties Requires taking one historic building on Mormon Road and land for right-of-way				
Cost												
Construction	\$ 9,060,000	\$8,110,000		\$7,410,000		\$8,220,000		\$7,520,000				
Right-of-Way	4,540,000	131,000		115,000		135,000		119,000				
Total ^a	\$13,600,000	\$8,241,000		\$7,525,000		\$8,355,000		\$7,639,000				
Travel Time (minutes) and Distance (miles)	Existing Street System											
	Time	Distance	Time	Distance	Time	Distance	Time	Distance	Time	Distance	Time	Distance
STH 36 N to STH 36 S	12.6	8.0	13.6	10.5	11.6	10.7	12.5	11.1	12.0	11.0	12.8	11.4
STH 11 E to STH 11 W	11.4	7.4	10.6	7.7	8.8	8.0	9.5	8.3	9.1	8.3	9.8	8.6
CTH P to STH 36 N	11.3	7.0	11.0	8.8	9.3	8.5	9.3	8.5	9.6	8.8	9.6	8.8
STH 11 E to STH 36 S	12.1	7.7	9.5	6.7	7.6	6.9	8.4	7.3	7.9	7.2	8.7	7.6
STH 11 W to STH 36 N	11.1	7.6	14.7	11.5	12.9	11.8	13.6	12.1	13.2	12.1	13.9	12.4
STH 142 to STH 11 W	9.9	5.3	8.9	6.0	6.5	5.9	7.2	12.7	6.7	6.1	7.4	6.4
STH 83 to STH 36 N	11.2	7.1	9.3	8.1	7.7	7.1	7.7	7.1	8.0	7.4	8.0	7.4

Table 9 (continued)

Evaluation Criteria		Alternatives on CTH J and New Alignment Between STH 36 and Soo Line Right-of-Way										
		J-Inner Alternative		J-Outer Alternatives								
				J-1-3		J-1-4		J-2-3		J-2-4		
Number and Type of Structures	3 apartment buildings (77 dwelling units) 15 single-family residences 7 commercial businesses 1 barn	None	6 single-family residences 1 commercial business 1 barn	None	6 single-family residences 1 commercial business 1 barn	None	6 single-family residences 1 commercial business 1 barn	None	6 single-family residences 1 commercial business 1 barn	None	6 single-family residences 1 commercial business 1 barn	
Right-of-Way Required	<p>New 130-foot-wide right-of-way, 6.8 miles in length; 30-foot widening of CTH J right-of-way for 4.3 miles. 64-foot widening of Mormon Road right-of-way for 1.1 miles</p> <p>Uses existing CTH J alignment for 4.3 miles from STH 36 to STH 11; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural lands for 3.4 miles to STH 83; 57-foot-wide strip of Wisconsin Central right-of-way and 73-foot-wide strip of residential, commercial, and industrial land for 1.5 miles from STH 83 to city limits, including a segment of Market Street between Kane Street and CTH P; new alignment through industrial and rural land for 0.8 mile from city limits to Mormon Road; and widening of Mormon Road right-of-way through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 3,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p> <p>Market Street between Kane Street and CTH P is converted to portion of bypass route; Randolph, Emerson, and Hawthorn Streets will end in cul-de-sac or loop at bypass</p> <p>Bypass will abut elementary school</p>	<p>130-foot-wide right-of-way, 9.2 miles in length; 30-foot widening of CTH J for 4.3 miles</p> <p>Uses existing CTH J alignment for 4.3 miles from STH 36 to STH 11; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural land for 1.1 miles; new alignment through agricultural lands for 7.2 miles to STH 11. Requires taking 130-foot by 15,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p>	<p>130-foot-wide right-of-way, 7.4 miles in length; 30-foot widening of CTH J for 4.3 miles; 64-foot widening of Mormon Road right-of-way for 1.1 miles</p> <p>Uses existing CTH J alignment for 4.3 miles from STH 36 to STH 11; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural land for 1.1 miles; new alignment through agricultural and rural lands for 5.4 miles to Mormon Road; and widening of Mormon Road right-of-way through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 13,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p>	<p>130-foot-wide right-of-way, 9.5 miles in length; 30-foot widening of CTH J for 4.3 miles</p> <p>Uses existing CTH J alignment for 4.3 miles from STH 36 to STH 11; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural land for 1.5 miles; new alignment through agricultural lands for 7.1 miles to STH 11. Requires taking 130-foot by 15,500-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p>	<p>130-foot-wide right-of-way, 7.7 miles in length; 30-foot widening of CTH J for 4.3 miles; 64-foot widening of Mormon Road right-of-way for 1.1 miles</p> <p>Uses existing CTH J alignment for 4.3 miles from STH 36 to STH 11; 100-foot-wide Soo Line right-of-way and 30-foot strip of agricultural land for 1.5 miles; new alignment through agricultural lands to Mormon Road; and widening of Mormon Road right-of-way through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 13,500-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p>							
Cost												
Construction	\$ 7,710,000	\$6,760,000	\$6,060,000	\$6,870,000	\$6,170,000							
Right-of-Way	4,552,000	143,000	127,000	147,000	131,000							
Total ^b	\$12,262,000	\$6,903,000	\$6,187,000	\$7,017,000	\$6,301,000							
Travel Time (minutes) and Distance (miles)	Existing Street System											
	Time	Distance	Time	Distance	Time	Distance	Time	Distance	Time	Distance	Time	Distance
STH 36 N to STH 36 S	12.6	8.0	15.5	12.2	13.5	12.4	14.3	12.8	13.9	12.7	14.7	13.1
STH 11 E to STH 11 W	11.4	7.4	11.9	8.9	10.1	9.2	10.8	9.5	10.4	9.5	11.1	9.8
CTH P to STH 36 N	11.3	7.0	12.9	10.5	11.2	10.2	11.2	10.2	11.5	10.5	11.5	10.5
STH 11 E to STH 36 S	12.1	7.7	10.8	7.9	8.9	8.1	9.7	8.5	9.2	8.4	10.0	8.8
STH 11 W to STH 36 N	11.1	7.6	16.6	13.2	14.8	13.5	15.5	13.8	15.1	13.8	15.8	14.1
STH 142 to STH 11W	9.9	5.3	8.9	6.0	6.5	5.9	7.2	12.7	6.7	6.1	7.4	6.4
STH 83 to STH 36 N	11.2	7.1	11.2	9.8	9.6	8.8	9.6	8.8	9.9	9.1	9.9	9.1

Table 9 (continued)

Evaluation Criteria	Alternatives on Crossway Road/CTH J Alignment Between STH 36 and Soo Line Right-of-Way				
	K-Inner Alternative	K-Outer Alternatives			
		K-1-3	K-1-4	K-2-3	K-2-4
Number and Type of Structures	3 apartment buildings (77 dwelling units) 16 single-family residences 7 commercial businesses 1 barn	1 single-family residence	7 single-family residences 1 commercial business 1 barn	1 single-family residence	7 single-family residences 1 commercial business 1 barn
Right-of-Way Required	<p>130-foot-wide right-of-way, 7.0 miles in length; 30-foot widening of CTH J for 1.1 miles; 80-foot widening of Crossway Road right-of-way for 1.9 miles; and 64-foot widening of Mormon Road right-of-way for 1.1 miles</p> <p>Uses existing CTH J for 1.1 miles and new alignment through agricultural lands for 0.8 mile from STH 36 to CTH A; existing Crossway Road for 1.9 miles from CTH A to STH 11; new alignment through agricultural lands for 1.0 mile from STH 11 to Soo Line right-of-way; 100-foot-wide Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 2.7 miles to STH 83; 57-foot-wide strip of Wisconsin Central right-of-way and 73-foot-wide strip of residential, commercial, and industrial land for 1.5 miles from STH 83 to city limits, including a segment of Market Street between Kane Street and CTH P; new alignment through industrial and rural land for 0.8 mile from city limits to Mormon Road; and widening of Mormon Road right-of-way through agricultural land to STH 11. Requires taking 130-foot by 3,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p> <p>Market Street between Kane Street and CTH P is converted to portion of bypass route; Randolph, Emerson, and Hawthorn Streets will end in cul-de-sac or loop at bypass</p> <p>Bypass will abut elementary school</p>	<p>130-foot-wide right-of-way, 9.4 miles in length; 30-foot widening of CTH J for 1.1 miles; 80-foot widening of Crossway Road right-of-way for 1.9 miles</p> <p>Uses existing CTH J for 1.1 miles and new alignment through agricultural lands for 0.8 mile from STH 36 to CTH A; existing Crossway Road for 1.9 miles from CTH A to STH 11; new alignment through agricultural lands for 1.0 mile from STH 11 to Soo Line right-of-way and 30-foot strip of agricultural land for 0.4 mile; 7.2 miles of new alignment through agricultural lands to STH 11. Requires taking 130-foot by 15,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p>	<p>130-foot-wide right-of-way, 7.6 miles in length; 30-foot widening of CTH J for 1.1 miles; 80-foot widening of Crossway Road right-of-way for 1.9 miles; and 64-foot widening of Mormon Road right-of-way of 1.1 miles</p> <p>Uses existing CTH J for 1.1 miles and new alignment through agricultural lands for 0.8 mile from STH 36 to CTH A; existing Crossway Road for 1.9 miles from CTH A to STH 11; new alignment through agricultural lands for 1.0 mile from STH 11 to Soo Line right-of-way and 30-foot strip of agricultural land for 0.4 mile; 5.4 miles of new alignment through agricultural land to Mormon Road; and widening of Mormon Road right-of-way through agricultural land for 1.1 miles to STH 11. Requires taking 130-foot by 15,000-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p>	<p>130-foot-wide right-of-way, 9.7 miles in length; 30-foot widening of CTH J for 1.1 miles; 80-foot widening of Crossway Road right-of-way for 1.9 miles</p> <p>Uses existing CTH J for 1.1 miles and new alignment through agricultural lands for 0.8 mile from STH 36 to CTH A; existing Crossway Road for 1.9 miles from CTH A to STH 11; new alignment through agricultural lands for 1.0 mile from STH 11 to Soo Line right-of-way; 100-foot-wide strip of Soo Line right-of-way and 30-foot strip of agricultural land for 0.8 mile; 7.1 miles of new alignment through agricultural lands to STH 11. Requires taking 130-foot by 15,500-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p>	<p>130-foot-wide right-of-way, 7.9 miles in length; 30-foot widening of CTH J for 1.1 miles; 80-foot widening of Crossway Road right-of-way for 1.9 miles; and 64-foot widening of Mormon Road right-of-way for 1.1 miles</p> <p>Uses existing CTH J for 1.1 miles and new alignment through agricultural lands for 0.8 mile from STH 36 to CTH A; existing Crossway Road for 1.9 miles from CTH A to STH 11; new alignment through agricultural lands for 1.0 mile from STH 11 to Soo Line right-of-way; 100-foot-wide strip of Soo Line right-of-way and 30-foot-wide strip of agricultural lands for 0.8 mile; 5.3 miles of new alignment through agricultural lands to Mormon Road; and widening of Mormon Road right-of-way through agricultural lands for 1.1 miles to STH 11. Requires taking 130-foot by 13,500-foot strip of primary environmental corridor</p> <p>Reduces taking and dividing of farm property</p> <p>Requires taking one historic building on Mormon Road and land for right-of-way</p>
Cost					
Construction	\$ 8,880,000	\$7,930,000	\$7,230,000	\$8,040,000	\$7,340,000
Right-of-Way	4,549,000	140,000	124,000	144,000	128,000
Total ^c	\$13,429,000	\$8,070,000	\$7,354,000	\$8,184,000	\$7,468,000

Table 9 (continued)

Evaluation Criteria			Alternatives on Crossway Road/CTH J Alignment Between STH 36 and Soo Line Right-of-Way									
			K-Inner Alternative		K-Outer Alternatives							
					K-1-3		K-1-4		K-2-3		K-2-4	
Travel Time (minutes) and Distance (miles)	Existing Street System		Time	Distance	Time	Distance	Time	Distance	Time	Distance	Time	Distance
	Time	Distance										
STH 36 N to STH 36 S	12.6	8.0	14.3	11.1	12.3	11.3	13.2	11.7	12.7	11.6	13.5	12.0
STH 11 E to STH 11 W	11.4	7.4	11.1	8.2	9.3	8.5	10.0	8.8	9.6	8.8	10.3	9.1
CTH P to STH 36 N	11.3	7.0	11.7	9.4	10.0	9.1	10.0	9.1	10.3	9.4	10.3	9.4
STH 11 E to STH 36 S	12.1	7.7	10.0	7.2	8.1	7.4	8.9	7.8	8.4	7.7	9.2	8.1
STH 11 W to STH 36 N	11.1	7.6	15.4	12.1	13.6	12.4	14.3	12.7	13.9	12.7	14.6	13.0
STH 142 to STH 11W	9.9	5.3	8.9	6.0	6.5	5.9	7.2	12.7	6.7	6.1	7.4	6.4
STH 83 to STH 36 N	11.2	7.1	10.0	8.7	8.4	7.7	8.4	7.7	8.7	8.0	8.7	8.0

^a Costs shown are for initial two-lane bypass, except for the section of the N-Inner alternative between STH 83 and CTH P, where a four-lane section is assumed to be constructed as the initial section. Total estimated cost for each alternative for completion of ultimate four-lane bypass between STH 11 east and STH 36 south is as follows:

- N-Inner = \$16,300,000
- N-1-3 = \$11,760,000
- N-1-4 = \$10,570,000
- N-2-3 = \$11,990,000
- N-2-4 = \$10,800,000

^b Costs shown are for initial two-lane bypass, except for the section of the J-Inner alternative between STH 83 and CTH P, where a four-lane section is assumed to be constructed as the initial section. Total estimated cost for each alternative for completion of ultimate four-lane bypass between STH 11 east and STH 36 south is as follows:

- J-Inner = \$15,150,000
- J-1-3 = \$10,610,000
- J-1-4 = \$ 9,420,000
- J-2-3 = \$10,840,000
- J-2-4 = \$ 9,650,000

^c Costs shown are for initial two-lane bypass, except for the section of the K-Inner alternative between STH 83 and CTH P, where a four-lane section is assumed to be constructed as the initial section. Total estimated cost for each alternative for completion of ultimate four-lane bypass between STH 11 east and STH 36 south is as follows:

- K-Inner = \$16,690,000
- K-1-3 = \$12,150,000
- K-1-4 = \$10,960,000
- K-2-3 = \$12,380,000
- K-2-4 = \$11,190,000

Source: SEWRPC.

travel times: about two minutes less compared to alternatives using CTH J; and about one minute less compared to alternatives using Mormon Road. Also, nearly complete control of marginal access could be provided on the initially recommended alignment. The initially recommended alternative would require no taking of residences and businesses; the alternatives using Mormon Road would require the taking of six single-family residences and one business. The principal disadvantage of the initially recommended bypass alignment is that it would require acquisition of substantially more agricultural land than the remaining alternatives, as it would be largely located on new location, and it would result in the division of more farms. The other disadvantage is that the initially recommended bypass alternative would entail about \$1 million more in capital costs than the alternatives using CTH J.

Based on this review of alternative alignments, the Commission staff continued to recommend to the concerned local units of government assembled at an intergovernmental meeting of May 26, 1989, that the preferred alignment in the jurisdictional highway system plan be the alignment recommended at the January 20, 1989, meeting of the Advisory Committee—the same alignment proposed in the original Racine County jurisdictional highway system plan adopted by Racine County on December 2, 1975. This alignment better serves the transportation objectives concerned, as travel time on the bypass would be up to four minutes less than on an alternative bypass alignment using CTH J and Mormon Road, and nearly complete control of marginal access may be provided. The Wisconsin Department of Transportation, District 2, indicated its support of this proposed alignment, citing its potential advantages of better control

of marginal access and greater ease of acquiring an adequate right-of-way width. The local units of government concerned, however, indicated that this preferred alignment may be extremely difficult, if not impossible, to implement. They noted that the analyses indicated that the alternative using CTH J and Mormon Road would provide, from a transportation perspective, an acceptable though less desirable alternative. Moreover, they noted that the alternative using CTH J and Mormon Road would have a substantially greater probability of implementation. Also, they noted that, in any case, all feasible alternatives will have to be reconsidered in a subsequent preliminary engineering study before a final decision can be made concerning bypass location. Lastly, they noted that subalternatives exist with respect to the alternative alignment using CTH J and Mormon Road which would address, in part, the right-of-way width and marginal access concerns of the Wisconsin Department of Transportation. As a result, the Advisory Committee, at its meeting of November 16, 1989, recommended that the alignment for the Burlington area bypass follow CTH J and Mormon Road (Alternative J-outer 2-4).

Erie Street and Five Mile Road

Subsequent to the January 20, 1989 Advisory Committee meeting, the City of Caledonia requested that the following roadway segments be added to the plan as local arterials: a segment of Erie Street between Four Mile Road and Five Mile Road, and a new segment of Five Mile Road to be created by an extension from Charles Street to Erie Street. The Advisory Committee, at its meeting of November 16, 1989, recommended that these two proposed segments be added to the jurisdictional plan as local arterials to provide a desirable spacing of arterials to support urban development in this portion of the Town of Caledonia.

RECOMMENDED JURISDICTIONAL HIGHWAY SYSTEM PLAN TO BE TAKEN TO PUBLIC HEARING

The second generation Racine County jurisdictional highway system plan as recommended to be taken to public hearing by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County is shown on Map 28. The amendments to the currently adopted plan incorporated in the preliminary new plan are listed in Table 10. The

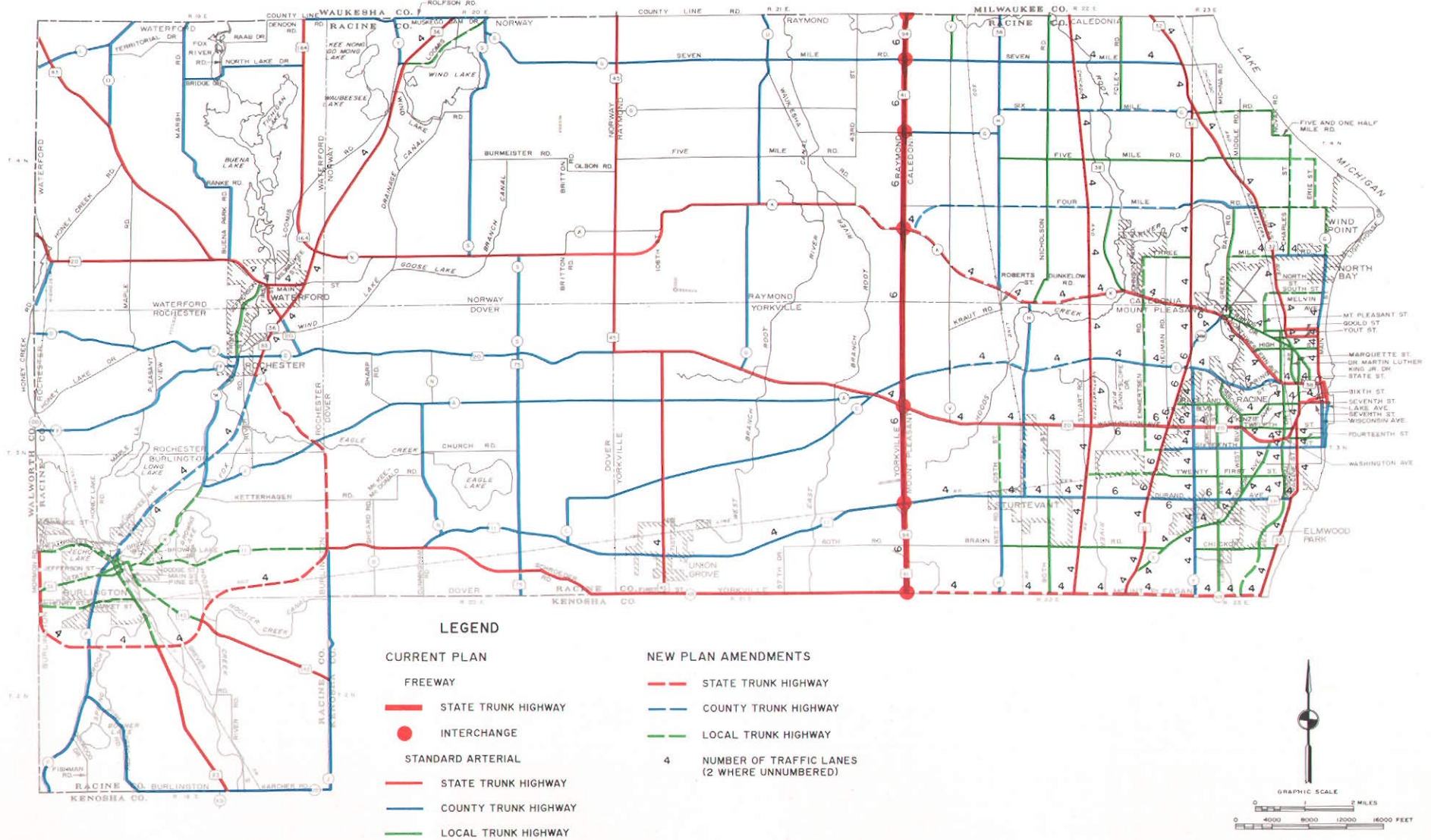
plan envisions a system of arterial facilities in Racine County that can meet existing and probable future traffic demands effectively and efficiently. The plan identifies the location and configuration of the various facilities constituting the arterial system, and recommends the number of traffic lanes required on each segment of the system. The plan also recommends the level of government which should be responsible for the construction, operation, and maintenance of each facility making up the arterial system.

The major capacity improvements recommended under the new plan are shown on Map 29. These improvements include widenings of existing facilities to provide additional traffic lanes, and the construction of new arterial facilities. The preliminary recommended major capacity improvements are listed in Table 11. The recommended changes in jurisdictional responsibility are shown on Map 30 and are listed in Table 12.

The preliminary recommended arterial system would consist of 436 miles of streets and highways, or about 35 percent of the 1,250-mile total street and highway system expected to serve Racine County by the year 2000. The recommended state trunk highway element of the preliminary plan would consist of 158 miles of arterial facilities, or about 36 percent of the 436-mile planned arterial system. The recommended county trunk highway element of the plan would consist of 180 miles of arterial facilities, or about 41 percent of the 436-mile planned arterial system. The recommended local trunk highway element of the plan would consist of 98 miles of arterial facilities, or about 23 percent of the 436-mile planned arterial system. Table 13 presents a summary of the mileage of the planned arterial street and highway system by proposed jurisdiction—state, county, and local—within each unit of government within Racine County. It may be noted that, under the preliminary plan, the total mileage of state trunk highways in the County would remain at about 158 miles. The total mileage of county trunk highways would increase from 150 to 180 miles, or by about 20 percent.

Of the total 436 miles of the arterial system in Racine County under the preliminary plan, 351 miles, or 81 percent, would require only preservation, or resurfacing and reconstruction; 51 miles, or 12 percent, would require improvement, or widening to provide additional traffic lanes; and 34 miles, or 7 percent, would consist

RECOMMENDED PRELIMINARY JURISDICTIONAL HIGHWAY SYSTEM PLAN TO BE TAKEN TO PUBLIC HEARING



Source: SEWRPC.

Table 10

**PRELIMINARY RECOMMENDED AMENDMENTS TO THE RACINE COUNTY
JURISDICTIONAL HIGHWAY SYSTEM PLAN AS TAKEN TO PUBLIC HEARING**

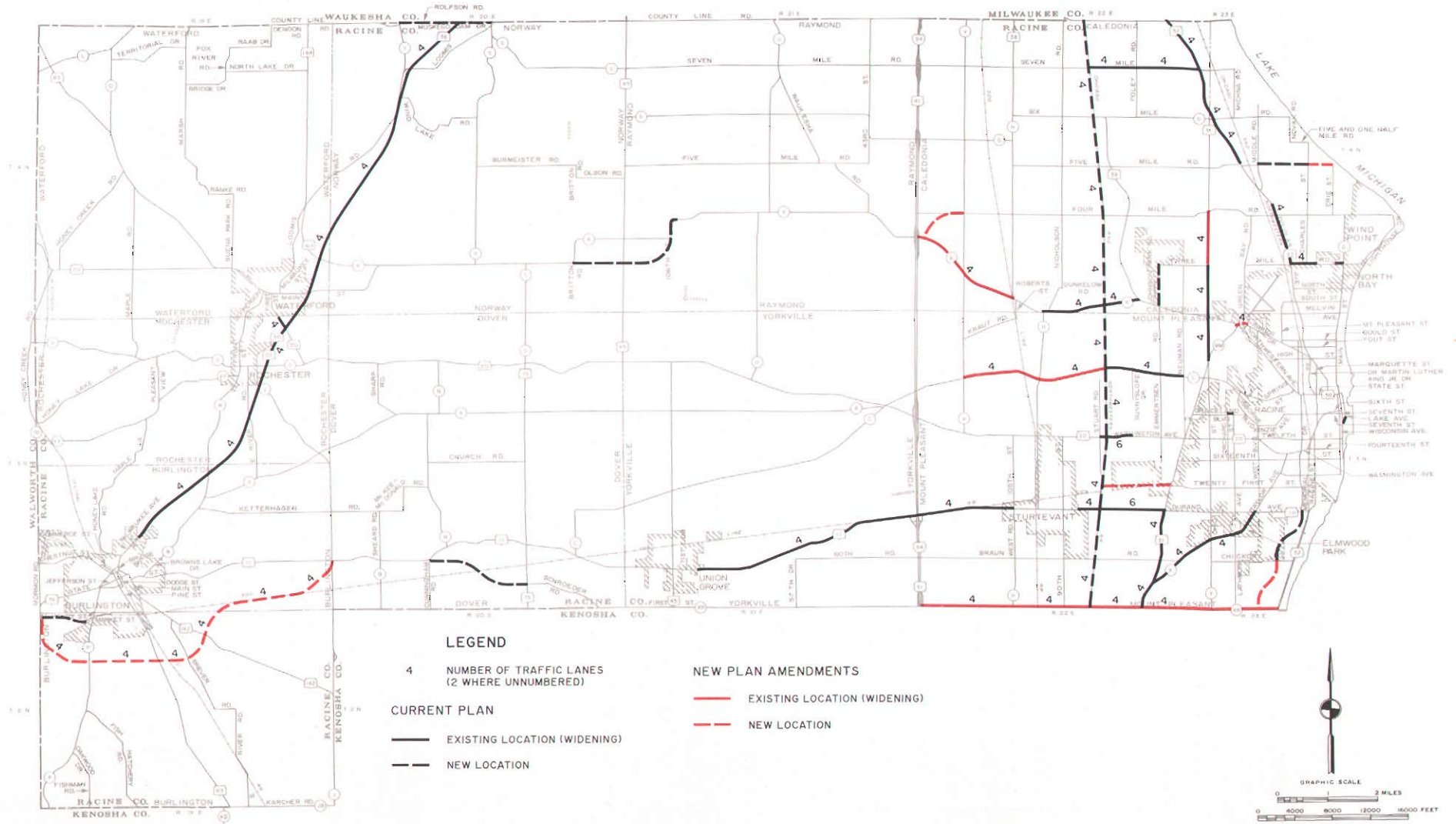
Functional Plan Amendments

- Add to the plan as a state trunk highway the Burlington area outer bypass to provide four travel lanes
- Add to plan the reconstruction of the STH 38-CTH MM-Rapids Drive intersection to provide direct movement between CTH MM and Rapids Drive
- Add to plan as local arterials Five Mile Road between Charles Street and Erie Street, and Erie Street between Five Mile Road and Four Mile Road
- Add to plan as a local arterial an extension of 21st Street from STH 31 to the proposed Lake Arterial
- Add to plan as a local arterial the extension of Memorial Drive between Chickory Road and CTH KR
- Add to the plan the improvement of CTH KR from IH 94 to STH 32 to provide four travel lanes
- Add to the plan the improvement of STH 20 from Stuart-Willow Roads to the proposed Lake Arterial facility to provide six travel lanes
- Add to the plan the improvement of CTH C from CTH V to the proposed Lake Arterial facility to provide four travel lanes
- Add to the plan the improvement of CTH K from IH 94 to CTH H at Franksville to provide four travel lanes
- Add to the plan the improvement of STH 31 from Three Mile Road to Four Mile Road to provide four travel lanes
- Change the proposed improvement of STH 38 from CTH K to STH 31 to provide for maintaining the current four travel lanes rather than improving to six travel lanes
- Change the proposed improvement in the plan of CTH K from STH 38 to the proposed Lake Arterial facility to provide four travel lanes, rather than six travel lanes
- Delete from the plan the proposed interchange of Four Mile Road and IH 94; and add to the plan the extension of Four Mile Road to CTH K east of IH 94
- Delete CTH V as arterial between Seven Mile Road and STH 20 from the plan
- Delete from plan the extension of Three Mile Road between Green Bay Road and STH 31
- Delete from plan the extension of Melvin Street between Green Bay Road and Mt. Pleasant Street and the extension of Mt. Pleasant Street from its northerly terminus to Three Mile Road
- Delete from plan the extension of Chickory Road between Meachem Road and Taylor Avenue
- Delete from plan as arterial facilities the existing and proposed segments of Eight Mile Road between IH 94 and USH 45
- Delete from plan the State Street extension and inner bypass extension between STH 83 and STH 36 in the Burlington area

Jurisdictional Plan Amendments

- Change the recommended jurisdiction of CTH K from IH 94 to STH 38 from county to state trunk highway
- Change the recommended jurisdiction of Four Mile Road from CTH K to STH 31 from state to county trunk highway
- Change the recommended jurisdiction of Four Mile Road from STH 32 to Main Street and Main Street from Four Mile Road to Three Mile Road from county to local arterial
- Change the recommended jurisdiction of Three Mile Road from STH 32 to Green Bay Road from county to local arterial
- Change the recommended jurisdiction from county to local trunk highway of Three Mile Road from STH 31 west to Johnson Park Road; Johnson Park Road and its extension along the eastern boundary of Johnson Park; Emmertsen Road from STH 38 south to 16th Street; and 16th Street east from Emmertsen Road to STH 31
- Change the recommended jurisdiction of CTH H between STH 20 and STH 11 from local to county trunk highway and of West Road between STH 20 and STH 11 from county to local trunk highway
- Change recommended jurisdiction from county to local arterial of proposed arterial between STH 32 and Four Mile Road routed along Charles Street, Five and One-Half Mile Road, Novak Road, and Six Mile Road
- Change the recommended jurisdiction of CTH KR from STH 31 to STH 32 from county to state trunk highway
- Change recommended jurisdiction of Six Mile Road between CTH H and STH 32 from local to county trunk highway
- Change the recommended jurisdiction of the following arterial facilities located within the Burlington area bypass from recommended state to county trunk highways: STH 36 from the eastern segment of the bypass to McHenry Street; from state to local trunk highways: STH 11, STH 142, STH 83, and STH 36 from McHenry Street to the western segment of the bypass; and from county to local trunk highways: Market Street and its extension to the western segment of the bypass and CTH W from CTH A to STH 11

CAPACITY IMPROVEMENTS UNDER THE PRELIMINARY RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Table 11

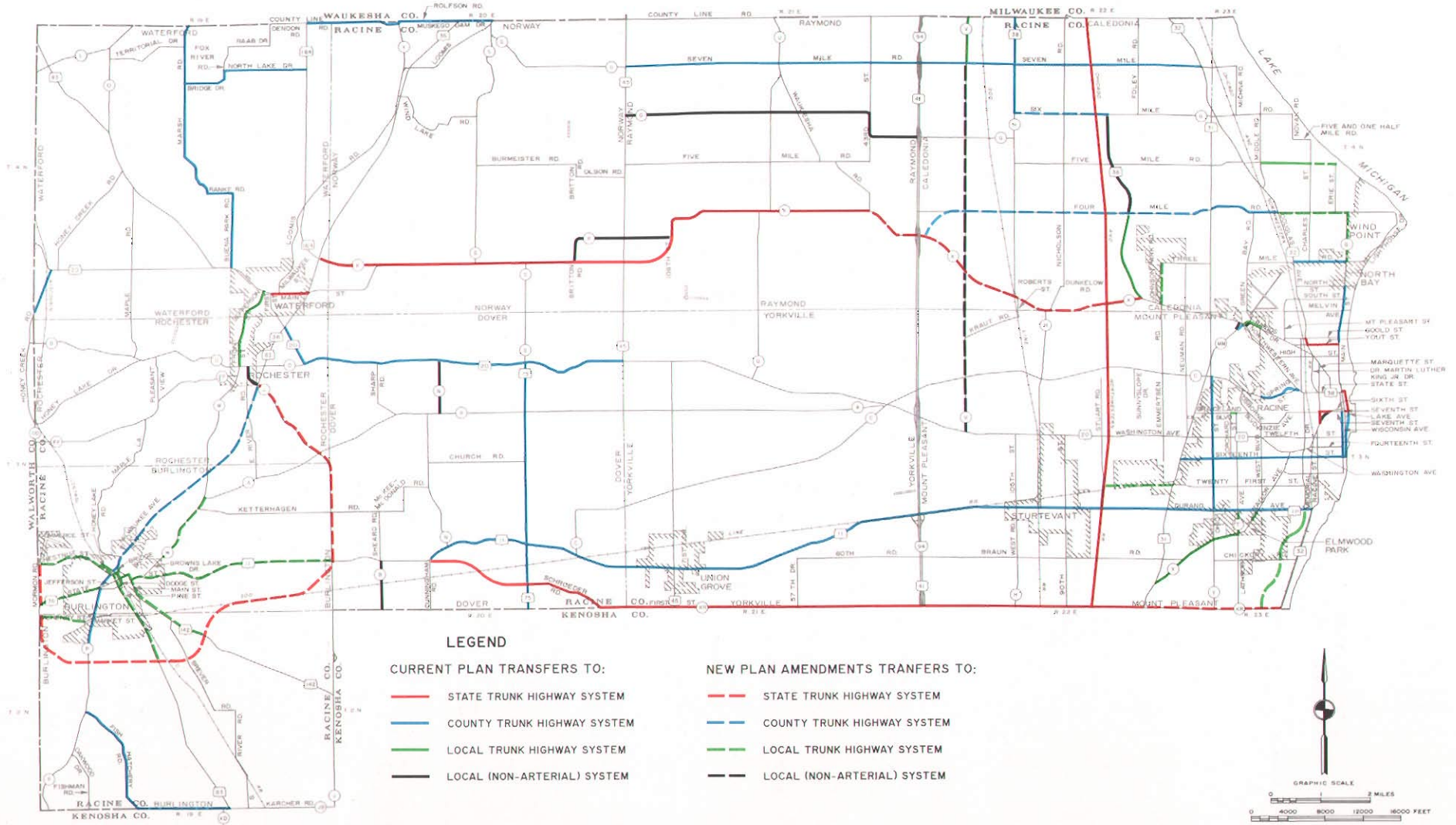
**CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE PRELIMINARY
RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Jurisdiction	Facility	Termini	Description	Included in First Generation Plan	Implementation Priority ^a	
Existing Location (additional traffic lanes) State	CTH K	Kraut Road to STH 38	Widen from two to four traffic lanes	Yes	Low	
	CTH K	IH 94 to CTH H	Widen from two to four traffic lanes	No	Low	
	CTH KR	IH 94 to STH 32	Widen from two to four traffic lanes	No	Low	
	STH 20	Village of Waterford to STH 36/83	Widen from two to four traffic lanes	Yes	Low	
	STH 20	Willow Road to Sunnyslope Drive	Widen from four to six traffic lanes	Yes	High	
	STH 31	Three Mile Road to Four Mile Road	Widen from two to four traffic lanes	No	Medium	
	STH 31	CTH KR to STH 11	Widen from two to four traffic lanes	Yes	High	
	STH 31	CTH MM to Three Mile Road	Widen from two to four traffic lanes	Yes	Medium	
	STH 32	Milwaukee County to Five Mile Road	Widen from two to four traffic lanes	Yes	Medium	
	STH 32	CTH G to the City of Racine	Widen from two to four traffic lanes	Yes	Medium	
	STH 36	Waukesha County to City of Burlington	Widen from two to four traffic lanes	Yes	High	
	County	Seven Mile Road	Chicago & North Western Railway to STH 32	Widen from two to four traffic lanes	Yes	Low
		CTH C	Airline Road to Newman Road	Widen from two to four traffic lanes	Yes	High
CTH C		CTH V to Airline Road	Widen from two to four traffic lanes	No	Low	
STH 11		86th Street in the Village of Sturtevant to STH 31	Widen from four to six traffic lanes	Yes	High	
STH 11		71st Street in the Village of Union Grove to 105th Street in the Village of Sturtevant	Widen from two to four traffic lanes	Yes	Low	
Local	Three Mile Road	STH 32 to CTH G	Widen from two to four traffic lanes	Yes	Medium	
	CTH X and Taylor Avenue	STH 11 to STH 31	Widen from two to four traffic lanes	Yes	Low	
New Location (on new alignment) State	Burlington Bypass	STH 11 to STH 36	Construct four lanes on new alignment	No	High	
	CTH K extension	108th Street to Britton Road	Construct two lanes on new alignment	Yes	Medium	
	Lake Arterial	Milwaukee County to Kenosha County	Construct four lanes on new alignment	Yes	High	
	STH 11 realignment	Cunningham Road to STH 75	Construct two lanes on new alignment	Yes	Low	
	Reconstruction of STH 38/CTH MM intersection	CTH MM to Rapids Drive	Construct four lanes on new alignment	No	High	
County	Four Mile Road realignment	CTH V to CTH K	Construct two lanes on new alignment	No	Low	
	Lake Avenue extension	Main Street to Lake Avenue	Construct two lanes on new alignment	Yes	Low	
	Muskego Dam Drive	CTH Y to CTH G	Construct two lanes on new alignment	Yes	Low	
Local	21st Street	Chicago & North Western Railway to STH 31	Construct two lanes on new alignment	No	Medium	
	Five Mile Road extension	Charles Street to Erie Street	Construct two lanes on new alignment	No	Low	
	Five Mile Road extension	Middle Road to Charles Street	Construct two lanes on new alignment	Yes	Low	
	Emmertsen Road	Three Mile Road to STH 38	Construct two lanes on new alignment	Yes	Low	
	Graceland					
	Boulevard extension	Orchard Avenue to Lathrop Avenue	Construct two lanes on new alignment	Yes	Low	
	Market Street	Sheldon Street to Mormon Road	Construct two lanes on new alignment	Yes	Low	
	Memorial Drive	STH 11 to Chicory Road	Construct two lanes on new alignment	Yes	High	
Memorial Drive	Chicory Road to CTH KR	Construct two lanes on new alignment	No	High		

^aThe proposed implementation priority is dependent upon the need for the improvement to meet current traffic demand; the need for the improvement to meet future traffic demand and the anticipated timing of that demand; the need for the improvement to provide an integrated traffic route; and the potential economic development impacts of the improvement.

Source: SEWRPC.

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY IN RACINE COUNTY UNDER THE PRELIMINARY RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Table 12

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY UNDER THE PRELIMINARY RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN^a

Unit of Government	Jurisdiction		Facility	From	To	Distance (miles)	Included in First Generation Plan
	Planned	Existing					
Town of Burlington	State trunk highway	New facility	Burlington Bypass	STH 11	STH 36	7.95	No
	State trunk highway	County trunk highway	CTH J	Town of Rochester	STH 11	1.07	No
	State trunk highway	Local trunk highway	Mormon Road	STH 36	STH 11	0.42	No
	County trunk highway	Local trunk highway	Fish Hatchery Road	CTH P	Karcher Road	2.49	Yes
	County trunk highway	Local trunk highway	Karcher Road	Fish Hatchery Road	CTH KD	0.88	Yes
	County trunk highway	State trunk highway	STH 36/83	Town of Rochester	City of Burlington	2.15	No
	Local trunk highway	County trunk highway	CTH W	City of Burlington	CTH A	1.56	No
	Local trunk highway	New facility	Market Street	Sheldon Street	Mormon Road	0.90	No
	Local trunk highway	State trunk highway	STH 11	City of Burlington	CTH J	3.51	No
	Local trunk highway	State trunk highway	STH 11	Mormon Road	City of Burlington	0.65	No
	Local trunk highway	State trunk highway	STH 142	City of Burlington	Bypass route	1.77	No
	Local trunk highway	State trunk highway	STH 36	Walworth County	City of Burlington	0.61	No
	Local trunk highway	State trunk highway	STH 83	City of Burlington	Bypass route	0.62	No
	Town of Caledonia	State trunk highway	County trunk highway	CTH K	Chicago & North Western Railway	STH 38	1.43
State trunk highway		County trunk highway	CTH K	IH 94	STH 38	4.73	No
State trunk highway		New facility	Lake Arterial	Milwaukee County	Town of Mt. Pleasant	6.00	Yes
County trunk highway		New facility	Four Mile Road realignment	CTH V	CTH K	0.96	No
County trunk highway		Local trunk highway	Seven Mile Road	Town of Raymond	STH 32	5.77	Yes
County trunk highway		Local trunk highway	Four Mile Road	STH 32	STH 31	1.43	Yes
County trunk highway		Local trunk highway	Four Mile Road	CTH V	STH 31	5.05	No
County trunk highway		State trunk highway	STH 38	Milwaukee County	CTH G	3.90	Yes
County trunk highway		Local trunk highway	Three Mile Road	STH 32	CTH G	0.33	Yes
Local trunk highway		New facility	Five Mile Road extension	Middle Road	Five Mile Road	0.74	Yes
Local trunk highway		New facility	Five Mile Road extension	Charles Street	Erie Street	0.50	No
Local trunk highway		County trunk highway	CTH G	STH 32	Three Mile Road	1.91	No
Local trunk highway		County trunk highway	CTH V	Milwaukee County	Seven Mile Road	1.00	Yes
Local nonarterial		County trunk highway	CTH V	Seven Mile Road	STH 20	5.00	No
Local trunk highway		New facility	Emmertsen Road	Three Mile Road	STH 38	1.50	No
Local nonarterial		State trunk highway	STH 38	CTH G	Four Mile Road	2.15	Yes
Local trunk highway		State trunk highway	STH 38	Four Mile Road	CTH K	1.86	Yes
Town of Dover		State trunk highway	County trunk highway	CTH J	Church Road	STH 11	0.93
	State trunk highway	New facility	STH 11 realignment	Cunningham Road	STH 75	2.00	Yes
	State trunk highway	Local trunk highway	Schroeder Road	STH 75	Town of Yorkville	1.87	Yes
	County trunk highway	State trunk highway	STH 11	Cunningham Road	Town of Yorkville	4.23	Yes
	County trunk highway	State trunk highway	STH 20	Town of Rochester	Town of Yorkville	6.13	Yes
	County trunk highway	State trunk highway	STH 75	STH 20	Kenosha County	5.01	Yes
	Local nonarterial	County trunk highway	CTH B	STH 11	Kenosha County	1.00	Yes
	Local nonarterial	County trunk highway	CTH N	STH 20	CTH A	1.00	Yes
	Town of Mt. Pleasant	State trunk highway	County trunk highway	CTH K	Kraut Road	Town of Caledonia	0.39
State trunk highway		County trunk highway	CTH KR	IH 94	STH 31	2.28	Yes
State trunk highway		County trunk highway	CTH KR	STH 31	STH 32	1.39	No
State trunk highway		New facility	Lake Arterial	Town of Caledonia	CTH KR	6.05	Yes
County trunk highway		Local trunk highway	16th Street	STH 31	City of Racine	0.21	Yes
County trunk highway		New facility	CTH MM realignment	West of STH 38	STH 38	0.09	No
County trunk highway		Local trunk highway	Ohio Street	CTH C	City of Racine	0.16	Yes
County trunk highway		State trunk highway	STH 11	IH 94	Village of Sturtevant	1.72	Yes
County trunk highway		State trunk highway	STH 11	Village of Sturtevant	City of Racine	2.34	Yes
Local trunk highway		New facility	21st Street	Lake Arterial	City of Racine	0.21	No
Local trunk highway		County trunk highway	CTH X	STH 31	CTH T	1.46	Yes
Local trunk highway		New facility	Memorial Drive	Chicory Road	CTH KR	1.00	No
Local trunk highway		New facility	Memorial Drive	STH 11	Chicory Road	1.35	Yes
Local trunk highway		New facility	Rapids Court extension	Rapids Drive	STH 38	0.06	No
Town of Norway		State trunk highway	County trunk highway	CTH K	Town of Waterford	Britton Road	5.00
	State trunk highway	New facility	CTH K extension	Britton Road	USH 45	1.00	Yes
	County trunk highway	Local trunk highway	Denoon Road	Town of Waterford	CTH Y	0.70	Yes
	County trunk highway	New facility	Muskego Dam Drive	CTH Y	CTH G	0.98	Yes
	Local nonarterial	County trunk highway	CTH K	Apple Road	Town of Raymond	1.43	Yes
Town of Raymond	State trunk highway	County trunk highway	CTH K	108th Street	IH 94	5.55	Yes
	State trunk highway	New facility	CTH K extension	108th Street	USH 45	1.30	Yes
	County trunk highway	Local trunk highway	Seven Mile Road	Town of Caledonia	Town of Norway	6.03	Yes
	Local nonarterial	County trunk highway	CTH G	USH 45	IH 94	6.45	Yes
	Local nonarterial	County trunk highway	CTH K	108th Street	Town of Norway	1.00	Yes
Town of Rochester	State trunk highway	County trunk highway	CTH J	STH 36/83	Town of Burlington	2.24	No
	County trunk highway	State trunk highway	STH 20	STH 36/83	Town of Dover	1.41	Yes
	County trunk highway	State trunk highway	STH 36/83	CTH J	Town of Burlington	1.85	No
	Local trunk highway	County trunk highway	CTH W	Village of Rochester	Village of Waterford	0.09	Yes

Table 12 (continued)

Unit of Government	Jurisdiction		Facility	From	To	Distance (miles)	Included in First Generation Plan
	Planned	Existing					
Town of Waterford	State trunk highway	County trunk highway	CTH K	STH 36	Town of Norway	0.25	Yes
	County trunk highway	Local trunk highway	Bridge Drive	Marsh Road	Fox River Road	0.85	Yes
	County trunk highway	Local trunk highway	Buena Park Road	Ranke Road	STH 20	1.51	Yes
	County trunk highway	Local trunk highway	Fox River Road	Bridge Drive	North Lake Drive	0.17	Yes
	County trunk highway	Local trunk highway	Honey Creek Road	Walworth County	STH 20	0.98	Yes
	County trunk highway	Local trunk highway	Marsh Road	Waukesha County	Ranke Road	3.74	Yes
	County trunk highway	Local trunk highway	North Lake Drive	Fox River Road	STH 164	1.68	Yes
	County trunk highway	Local trunk highway	Ranke Road	Marsh Road	Buena Park Road	0.51	Yes
Town of Yorkville	State trunk highway	County trunk highway	CTH KR	USH 45	IH 94	2.50	Yes
	Local trunk highway	Local trunk highway	Schroeder Road	Town of Dover	USH 45	0.49	Yes
	County trunk highway	State trunk highway	STH 11	71st Street	IH 94	4.22	Yes
	County trunk highway	State trunk highway	STH 11	USH 45	Town of Dover	0.98	Yes
Village of Elmwood Park	Local trunk highway	County trunk highway	CTH T	North corporate limits	South corporate limits	0.33	Yes
Village of Rochester	Local trunk highway	County trunk highway	CTH W (Front Street)	Main Street-CTH D	North corporate limits	0.33	Yes
Village of Sturtevant	County trunk highway	State trunk highway	STH 11	West corporate limits	East corporate limits	1.66	Yes
Village of Union Grove	County trunk highway	State trunk highway	STH 11	East corporate limits	West corporate limits	0.96	Yes
Village of Waterford	State trunk highway	Local trunk highway	Main Street	First Street	East corporate limits	0.68	Yes
	Local trunk highway	County trunk highway	CTH W	Main Street	South corporate limits	1.31	Yes
Village of Wind Point	Local trunk highway	County trunk highway	CTH G	Four Mile Road	Three Mile Road	0.50	No
City of Burlington	County trunk highway	Local trunk highway	McHenry Street	STH 36	South corporate limits	1.06	Yes
	County trunk highway	State trunk highway	STH 36/83	North corporate limits	McHenry Street	1.23	No
	Local trunk highway	State trunk highway	STH 11	East corporate limits	West corporate limits	3.19	No
	Local trunk highway	State trunk highway	STH 142	STH 11	South corporate limits	0.19	No
	Local trunk highway	State trunk highway	STH 36	West corporate limits	McHenry Street	0.81	No
	Local trunk highway	State trunk highway	STH 83	Milwaukee Avenue	South corporate limits	1.25	No
City of Racine	State trunk highway	Local trunk highway	Douglas Avenue	Yout Street	Gould Street	0.13	Yes
	State trunk highway	Local trunk highway	Lake Avenue	Seventh Street	State Street	0.40	Yes
	State trunk highway	Local trunk highway	S. Marquette Avenue	Sixth Street	Washington Avenue	0.25	Yes
	State trunk highway	Local trunk highway	Seventh Street	Main Street	Lake Avenue	0.06	Yes
	State trunk highway	Local trunk highway	Sixth Street	Grand Avenue	Marquette Avenue	0.25	Yes
	State trunk highway	Local trunk highway	State Street	Lake Avenue	Main Street	0.06	Yes
	State trunk highway	Local trunk highway	Yout Street	Douglas Avenue	Main Street	0.64	Yes
	County trunk highway	New facility	Lake Avenue extension	Main Street	Lake Avenue	0.11	Yes
	County trunk highway	Local trunk highway	Lake Avenue	Ninth Street	Seventh Street	0.21	Yes
	County trunk highway	Local trunk highway	Main Street	Gould Street	North corporate limits	1.01	Yes
	County trunk highway	Local trunk highway	Main Street	Sixteenth Street	Tenth Street	0.61	Yes
	County trunk highway	Local trunk highway	Ohio Street	CTH C	STH 11	2.56	Yes
	County trunk highway	Local trunk highway	STH 11	West corporate limits	STH 32	1.96	Yes
	County trunk highway	Local trunk highway	Sixteenth Street	West corporate limits	Main Street	3.27	Yes
	County trunk highway	Local trunk highway	Spring Street	CTH C	STH 38	0.75	Yes
	County trunk highway	Local trunk highway	Three Mile Road	STH 32	CTH G	0.74	Yes
	County trunk highway	Local trunk highway	Wisconsin Avenue	Sixteenth Street	Seventh Street	0.92	Yes
	Local trunk highway	New facility	21st Street	West corporate limits	STH 31	1.19	No
	Local trunk highway	County trunk highway	CTH T	STH 11	South corporate limits	0.17	Yes
	Local trunk highway	County trunk highway	CTH X	STH 11	South corporate limits	0.82	Yes
	Local trunk highway	New facility	Graceland Boulevard extension	Orchard Avenue	Lathrop Avenue	0.13	Yes
	Local trunk highway	New facility	Rapids Court extension	Rapids Drive	STH 38	0.19	No
	Local nonarterial	State trunk highway	STH 20	Marquette Avenue	Seventh Street	0.32	Yes

^aThe jurisdictional transfers recommended should all be initiated as soon as possible because the transfers will promote implementation of the recommended plan improvement.

Source: SEWRPC.

of new facilities. Of the 51 miles of proposed improvement projects, 28 miles, or 55 percent, would be on the planned state trunk highway system; 20 miles, or 39 percent, would be on the planned county trunk highway system; and three miles, or 6 percent, would be on the planned local trunk highway system. Of the 34 miles of proposed new arterial facilities, 24 miles, or 71 percent, would be on the state trunk

system; two miles, or 6 percent, on the county trunk system; and eight miles, or 23 percent, on the local arterial system.

Table 14 presents an estimate of the total cost of the preliminary jurisdictional highway system plan for Racine County as amended and taken to public hearing. The estimate of the cost is conservatively high, as it assumes that all

Table 13

**ARTERIAL STREET MILEAGE BY JURISDICTION UNDER THE PRELIMINARY
RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Jurisdiction	Planned Arterial Miles—Year 2000			
	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
City of Burlington	0.00	2.29	7.84	10.13
City of Racine	14.00	13.14	27.59	54.73
Village of Elmwood Park	0.00	0.00	0.73	0.73
Village of North Bay	0.00	0.21	0.00	0.21
Village of Rochester	0.00	1.27	0.33	1.60
Village of Sturtevant	0.13	2.91	0.93	3.97
Village of Union Grove	0.91	0.96	0.00	1.87
Village of Waterford	2.44	0.00	1.31	3.75
Village of Wind Point	0.00	0.00	0.50	0.50
Town of Burlington	15.73	15.87	9.62	41.22
Town of Caledonia	24.67	25.41	30.95	81.03
Town of Dover	7.30	27.83	0.00	35.13
Town of Mt. Pleasant	27.94	18.62	15.97	62.53
Town of Norway	14.13	12.08	1.96	28.17
Town of Raymond	12.72	12.10	0.00	24.82
Town of Rochester	4.04	15.41	0.09	19.54
Town of Waterford	17.23	13.44	0.00	30.67
Town of Yorkville	16.78	18.53	0.00	35.31
Total	158.02	180.07	97.82	435.91

Source: SEWRPC.

facilities that will require only preservation will be resurfaced once by the year 2000. In addition, it is assumed that all improvements on existing and new location will be implemented by the year 2000. The estimated costs are presented by recommended jurisdiction—state, county, and local. The estimated total improvement cost of the preliminary system to the year 2000, including right-of-way acquisition, is \$159 million, including \$83 million for the improvement of state trunk highways, \$49 million for the improvement of county trunk highways, and \$27 million for the improvement of local arterials.

**PUBLIC REACTION TO
PRELIMINARY AMENDED
JURISDICTIONAL HIGHWAY PLAN**

The preliminary version of the new jurisdictional highway system plan for Racine County as approved by the Advisory Committee was presented for public review and comment at public informational meetings and hearings held

on January 17, 1990, at the Police Department Building Courtroom in Burlington Wisconsin; and on January 24, 1990, at the Racine County Highway and Office Building, Ives Grove, Wisconsin. Prior to these hearings, the Commission prepared and distributed SEWRPC Newsletter, Vol. 29, No. 6. The newsletter described the original jurisdictional highway system plan for Racine County and the amendments to the plan proposed on a preliminary basis by the Advisory Committee. The capacity improvements recommended under the proposed new jurisdictional highway system plan were described, including the recommended relative priority of those improvements, as were the proposed jurisdictional transfers. The estimated cost of the new plan was presented, along with a review of potential funding sources. The minutes of the public hearings were published by the Racine County Department of Public Works for distribution to, and review by, the Advisory Committee. The record of the public hearings, including the minutes of the hearings along with attendance records, written comments submitted

Table 14

ESTIMATED COST TO THE YEAR 2000 OF THE PRELIMINARY
AMENDED RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN

	Planned Arterial Mileage—Year 2000			
	State	County	Local	Total
Preservation	105.6	158.2	87.3	351.1
Improvement ^a	28.1	19.8	2.7	50.6
Expansion ^b	24.3	2.1	7.8	34.2
Total	158.0	180.1	97.8	435.9

	Estimated Construction Cost (including right-of-way)			
	State	County	Local	Total
Preservation	\$17,390,000	\$16,770,000	\$12,560,000	\$ 46,720,000
Improvement ^a	40,180,000	29,480,000	2,900,000	72,560,000
Expansion ^b	25,320,000	2,350,000	11,450,000	39,120,000
Total	\$82,890,000	\$48,600,000	\$26,910,000	\$158,400,000

^aWidening to provide additional traffic lanes on existing arterial.

^bConstruction of new arterial facilities.

Source: SEWRPC.

subsequent to the hearing, and pertinent newspaper articles, is maintained in the files of the Racine County Department of Public Works. A total of 127 people attended the Burlington informational meeting and hearing, with 11 people speaking at the hearing; and 155 people attended the Ives Grove informational meeting and hearing, with 28 people speaking at the hearing.

The record of the public hearings indicates that comments were made about only four of the proposals of the preliminary recommended Racine County jurisdictional highway system plan. Comments were made relative to the long-planned Lake Arterial; the long-recommended widening of CTH K between Kraut Road and STH 38; the new proposed realignment of CTH MM and Rapids Drive at STH 38; and the proposed Burlington outer bypass, which was recommended in the original county jurisdictional highway system plan. Comments were made in opposition to the Lake Arterial, with such comments principally being concerned

about the land that may need to be acquired for its construction and the potential environmental impacts on abutting properties, particularly noise and visual impacts on abutting residential properties.

With respect to the realignment of CTH MM and Rapids Drive at STH 38, comments made in opposition principally cited concerns about the property acquisition that would be attendant to this proposal. The high cost of the proposed realignment was also cited, along with the potential environmental impacts of a new crossing of the Root River.

The comments made in opposition to the proposed widening of CTH K between Kraut Road and STH 38 questioned the need for the widening and cited the potential negative impacts of the widening. Concern was particularly expressed about potential property acquisition, traffic and pedestrian safety, and the impacts of the widening on abutting residential properties, particularly noise impacts.

Comments both in support of and in opposition to the proposed Burlington outer bypass were made at the public hearings. Comments made in opposition principally addressed the specific alignment of the bypass as set forth in the preliminary system plan. Concern was expressed over the use of existing CTH J rather than new alignment for the eastern portion of the bypass. Concern was also expressed about the impact that the potential increase in traffic on CTH J would have on abutting residential properties and on farm vehicle use of CTH J. The potential environmental impacts of the southern portion of the bypass, which is proposed to be located on new alignment, were also cited, along with the potential impacts on Mormon Road, which was proposed in the system plan to carry the western portion of the bypass. The specific concern cited with respect to Mormon Road was the historic significance of abutting lands. Other concerns expressed about the bypass included its potential impacts on downtown Burlington. A suggestion was made that the bypass be located to the north of the Burlington area rather than to the south of the area.

ADVISORY COMMITTEE REACTION TO PUBLIC COMMENTS

Based upon review of the record of the public reaction to the preliminary plan, the Advisory Committee, at a meeting on March 22, 1990, took the following actions to produce a final recommended plan:

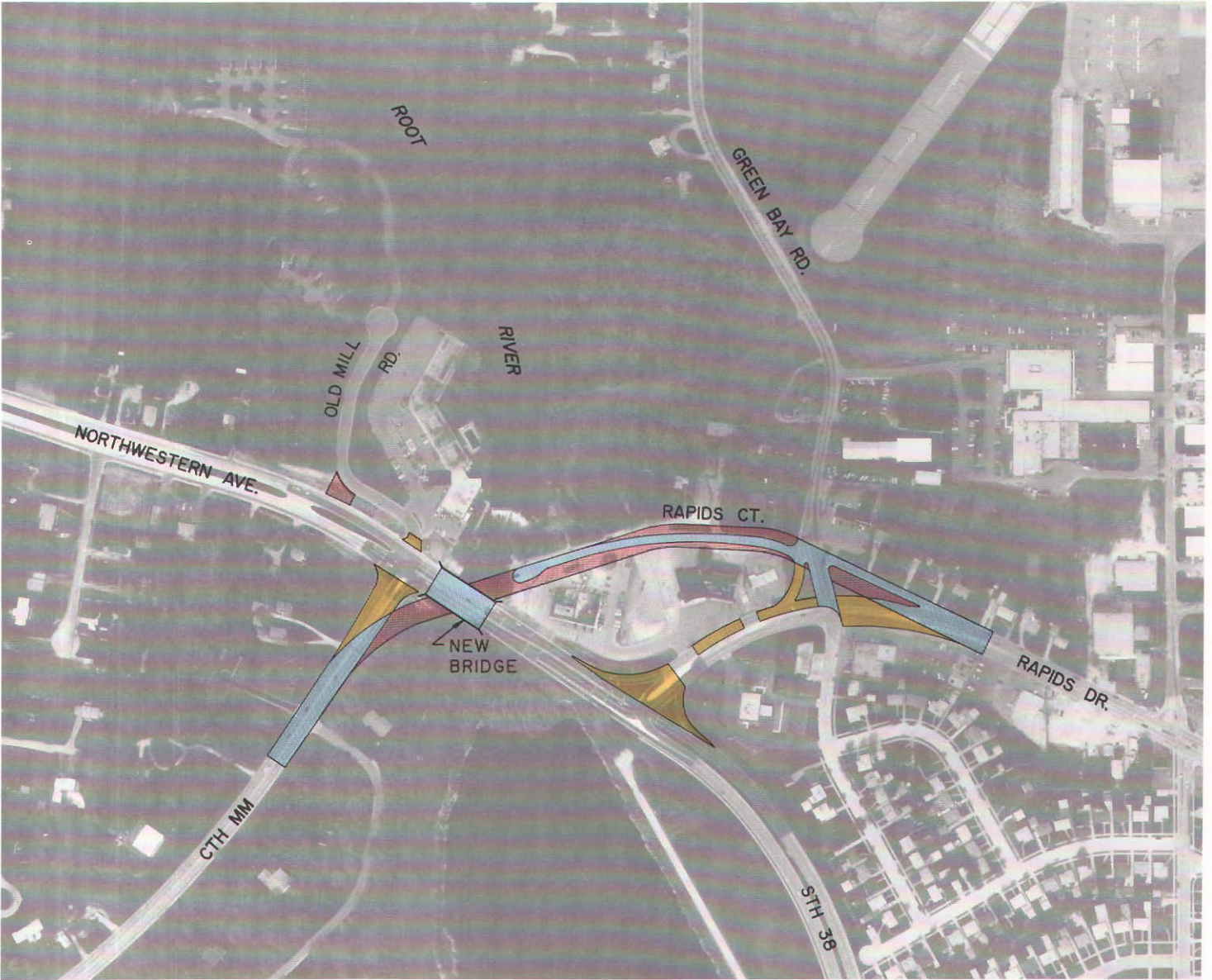
- The long-planned Lake Arterial was retained in the system plan by the unanimous action of the Advisory Committee. The Lake Arterial is essential to providing relief to STH 31, which currently carries traffic volumes which approach its design capacity, and to supporting planned urban development which is already occurring west of STH 31. The concerns expressed at the public hearings about the specific impacts of the Lake Arterial on abutting residential properties; the proper provision of needed farm access across the arterial; the right-of-way that may need to be acquired; and the potential design of the facility—for example, whether it would include berming and landscaping—can only be addressed in a preliminary engineering study. Therefore, the Advisory Committee

also recommended that, as soon as possible, the Wisconsin Department of Transportation conduct a preliminary engineering study of the Lake Arterial in Racine County; and that such study evaluate alternatives and identify a recommended alignment for the Lake Arterial, a proposed roadway cross-section and right-of-way, and proposed berming and landscaping for the arterial. In selecting the recommended alignment for the Lake Arterial, and in the design of berming and landscaping, careful consideration should be given to minimizing the impacts of the arterial on abutting properties.




- The realignment of CTH MM and Rapids Drive in Racine County was recommended to be retained in the system plan by the Advisory Committee with one dissenting vote from the representative of the Town of Mt. Pleasant. The final realignment in the plan was changed somewhat from the realignment as taken to public hearing in order to minimize property acquisition. The final realignment is shown on Map 31; it would not entail the acquisition of any residences or businesses. It would have an estimated cost of \$3.5 million—that is, the incremental cost at the time the existing STH 38 structure would require major reconstruction, which may be expected by the year 2010. This compares to the estimated cost of \$2.8 million for the alternative taken to public hearing. It should be noted that the necessary preliminary engineering study for the proposed realignment should further examine and refine the realignment.
- The widening of CTH K from Kraut Road to STH 38 was retained in the system plan by the unanimous action of the Advisory Committee. This widening is not required under existing traffic volumes, but rather will become necessary to accommodate future traffic volumes, which are forecast to increase as a result of planned land use development. Without such widening, severe traffic congestion may be expected to occur on the facility, and vehicle and pedestrian safety will be compromised. The existing right-of-way of this stretch of CTH K is 120 feet or more; thus, the widening of this stretch may be accomplished within the existing right-of-way.

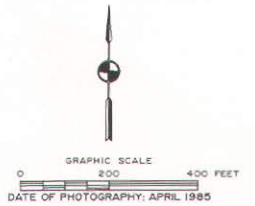
Map 31

FINAL PROPOSED REALIGNMENT OF CTH MM AND RAPIDS DRIVE AT STH 38



LEGEND

-  EXISTING PAVEMENT TO BE REMOVED
-  EXISTING PAVEMENT TO BE RECONSTRUCTED
-  NEW PAVEMENT



Source: SEWRPC.

- The outer Burlington bypass was retained in the system plan by the unanimous action of the Advisory Committee. To address the concerns regarding the specific alignment shown in the system plan, it is recommended that a preliminary engineering study be conducted by the Wisconsin Department of Transportation. That study should evaluate alternatives and identify a recommended alignment. A final alignment for such a facility can only be established upon completion of such a preliminary study. The Advisory Committee also determined that the alignment to be identified in the final system plan should be shown generally on new alignment rather than on existing facilities in order to better indicate that no preferred specific alignment had been identified in the system plan.

Regarding the concerns expressed about the implications of the bypass on downtown Burlington, it was noted that without the bypass, traffic congestion may be expected to increase in the Burlington area over the next two decades. This may be expected to have an adverse effect on the long-term growth potential of the Burlington area, as well as on the viability of businesses in the central portion of the Burlington area, where growing traffic congestion may be expected to be the worst. The resolution of the traffic congestion in the absence of the bypass would entail elimination of substantial current on-street parking and the widening of existing streets, which would entail acquisition and removal of businesses and residences along those streets. The bypass proposed in the plan as taken to public hearing may be anticipated to carry about 10,000 vehicles, including about 1,500 trucks, per average weekday in the plan design year 2010. The proposed bypass may be expected to significantly alleviate traffic congestion on Burlington area streets. The bypass may be expected to remove only through traffic from the local streets, traffic which is highly unlikely to be beneficial to local businesses.

With respect to the suggestion at the public hearings that an alternative bypass to the north would be preferable to the one proposed to the south, it was noted that such an alternative was considered and is docu-

mented in this report. The alternative of a bypass to the north of the City of Burlington was rejected because it may be anticipated to carry only about one-half the traffic, or about 5,000 vehicles per average weekday, of the proposed bypass to the south of the City. The bypass to the north thus would result in substantially less reduction in total vehicle traffic and in truck traffic on City of Burlington streets. As a result, the bypass to the north would not accomplish the objective of a bypass—that is, removing sufficient traffic from Burlington area streets to eliminate existing and avoid future traffic congestion. Moreover, a northern bypass extending from STH 11 on the east of the Burlington area to STH 36 on the west of the Burlington area may be expected to result in as much disruption of existing land uses as the proposed bypass to the south—that is, right-of-way would need to be acquired, environmentally sensitive areas could be disrupted, and significant amounts of traffic would be added to any existing roadways that would be used as part of the alignment.

Also at its meeting of March 22, 1990, and at the request of representatives of the City of Racine on the Advisory Committee, the Advisory Committee took the following actions to produce a final plan:

- The Advisory Committee retained Main Street (STH 32) as a two-way facility, rather than converting it to a one-way pair with Lake Avenue between 7th Street and State Street and carrying the state trunk highway over the one-way pair as now proposed in the plan. Also, as part of this change in the plan:
- Lake Avenue between State Street and 7th Street, State Street between Lake Avenue and Main Street, and 7th Street between Lake Avenue and Main Street would be changed from proposed state trunk highways to proposed local arterials.
- Wisconsin Avenue between 2nd Street and 6th Street, 2nd Street between Lake Avenue and Wisconsin Avenue, and Lake Avenue between State Street and 2nd Street would be added as local arterials.
- The proposed one-way pair of Wisconsin Avenue and Main Street/Lake Avenue

between 16th Street and 6th Street/7th Street would be replaced with a two-way Main Street between 7th Street and 16th Street, and Wisconsin Avenue between 6th Street and 16th Street. As part of this change, the proposed one-way extension of Main Street to Lake Street between 11th Street and 10th Street would be deleted from the plan.

- Main Street between 7th Street and 16th Street, Wisconsin Avenue between 6th Street and 16th Street, and 16th Street between Main Street and STH 31 would be retained as local arterials, rather than being converted to county trunk highways as recommended in the current plan.
- The Advisory Committee retained the existing routing of STH 20 over Washington Avenue between 6th Street and Marquette Avenue rather than rerouting as currently proposed in the plan along 6th Street and Marquette Avenue.
- The Advisory Committee added to the plan as a local arterial Kinzie Avenue between West Boulevard/Osborne Boulevard and STH 31; and in turn deleted from the plan Graceland Boulevard between Lathrop Avenue and STH 31.

FINAL RECOMMENDED JURISDICTIONAL HIGHWAY SYSTEM PLAN

The final, second generation, Racine County jurisdictional highway system plan as recommended by the Technical Coordinating and Advisory Committee on Jurisdictional Highway Planning for Racine County is shown on Map 32. Like the plan taken to public hearing, the final plan envisions a system of arterial facilities in Racine County that can meet existing and probable future traffic demands effectively and efficiently. Also like the preliminary plan, the final plan identifies the location and configuration of the various facilities constituting the arterial system, and recommends the number of traffic lanes required on each segment of the system. The plan also recommends the level of government which should be responsible for the construction, operation, and maintenance of each facility making up the arterial system.

The major capacity improvements recommended under the final plan are shown on Map 33, and are listed in Table 15. The recommended changes in jurisdictional responsibility are shown on Map 34 and are listed in Table 16.

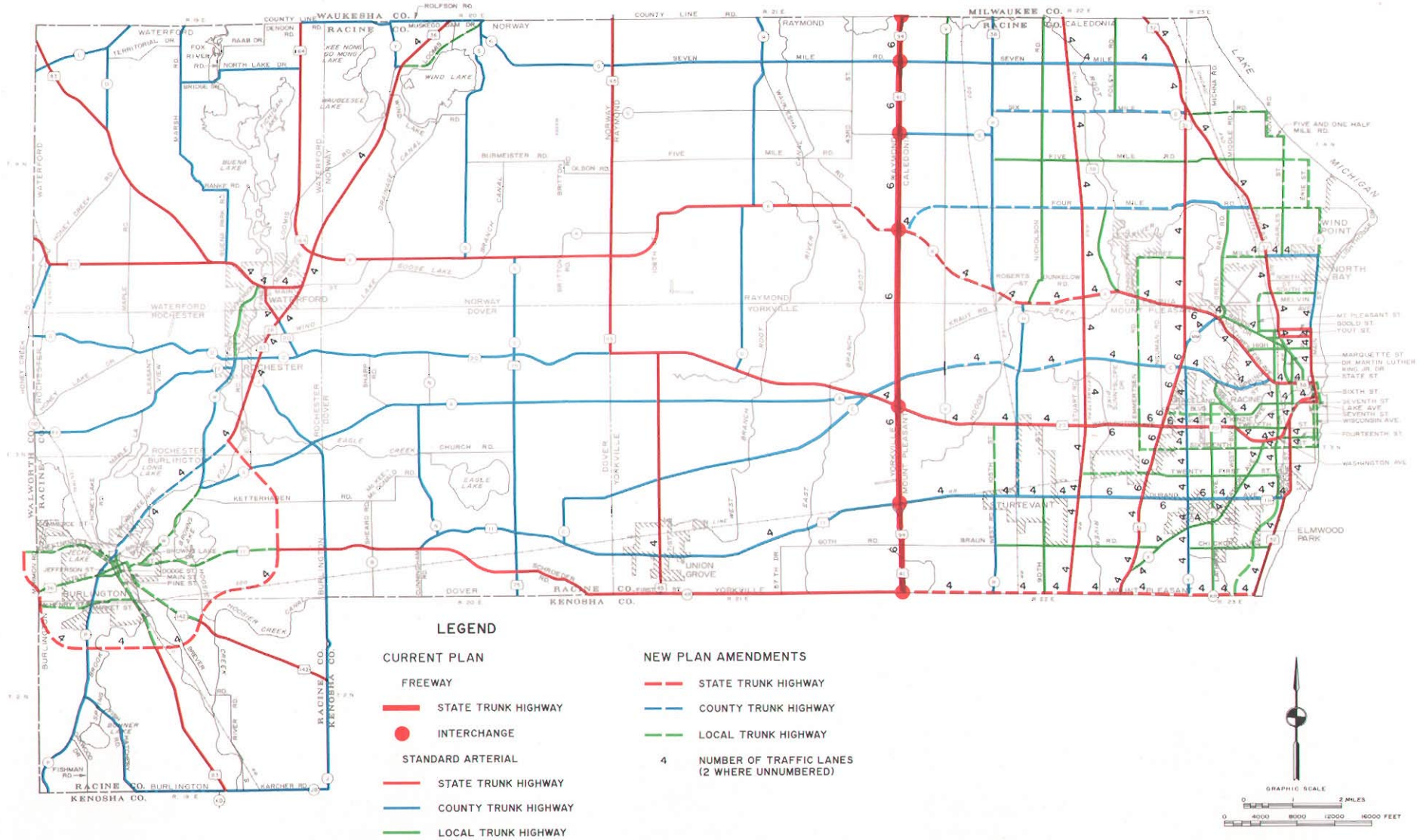
The final recommended arterial system would consist of 438 miles of streets and highways, or about 35 percent of the 1,250-mile total street and highway system expected to serve Racine County by the year 2000. The recommended state trunk highway element of the plan would consist of 156 miles of arterial facilities, or about 36 percent of the 438-mile planned arterial system. The recommended county trunk highway element of the plan would consist of 178 miles of arterial facilities, or about 40 percent of the 438-mile planned arterial system. The recommended local trunk highway element of the plan would consist of 104 miles of arterial facilities, or about 24 percent of the 438-mile planned arterial system. Table 17 presents a summary of the mileage of the arterial street and highway system as envisioned in the final plan by proposed jurisdiction—state, county, and local—within each unit of government within Racine County. It may be noted that, under the plan, the total mileage of state trunk highways in the County would remain at about 156 miles. The total mileage of county trunk highways would increase from 150 to 178 miles, or by about 19 percent.

Of the total 438 miles of the planned arterial system in Racine County, 353 miles, or 81 percent, would require only preservation, or resurfacing and reconstruction; 50 miles, or 11 percent, would require improvement, or widening to provide additional traffic lanes; and 35 miles, or 8 percent, would consist of new facilities. Of the 50 miles of proposed improvement projects, 29 miles, or 58 percent, would be on the planned state trunk highway system; 18 miles, or 36 percent, would be on the planned county trunk highway system; and three miles, or 6 percent, would be on the planned local trunk highway system. Of the 35 miles of proposed new arterial facilities, 25 miles, or 71 percent, would be on the state trunk system; two miles, or 6 percent, on the county trunk system; and eight miles, or 23 percent, on the local arterial system.

About 3.85 million vehicle miles of travel may be expected to occur on an average weekday on all streets and highways within Racine County by

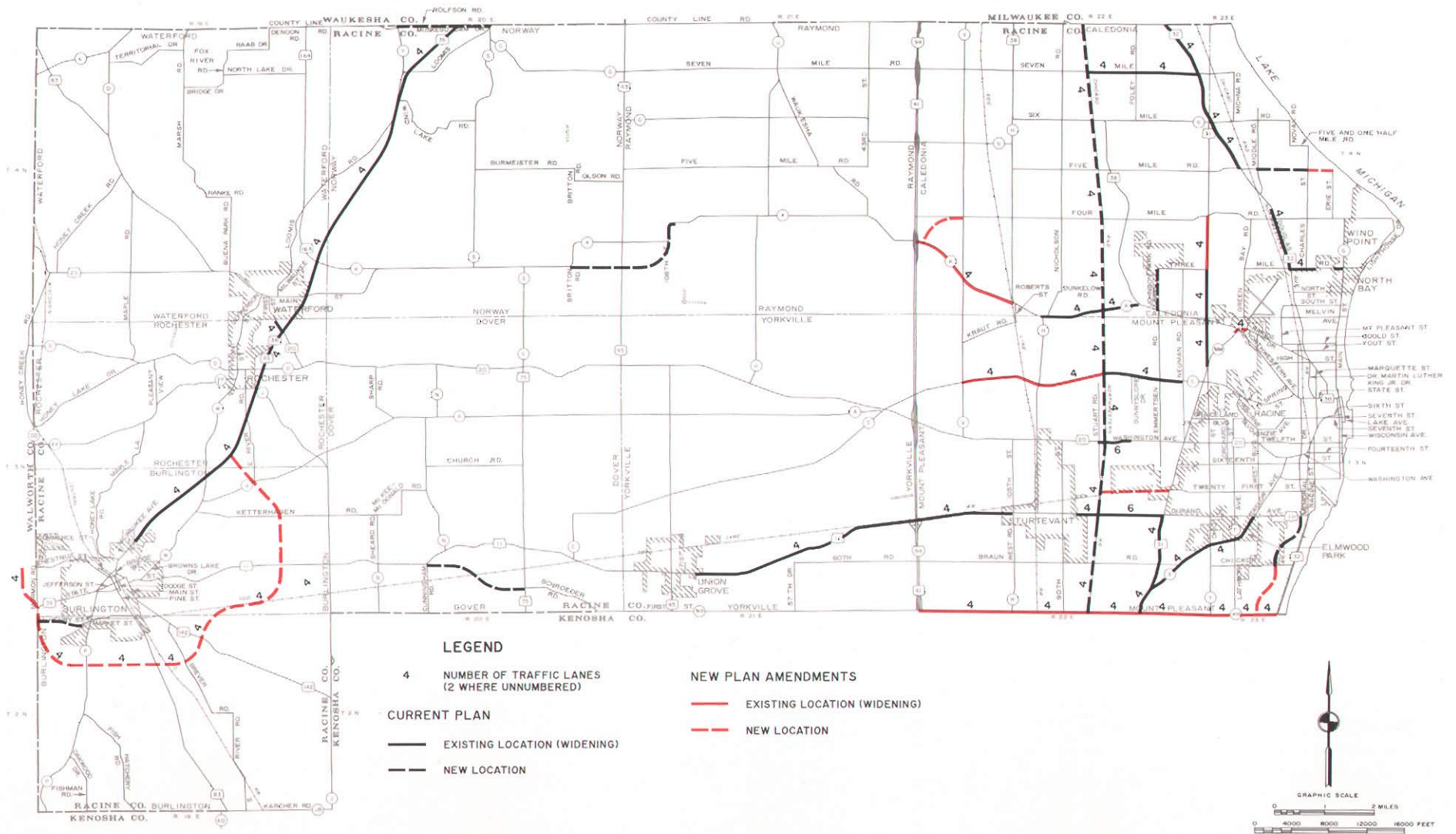
Map 32

FINAL RECOMMENDED RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE FINAL NEW RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Table 15

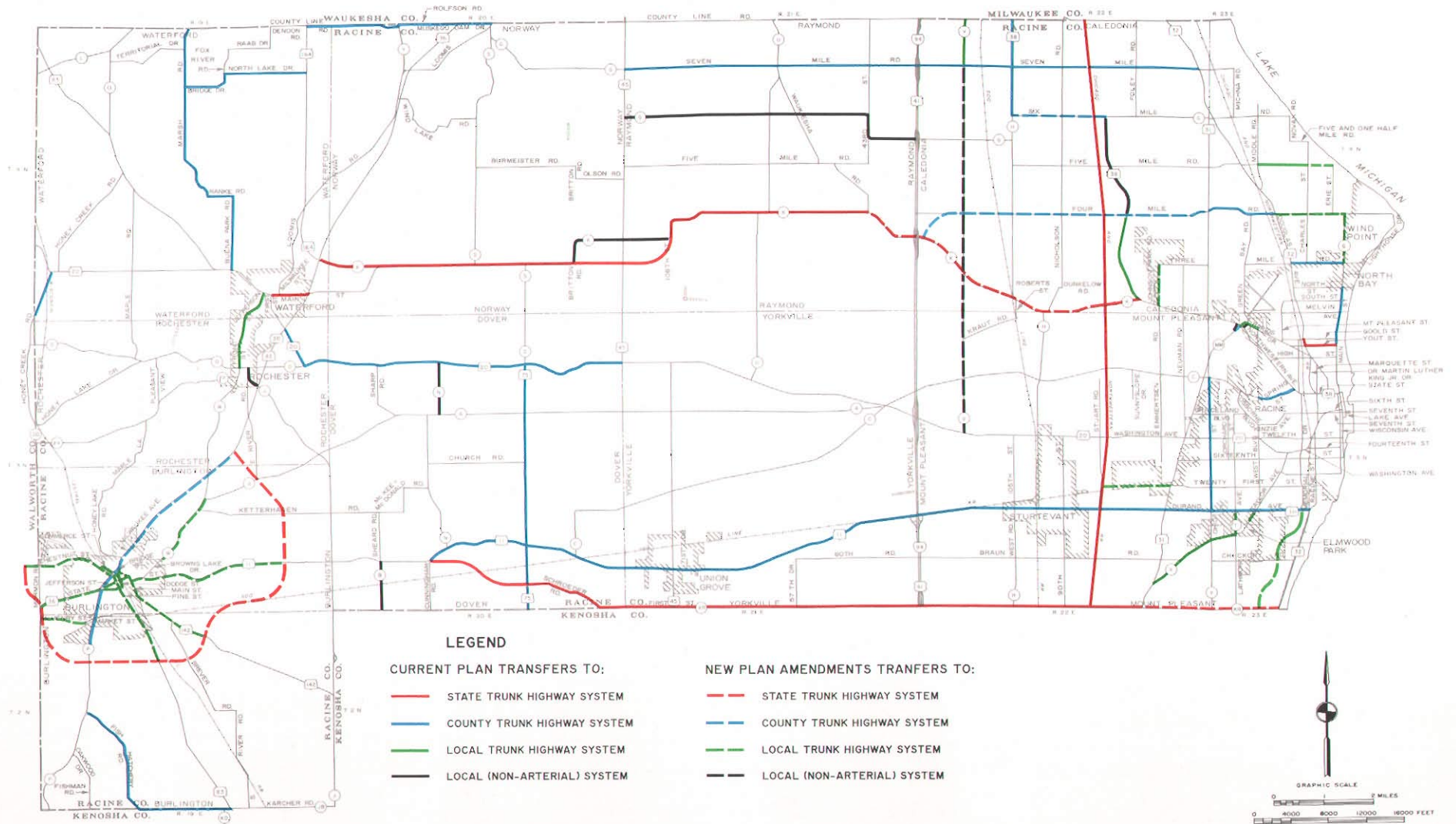
**CAPACITY IMPROVEMENTS RECOMMENDED UNDER THE FINAL
NEW RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Jurisdiction	Facility	Termini	Description	Included in First Generation Plan	Implementation Priority ^a
Existing Location (additional traffic lanes) State	CTH K	Kraut Road to STH 38	Widen from two to four traffic lanes	Yes	Low
	CTH K	IH 94 to CTH H	Widen from two to four traffic lanes	No	Low
	CTH KR	IH 94 to STH 32	Widen from two to four traffic lanes	No	Low
	STH 20	Village of Waterford to STH 36/83	Widen from two to four traffic lanes	Yes	Low
	STH 20	Willow Road to Sunnyslope Drive	Widen from four to six traffic lanes	Yes	High
	STH 31	Three Mile Road to Four Mile Road	Widen from two to four traffic lanes	No	Medium
	STH 31	CTH KR to STH 11	Widen from two to four traffic lanes	Yes	High
	STH 31	CTH MM to Three Mile Road	Widen from two to four traffic lanes	Yes	Medium
	STH 32	Milwaukee County to Five Mile Road	Widen from two to four traffic lanes	Yes	Medium
	STH 32	CTH G to the City of Racine	Widen from two to four traffic lanes	Yes	Medium
	STH 36	Waukesha County to City of Burlington	Widen from two to four traffic lanes	Yes	High
County	Seven Mile Road	Chicago & North Western Railway to STH 32	Widen from two to four traffic lanes	Yes	Low
	CTH C	Airline Road to Newman Road	Widen from two to four traffic lanes	Yes	High
	CTH C	CTH V to Airline Road	Widen from two to four traffic lanes	No	Low
	STH 11	86th Street in the Village of Sturtevant to STH 31	Widen from four to six traffic lanes	Yes	High
	STH 11	71st Street in the Village of Union Grove to 105th Street in the Village of Sturtevant	Widen from two to four traffic lanes	Yes	Low
	Three Mile Road	STH 32 to CTH G	Widen from two to four traffic lanes	Yes	Medium
Local	CTH X and Taylor Avenue	STH 11 to STH 31	Widen from two to four traffic lanes	Yes	Low
New Location (on new alignment) State	Burlington Bypass	STH 36 (Milwaukee Avenue) to STH 11	Construct two lanes on new alignment	No	High
	Burlington Bypass	STH 11 to STH 36 (State Street)	Construct four lanes on new alignment	No	High
	Burlington Bypass	STH 36 to STH 11	Construct two lanes on new alignment	No	High
	CTH K extension	108th Street to Britton Road	Construct two lanes on new alignment	Yes	Medium
	Lake Arterial	Milwaukee County to Kenosha County	Construct four lanes on new alignment	Yes	High
	STH 11 realignment	Cunningham Road to STH 75	Construct two lanes on new alignment	Yes	Low
	Reconstruction of STH 38/CTH MM intersection	CTH MM to Rapids Drive	Construct four lanes on new alignment	No	High
County	Four Mile Road realignment	CTH V to CTH K	Construct two lanes on new alignment	No	Low
	Muskego Dam Drive	CTH Y to CTH G	Construct two lanes on new alignment	Yes	Low
Local	21st Street	Chicago & North Western Railway to STH 31	Construct two lanes on new alignment	No	Medium
	Five Mile Road extension	Charles Street to Erie Street	Construct two lanes on new alignment	No	Low
	Five Mile Road extension	Middle Road to Charles Street	Construct two lanes on new alignment	Yes	Low
	Emmertsen Road	Three Mile Road to STH 38	Construct two lanes on new alignment	Yes	Low
	Market Street	Sheldon Street to Mormon Road	Construct two lanes on new alignment	Yes	Low
	Memorial Drive	STH 11 to Chicory Road	Construct two lanes on new alignment	Yes	High
	Memorial Drive	Chicory Road to CTH KR	Construct two lanes on new alignment	No	High

^aThe proposed implementation priority is dependent upon the need for the improvement to meet current traffic demand; the need for the improvement to meet future traffic demand and the anticipated timing of that demand; the need for the improvement to provide an integrated traffic route; and the potential economic development impacts of the improvement.

Source: SEWRPC.

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY UNDER THE FINAL RECOMMENDED RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN



Source: SEWRPC.

Table 16

CHANGES IN HIGHWAY SYSTEM JURISDICTIONAL RESPONSIBILITY UNDER THE FINAL RECOMMENDED RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN^a

Unit of Government	Jurisdiction		Facility	From	To	Distance (miles)	Included in First Generation Plan
	Planned	Existing					
Town of Burlington	State trunk highway	New facility	Burlington Bypass	Town of Rochester	STH 36	8.66	No
	County trunk highway	Local trunk highway	Fish Hatchery Road	CTH P	Karcher Road	2.49	Yes
	County trunk highway	Local trunk highway	Karcher Road	Fish Hatchery Road	CTH KD	0.88	Yes
	County trunk highway	State trunk highway	STH 36/83	Town of Rochester	City of Burlington	2.15	No
	Local trunk highway	County trunk highway	CTH W	City of Burlington	CTH A	1.56	No
	Local trunk highway	New facility	Market Street	Sheldon Street	Mormon Road	0.90	No
	Local trunk highway	State trunk highway	STH 11	City of Burlington	Bypass route	2.09	No
	Local trunk highway	State trunk highway	STH 11	Walworth County	City of Burlington	0.65	No
	Local trunk highway	State trunk highway	STH 142	City of Burlington	Bypass route	1.77	No
	Local trunk highway	State trunk highway	STH 36	Walworth County	City of Burlington	0.61	No
Town of Caledonia	State trunk highway	County trunk highway	CTH K	Chicago & North Western Railway	STH 38	1.43	Yes
	State trunk highway	County trunk highway	CTH K	IH 94	STH 38	4.73	No
	State trunk highway	New facility	Lake Arterial	Milwaukee County	Town of Mt. Pleasant	6.00	Yes
	County trunk highway	New facility	Four Mile Road realignment	CTH V	CTH K	0.96	No
	County trunk highway	Local trunk highway	Seven Mile Road	Town of Raymond	STH 32	5.77	Yes
	County trunk highway	Local trunk highway	Four Mile Road	STH 32	STH 31	1.43	Yes
	County trunk highway	Local trunk highway	Four Mile Road	CTH V	STH 31	5.05	No
	County trunk highway	State trunk highway	STH 38	Milwaukee County	CTH G	3.90	Yes
	County trunk highway	Local trunk highway	Three Mile Road	STH 32	CTH G	0.33	Yes
	Local trunk highway	New facility	Five Mile Road extension	Middle Road	Five Mile Road	0.74	Yes
	Local trunk highway	New facility	Five Mile Road extension	Charles Street	Erie Street	0.50	No
	Local trunk highway	County trunk highway	CTH G	STH 32	Three Mile Road	1.91	No
	Local trunk highway	County trunk highway	CTH V	Milwaukee County	Seven Mile Road	1.00	Yes
	Local nonarterial	County trunk highway	CTH V	Seven Mile Road	STH 20	5.00	No
	Local nonarterial	New facility	Emmertsen Road	Three Mile Road	STH 38	1.50	No
	Local nonarterial	State trunk highway	STH 38	CTH G	Four Mile Road	2.15	Yes
Local trunk highway	State trunk highway	STH 38	Four Mile Road	CTH K	1.86	Yes	
Town of Dover	State trunk highway	New facility	STH 11 realignment	Cunningham Road	STH 75	2.00	Yes
	State trunk highway	Local trunk highway	Schroeder Road	STH 75	Town of Yorkville	1.87	Yes
	County trunk highway	State trunk highway	STH 11	Cunningham Road	Town of Yorkville	4.23	Yes
	County trunk highway	State trunk highway	STH 20	Town of Rochester	Town of Yorkville	6.13	Yes
	County trunk highway	State trunk highway	STH 75	STH 20	Kenosha County	5.01	Yes
	Local nonarterial	County trunk highway	CTH B	STH 11	Kenosha County	1.00	Yes
	Local nonarterial	County trunk highway	CTH N	STH 20	CTH A	1.00	Yes
Town of Mt. Pleasant	State trunk highway	County trunk highway	CTH K	Kraut Road	Town of Caledonia	0.39	No
	State trunk highway	County trunk highway	CTH KR	IH 94	STH 31	2.28	Yes
	State trunk highway	County trunk highway	CTH KR	STH 31	STH 32	1.39	No
	State trunk highway	New facility	Lake Arterial	Town of Caledonia	CTH KR	6.05	Yes
	County trunk highway	New facility	CTH MM realignment	West of STH 38	STH 38	0.09	No
	County trunk highway	Local trunk highway	Ohio Street	CTH C	City of Racine	0.16	Yes
	County trunk highway	State trunk highway	STH 11	IH 94	Village of Sturtevant	1.72	Yes
	County trunk highway	State trunk highway	STH 11	Village of Sturtevant	City of Racine	2.34	Yes
	Local trunk highway	New facility	21st Street	Lake Arterial	City of Racine	0.21	No
	Local trunk highway	County trunk highway	CTH X	STH 31	CTH T	1.46	Yes
	Local trunk highway	New facility	Memorial Drive	Chicory Road	CTH KR	1.00	No
	Local trunk highway	New facility	Memorial Drive	STH 11	Chicory Road	1.35	Yes
	Local trunk highway	New facility	Rapids Court extension	Rapids Drive	STH 38	0.06	No
	Town of Norway	State trunk highway	County trunk highway	CTH K	Town of Waterford	Britton Road	5.00
State trunk highway		New facility	CTH K extension	Britton Road	USH 45	1.00	Yes
County trunk highway		Local trunk highway	Denoon Road	Town of Waterford	CTH Y	0.70	Yes
County trunk highway		New facility	Muskego Dam Drive	CTH Y	CTH G	0.98	Yes
Local nonarterial		County trunk highway	CTH K	Apple Road	Town of Raymond	1.43	Yes
Town of Raymond	State trunk highway	County trunk highway	CTH K	108th Street	IH 94	5.55	Yes
	State trunk highway	New facility	CTH K extension	108th Street	USH 45	1.30	Yes
	County trunk highway	Local trunk highway	Seven Mile Road	Town of Caledonia	Town of Norway	6.03	Yes
	Local nonarterial	County trunk highway	CTH G	USH 45	IH 94	6.45	Yes
	Local nonarterial	County trunk highway	CTH K	108th Street	Town of Norway	1.00	Yes
Town of Rochester	State trunk highway	New facility	Burlington Bypass	STH 36/83	Town of Burlington	0.44	No
	County trunk highway	State trunk highway	STH 20	STH 36/83	Town of Dover	1.41	Yes
	County trunk highway	State trunk highway	STH 36/83	Burlington Bypass	Town of Burlington	0.51	No
	Local trunk highway	County trunk highway	CTH W	Village of Rochester	Village of Waterford	0.09	Yes

Table 16 (continued)

Unit of Government	Jurisdiction		Facility	From	To	Distance (miles)	Included in First Generation Plan
	Planned	Existing					
Town of Waterford	State trunk highway	County trunk highway	CTH K	STH 36	Town of Norway	0.25	Yes
	County trunk highway	Local trunk highway	Bridge Drive	Marsh Road	Fox River Road	0.85	Yes
	County trunk highway	Local trunk highway	Buena Park Road	Ranke Road	STH 20	1.51	Yes
	County trunk highway	Local trunk highway	Fox River Road	Bridge Drive	North Lake Drive	0.17	Yes
	County trunk highway	Local trunk highway	Honey Creek Road	Walworth County	STH 20	0.98	Yes
	County trunk highway	Local trunk highway	Marsh Road	Waukesha County	Ranke Road	3.74	Yes
	County trunk highway	Local trunk highway	North Lake Drive	Fox River Road	STH 164	1.68	Yes
	County trunk highway	Local trunk highway	Ranke Road	Marsh Road	Buena Park Road	0.51	Yes
	Town of Yorkville	State trunk highway	County trunk highway	CTH KR	USH 45	IH 94	2.50
State trunk highway		Local trunk highway	Schroeder Road	Town of Dover	USH 45	0.49	Yes
County trunk highway		State trunk highway	STH 11	71st Street	IH 94	4.22	Yes
County trunk highway		State trunk highway	STH 11	USH 45	Town of Dover	0.98	Yes
Village of Elmwood Park	Local trunk highway	County trunk highway	CTH T	North corporate limits	South corporate limits	0.33	Yes
Village of Rochester	Local trunk highway	County trunk highway	CTH W (Front Street)	Main Street-CTH D	North corporate limits	0.33	Yes
Village of Sturtevant	County trunk highway	State trunk highway	STH 11	West corporate limits	East corporate limits	1.66	Yes
Village of Union Grove	County trunk highway	State trunk highway	STH 11	East corporate limits	West corporate limits	0.96	Yes
Village of Waterford	State trunk highway	Local trunk highway	Main Street	First Street	East corporate limits	0.68	Yes
	Local trunk highway	County trunk highway	CTH W	Main Street	South corporate limits	1.31	Yes
Village of Wind Point	Local trunk highway	County trunk highway	CTH G	Four Mile Road	Three Mile Road	0.50	No
City of Burlington	County trunk highway	Local trunk highway	McHenry Street	STH 36	South corporate limits	1.06	Yes
	County trunk highway	State trunk highway	STH 36/83	North corporate limits	McHenry Street	1.23	No
	Local trunk highway	State trunk highway	STH 11	East corporate limits	West corporate limits	3.19	No
	Local trunk highway	State trunk highway	STH 142	STH 11	South corporate limits	0.19	No
	Local trunk highway	State trunk highway	STH 36	West corporate limits	McHenry Street	0.81	No
	Local trunk highway	State trunk highway	STH 83	Milwaukee Avenue	South corporate limits	1.25	No
City of Racine	State trunk highway	Local trunk highway	Douglas Avenue	Yout Street	Gould Street	0.13	Yes
	State trunk highway	Local trunk highway	Yout Street	Douglas Avenue	Main Street	0.64	Yes
	County trunk highway	Local trunk highway	Main Street	Gould Street	North corporate limits	1.01	Yes
	County trunk highway	Local trunk highway	Ohio Street	CTH C	STH 11	2.56	Yes
	County trunk highway	State trunk highway	STH 11	West corporate limits	STH 32	1.96	Yes
	County trunk highway	Local trunk highway	Spring Street	CTH C	STH 38	0.75	Yes
	County trunk highway	Local trunk highway	Three Mile Road	STH 32	CTH G	0.74	Yes
	County trunk highway	Local trunk highway	Wisconsin Avenue	Sixteenth Street	Seventh Street	0.92	Yes
	Local trunk highway	New facility	21st Street	West corporate limits	STH 31	1.19	No
	Local trunk highway	County trunk highway	CTH T	STH 11	South corporate limits	0.17	Yes
	Local trunk highway	County trunk highway	CTH X	STH 11	South corporate limits	0.82	Yes
	Local trunk highway	New facility	Rapids Court extension	Rapids Drive	STH 38	0.19	No

^a The jurisdictional transfers recommended should all be initiated as soon as possible because the transfers will promote implementation of the recommended plan improvement.

Source: SEWRPC.

the year 2000. Of this total, 3.64 million vehicle miles of travel, or 94 percent, may be expected to occur on the recommended arterial street system; the remainder on local collector and land access streets. Figures 4 and 5 indicate the portion of the total travel anticipated under the recommended plan expected to be carried on each element of the total street and highway system within Racine County. The recommended state trunk highway system may be expected to carry 2.26 million of the total 3.64 million miles of travel anticipated to occur on the arterial system on an average weekday within Racine County by the year 2000. Thus, approximately 36 percent of the total arterial street and highway mileage may be expected to carry approximately 62 percent of the total arterial travel demand. The recommended county trunk high-

way system may be expected to carry an additional 0.87 million vehicle miles of travel. Thus, an additional 41 percent of the total arterial street and highway mileage may be expected to carry an additional 24 percent of the total arterial travel demand. The remaining 0.51 million vehicle miles of travel, or 14 percent of the total arterial travel, may be expected to be carried on the proposed local arterial system. It should be noted that the nonarterial portion of the total street and highway system in Racine County—the local collector and land access streets—may be expected to carry only about 0.21 million vehicle miles on an average weekday by the year 2000, or about 6 percent of the vehicle miles of travel on the total street and highway system of the County. Thus, the nonarterial street system, representing about

Table 17

**ARTERIAL STREET MILEAGE BY JURISDICTION UNDER THE FINAL
RECOMMENDED RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN**

Jurisdiction	Planned Arterial Miles—Year 2000			
	State Trunk Highway	County Trunk Highway	Local Trunk Highway	Total
City of Burlington	0.00	2.29	7.84	10.13
City of Racine	13.29	8.02	35.28	56.59
Village of Elmwood Park	0.00	0.00	0.73	0.73
Village of North Bay	0.00	0.21	0.00	0.21
Village of Rochester	0.00	1.27	0.33	1.60
Village of Sturtevant	0.13	2.91	0.93	3.97
Village of Union Grove	0.91	0.96	0.00	1.87
Village of Waterford	2.44	0.00	1.31	3.75
Village of Wind Point	0.00	0.00	0.50	0.50
Town of Burlington	16.37	16.94	8.20	41.51
Town of Caledonia	24.67	25.41	30.95	81.03
Town of Dover	6.37	28.76	0.00	35.13
Town of Mt. Pleasant	27.94	18.41	15.96	62.31
Town of Norway	14.13	12.08	1.96	28.17
Town of Raymond	12.72	12.10	0.00	24.82
Town of Rochester	3.58	16.31	0.09	19.98
Town of Waterford	17.23	13.44	0.00	30.67
Town of Yorkville	16.78	18.53	0.00	35.31
Total	156.56	177.64	104.08	438.28

Source: SEWRPC.

65 percent of the mileage of the total street and highway system, may be expected to carry only 6 percent of the total travel demand in the year 2000.

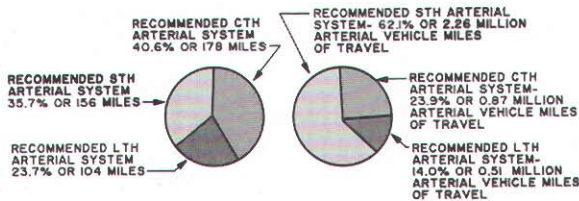
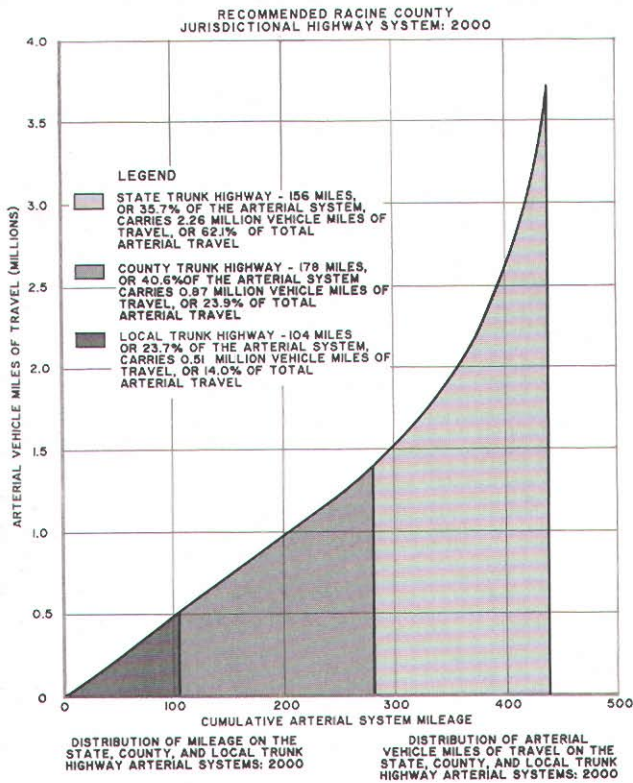
Thus, it may be concluded that the plan properly identifies all the streets and highways in Racine County which are now, and may be expected to be in the year 2000, the principal carriers of heavy traffic. In addition, the plan properly assigns to the State the responsibility for those facilities which may be expected to carry the heaviest volumes of through traffic, and which will entail the most substantial need for, and costs of, improvement. The plan similarly assigns the responsibility for the next most important arterial facilities to the County. Implementation of the plan may be expected to promote a desirable land use pattern in the County; abate traffic congestion; reduce travel time and costs; reduce accident exposure; and help concentrate appropriate governmental

resources and capabilities on corresponding areas of need, thus assuring the most effective use of public resources in the provision of highway transportation.

Table 18 presents an estimate of the total cost of the recommended jurisdictional highway system plan for Racine County. Like the estimate for the preliminary plan, this estimate is conservatively high, as it assumes that all facilities requiring only preservation will be resurfaced once by the year 2000. In addition, it is assumed that all improvements on existing and new location will be implemented by the year 2000. The estimated costs are presented by recommended jurisdiction—state, county, and local. The estimated total cost of the recommended system to the year 2000, including right-of-way acquisition, is \$163 million, including \$89 million for state trunk highways; \$46 million for county trunk highways; and \$28 million for local arterials.

Figure 4

RELATIONSHIP BETWEEN ARTERIAL VEHICLE MILES OF TRAVEL AND ARTERIAL MILEAGE

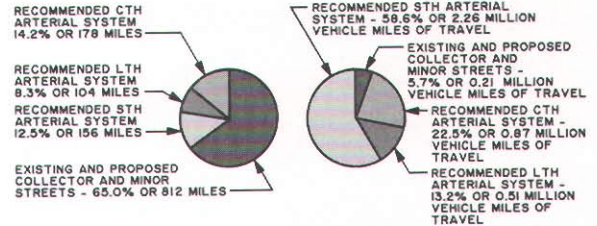
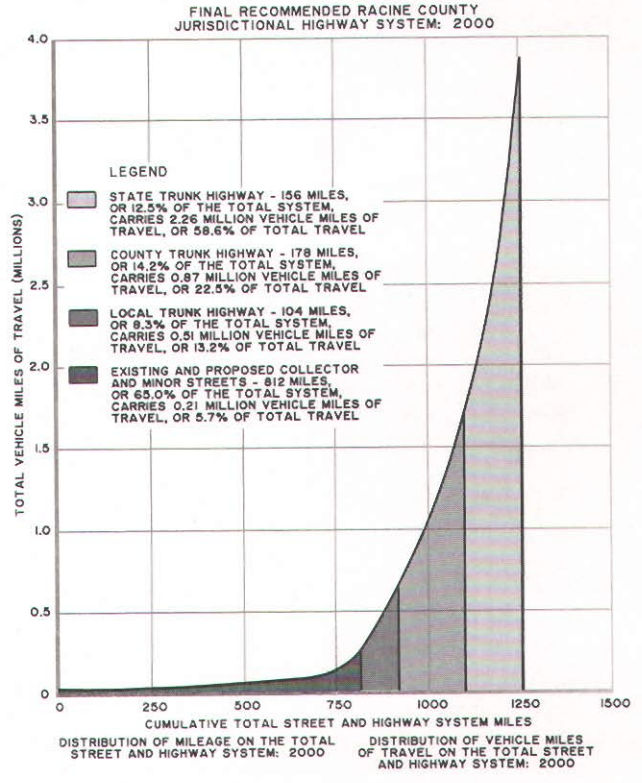


Source: SEWRPC.

Table 19 presents an estimate of the annual cost of implementing the state trunk highway element of the final plan on 10-year and 20-year schedules. The estimated annual cost is \$8.9 million on a 10-year schedule and \$4.4 million on a 20-year schedule. Table 19 also presents an estimate of the funding that may be expected to be available on an average annual basis for the improvement and reconstruction of state trunk highways within Racine County. As the potential funding includes discretionary funding, including Federal Aid Primary funds and state transportation funds, any estimate of future funding is necessarily uncertain. The estimate of \$4.4 million is the average funding provided for

Figure 5

RELATIONSHIP BETWEEN TOTAL VEHICLE MILES OF TRAVEL AND TOTAL MILEAGE



Source: SEWRPC.

state trunk highway improvements in Racine County over the past six years. This funding has ranged from \$1.2 million to \$14.1 million. If it is assumed that the average funding level will remain stable in constant dollars, the estimated state trunk highway funding shortfall would approximate \$4.5 million on a 10-year schedule of completion. There would be no shortfall on a 20-year schedule of completion.

Table 19 also presents an estimate of the annual cost of implementing the county trunk highway element of the plan on 10-year and 20-year schedules. The estimated annual cost is \$4.6 million on a 10-year schedule and \$2.3 million on

Table 18

**ESTIMATED COST TO THE YEAR 2000 OF THE FINAL NEW RACINE
COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN AS AMENDED**

	Planned Arterial Mileage—Year 2000			
	State	County	Local	Total
Preservation	101.7	157.1	93.8	352.6
Improvement ^a	29.4	18.5	2.7	50.6
Expansion ^b	25.5	2.0	7.6	35.1
Total	156.6	177.6	104.1	438.3

	Estimated Construction Cost (including right-of-way)			
	State	County	Local	Total
Preservation	\$17,540,000	\$16,200,000	\$13,840,000	\$ 47,580,000
Improvement ^a	41,650,000	28,000,000	2,900,000	72,550,000
Expansion ^b	29,800,000	2,100,000	11,190,000	43,090,000
Total	\$88,990,000	\$46,300,000	\$27,930,000	\$163,220,000

^aWidening to provide additional traffic lanes on existing arterial.

^bConstruction of new arterial facilities.

Source: SEWRPC.

a 20-year schedule. A potential source of funding other than county and local for the improvement of county arterials in rural areas is the Federal Aid Secondary (FAS) program; and for the improvement of local and county arterials in urban areas, the Federal Aid Urban (FAU) program. Another source of noncounty and nonlocal funding is the state reimbursement of local transportation costs, which currently is established at 30 percent of county transportation costs and 24 percent of city, village, and town transportation costs. For analytical purposes, it has been assumed that the Federal Aid Secondary fund and Federal Aid Urban fund allocation will remain stable in constant dollars at the 1989 level, and that the state reimbursement of local transportation costs will also remain stable at the current percentages. It may thus be estimated that \$1.6 million annually in state and federal aids would be available to the County on a 10-year completion schedule, and \$0.9 million annually on a 20-year completion schedule. Thus, the county funding required

approximates \$3.0 million per year expressed in constant 1989 dollars under a 10-year completion schedule, and \$1.4 million per year under a 20-year completion schedule.

Table 19 also provides an estimate of the total costs by unit of government of the local arterial element of the plan. On a 10-year schedule this would total \$2.8 million per year; and on a 20-year schedule, \$1.4 million per year. The principal sources of nonlocal funding for the local arterials are Federal Aid Urban and Federal Aid Secondary funds, and state reimbursement of local transportation costs. Assuming full use of estimated available federal and state aids, the estimated required local funding is \$1.9 million per year on a 10-year completion schedule and \$0.8 million on a 20-year completion schedule.

The estimated required annual county and local funding for plan implementation may be compared in Table 19 to the estimated average annual expenditures by the local units of govern-

Table 19

ESTIMATED ANNUAL COST AND LOCAL FUNDING REQUIRED BY LEVEL AND UNIT OF GOVERNMENT OF THE FINAL NEW RACINE COUNTY JURISDICTIONAL HIGHWAY SYSTEM PLAN AS AMENDED

Unit of Government	Total Cost of Plan as Amended	Estimated Annual Nonlocal Funding							Estimated Historic Average Annual Arterial Street Construction Expenditures ^c
		Annual Cost		Federal and State Aids ^a	State Aid Payments to Local Government ^b		Estimated Annual Local Funding Required		
		10-Year Schedule	20-Year Schedule		10-Year Schedule	20-Year Schedule	10-Year Schedule	20-Year Schedule	
State	\$ 88,990,000	\$ 8,899,000	\$4,449,500	\$4,390,000	\$ --	\$ --	\$ --	\$ --	\$ --
County	46,320,000	4,632,000	2,316,000	255,600	1,312,900	618,100	3,063,500	1,442,300	230,000
Local									
Town of Burlington	1,950,000 ^d	195,000	97,500	12,300	43,800	20,400	138,900	64,800	0
Town of Caledonia	5,310,000 ^e	531,000	265,500	89,400	106,000	42,300	335,600	133,800	182,400
Town of Dover	0	0	0	0	0	0	0	0	0
Town of Mt. Pleasant	8,960,000 ^e	896,000	448,000	41,600	205,100	97,500	649,300	308,900	175,000
Town of Norway	170,000	17,000	8,500	7,800	2,200	200	7,000	500	46,300
Town of Raymond	0	0	0	0	0	0	0	0	33,100
Town of Rochester	10,000	1,000	500	0	200	100	800	400	0
Town of Waterford	0	0	0	0	0	0	0	0	0
Town of Yorkville	0	0	0	0	0	0	0	0	0
Village of									
Elmwood Park	230,000	23,000	11,500	2,900	4,800	2,100	15,300	6,500	12,400
Village of North Bay	0	0	0	0	0	0	0	0	0
Village of Rochester	30,000	3,000	1,500	0	700	400	2,300	1,100	0
Village of Sturtevant	80,000	8,000	4,000	3,700	1,000	100	3,300	200	13,700
Village of Union Grove	0	0	0	0	0	0	0	0	0
Village of Waterford	110,000	11,000	5,500	0	2,600	1,300	8,400	4,200	13,100
Village of Wind Point	40,000	4,000	2,000	2,000	500	0	1,500	0	0
City of Burlington	1,730,000	173,000	86,500	31,400	34,000	13,200	107,600	41,900	38,000
City of Racine	9,310,000	931,000	465,500	141,100	189,600	77,900	600,300	246,500	298,000
Subtotal	\$ 27,930,000	\$ 2,793,000	\$1,396,500	\$ 332,200	\$ 590,500	\$255,500	\$1,870,300	\$ 808,800	\$ 812,000
Total	\$163,240,000	\$16,324,000	\$8,162,000	\$4,977,800	\$1,903,400	\$873,600	\$4,933,800	\$2,251,100	\$1,042,000

^aFederal and state aids to the County assume an estimated \$4,000 per mile per year of Federal Aid Urban (FAU) funds for county trunk highways in urban areas; and \$115,000 per year in Federal Aid Secondary (FAS) funds for county trunk highways in rural areas. Federal and state aids to local governments assume \$3,000 per mile per year for local arterial highways. Federal and state aids assumed for state trunk highways are based on the average annual expenditures over the years 1983 to 1988.

^bAnnual state aid payments assumed are based on current reimbursement formula of 30 percent of local transportation costs for counties, and 24 percent of local transportation costs for cities, villages, and towns.

^cEstimated average local expenditures for 1986 and 1987. Reduced by 30 percent for County and 24 percent for cities, villages, and towns to reflect state aid payment.

^dThese costs represent an investment in local trunk highways needed to serve urban growth in the Burlington area that is anticipated to occur outside the current corporate limits of the City of Burlington.

^eThese costs represent an investment in local trunk highways needed to serve urban growth in the Racine area that is anticipated to occur outside the current corporate limits of the City of Racine.

Source: SEWRPC.

ment in Racine County for arterial street and highway construction in the years 1986 and 1987. These estimates are based on expenditures as reported by the local units of government to the Wisconsin Department of Revenue, and on the implementation of arterial street and highway projects as documented for the annual element of the 1986 and 1987 transportation improvement programs. The estimated county and local funding required for plan implementation on a 10-year completion schedule of \$4.9 million annually substantially exceeds the estimated annual expenditures of \$1.0 million for

arterial street and highway construction by county and local governments in Racine County. The required county and local funding on a 20-year schedule of \$2.2 million annually also exceeds the reported historic annual expenditure of \$1.0 million for road construction by county and local governments.

Potential funding sources to meet the estimated county and local costs of implementing the jurisdictional highway system plan have been identified. One funding alternative is the property tax, which funds a substantial share of the

county and local arterial highway construction costs in Racine County. As already noted, the estimated county and local cost of plan implementation on a 10-year completion schedule is \$4.9 million, and on a 20-year completion schedule, \$2.2 million, expressed in constant 1989 dollars. The equalized property value in Racine County in 1988 was approximately \$4.2 billion, not including the value of property in tax incremental financing districts. To fully fund local and county costs of the plan—discounting for the purpose of this analysis costs currently incurred—on a 10-year completion schedule would require a property tax levy for arterial highway improvements of about \$1.18 per \$1,000 for the 10-year completion schedule, and \$0.54 per \$1,000 for the 20-year completion schedule. This may be compared to the total county property tax rate in Racine County in 1988 of \$4.81 per \$1,000, and the range of city, village, and town property tax rates of \$0.00 to \$12.61 per \$1,000.

An alternative funding source would be a “wheel tax,” which represents an addition to the state vehicle registration fee of \$25. State law permits such an additional fee to be levied by counties, and the fees collected may be shared by counties with local municipalities. In addition, cities, villages, and towns are permitted to levy an additional “wheel tax” fee. The revenue that could be collected in Racine County through an additional automobile and truck registration fee of \$20—a fee which would result in a total \$45 state and county vehicle registration fee—would be about \$2.4 million in 1989 dollars for the current level of 118,000 automobile and light truck registrations in Racine County, and about \$2.8 million in the year 2000 based upon a year 2000 forecast of 138,000 vehicle registrations. A \$20 wheel tax would generate over 100 percent of the total county and local funding necessary to implement the plan on a 20-year schedule of completion, and about 53 percent of the total funding necessary to implement the plan on a 10-year schedule of completion.

Another alternative, but one which would require legislation, is an add-on motor fuel tax at the county level. The 1989 state motor fuel tax is \$0.209 per gallon, and the federal motor fuel tax is \$0.09 per gallon. An add-on motor fuel tax of \$0.05 could be expected to generate approximately \$4.0 million annually within Racine County under current conditions, and \$4.6

million annually in the year 2000 expressed in constant 1989 dollars.⁸ This would represent about 88 percent of the total annual local and county funds necessary to implement the plan on a 10-year completion schedule and over 100 percent of such funds necessary to implement the plan on a 20-year completion schedule.

Another alternative would be the use of a sales tax to fund capital expenditures within Racine County, including those associated with highways. State law permits counties to levy a 0.5 percent sales tax. Walworth County is the only county in southeastern Wisconsin which levies such a tax at this time, although a number of other counties in southeastern Wisconsin have considered such a tax. Such a tax may be expected to generate approximately \$5.7 million per year in Racine County, expressed in constant 1989 dollars. Assuming that such sales tax revenues would increase with the number of households residing in the County, the revenue in the year 2000 may be expected to approximate \$6.3 million expressed in constant 1989 dollars. This would represent over 100 percent of the required county and local funding of capital expenditures for highways on a 10-year schedule of completion, and over 200 percent on a 20-year schedule of completion.

Another funding alternative would be the use of special assessments or impact fees. Impact fees are fees required from new land development that results in the need for additional transportation improvements. Generally, such fees can be imposed only if the improvement needed is directly a result of the new development. A similar type of funding source is a special assessment. Under this type of funding, those who benefit from an improvement can be assessed a portion of the improvement costs based upon the benefit received. Such a funding mechanism generally works well on local land access and collector streets, as each abutting

⁸*This estimate assumes that the taxes generated statewide by an add-on motor fuel tax will be distributed to local governments based on vehicle registration within their jurisdiction. Vehicle registrations may be expected to represent a reasonable estimate of the relative amount of motor fuel used and purchased within a subarea of the State.*

property owner receives a similar benefit of access to the street system. However, for arterial streets, special assessments are difficult to apply, because much of the benefit accrues primarily to through traffic and not to abutting property owners. To estimate the funding that may be developed from impact fees or special assessments would entail detailed land use and traffic studies on a corridor, subarea, or facility basis. It should be noted that such fees and assessments may have implications for the promotion of economic development, as they would entail fees required of new development. Such fees are typically applied only in those parts of the nation in which the entire metropolitan area is experiencing rapid growth.

The analysis of plan costs and potential funding by level of government indicates, for the 10-year schedule for plan implementation, potential funding shortfalls at the state, county, and municipal levels. However, potential funding appears to be adequate for a 20-year schedule of plan implementation. Therefore, timely implementation of the plan may require that Racine County and its municipalities work to reach a consensus with respect to a specific funding mechanism to meet the growing highway needs in the County; and that the State, in view of the potential local funding shortfall and its local cost-sharing policy, assist in the resolution of the local highway funding problem.

PLAN IMPLEMENTATION

Recommended plan actions are listed below by level of government concerned.

Federal Level

U. S. Department of Transportation, Federal Highway Administration: It is recommended that the U. S. Department of Transportation, Federal Highway Administration:

1. Acknowledge the recommended amended jurisdictional highway system plan for Racine County, and utilize the plan as a guide in the review of requests for realignment of the various federal aid systems and in the administration and granting of federal aids for highway improvement within the County.
2. Cooperate in, and approve, the adjustment of the federal aid systems in order to implement the recommended amended jurisdictional highway system plan.

State Level

Wisconsin Department of Transportation: It is recommended that the Wisconsin Department of Transportation:

1. Endorse the recommended jurisdictional highway system plan and integrate the plan into the state long-range highway system plan, including the addition to the state trunk highway system of the Lake Arterial and Burlington Bypass.
2. Seek, in cooperation with the Racine County Board and appropriate local officials, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems, as recommended in the jurisdictional highway system plan and listed in Table 16.
3. Proceed with right-of-way acquisition and facility construction to implement the recommended jurisdictional highway system plan, including the improvements listed in Table 15.
4. Seek, in cooperation with the Racine County Board and appropriate local officials, the realignment of the federal aid systems—specifically, the designation of planned state trunk highway routes as Federal Aid Primary routes; the designation of planned county and local arterial routes in urban areas as Federal Aid Urban routes; and the designation of planned county arterial routes in rural areas as Federal Aid Secondary routes.

Regional Level

Southeastern Wisconsin Regional Planning Commission: It is recommended that the Southeastern Wisconsin Regional Planning Commission act to formally adopt the recommended jurisdictional highway system plan as an integral part of the master plan for the Region, constituting an amendment to the regional transportation plan and to the Racine County jurisdictional highway system plan.

County Level

Racine County Board: It is recommended that the Racine County Board, upon recommendation of the Racine County Highway Committee:

1. Adopt the recommended jurisdictional highway system plan as a guide to highway facility development within the County.

2. Seek, in cooperation with the Wisconsin Department of Transportation and local units of government, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems, as recommended in the jurisdictional highway system plan and listed in Table 16.
3. Proceed with right-of-way acquisition and facility construction as necessary to implement the recommended jurisdictional highway system plan, including the improvements listed in Table 15.
4. Seek, in cooperation with the Wisconsin Department of Transportation and appropriate local officials, the realignment of the federal aid systems.
5. Establish, with the approval of the municipalities as they are affected, a modified "official" map, pursuant to Section 80.64 of the Wisconsin Statutes, identifying the location and necessary right-of-way of all planned state and county trunk highways.
6. By resolution, ask the Wisconsin Department of Transportation to place the Lake Arterial and Burlington Bypass on the official state trunk highway system; identify the extensions as candidate major projects; and enumerate, schedule, and fund the projects for construction.
3. The city common councils, village boards, and town boards within Racine County should proceed with right-of-way acquisition and facility construction to implement the recommended jurisdictional highway system plan, including the improvements listed in Table 15.
4. The city common councils, village boards, and town boards within Racine County should seek, in cooperation with the Racine County Board and the Wisconsin Department of Transportation, the implementation of the jurisdictional transfers with respect to the state, county, and local trunk systems as recommended in the jurisdictional highway system plan and listed in Table 16.
5. The city common councils, village boards, and town boards within Racine County should seek, in cooperation with the Racine County Board and the Wisconsin Department of Transportation, the realignment of the federal aid systems.
6. The city councils, village boards, and town boards should, by resolution, ask the Wisconsin Department of Transportation to place the Lake Arterial and Burlington Bypass on the official state trunk highway system; identify the improvements as candidate major projects; and enumerate, schedule, and fund the projects for construction.

Local Level

1. The city common councils, village boards, and town boards within Racine County should act to adopt the recommended jurisdictional highway system plan as a guide to highway system development within their areas of jurisdiction. It is further suggested that the respective local planning commissions adopt and integrate the recommended jurisdictional highway system plan into the local master plans and certify such adoption to their local governing body.
2. The city common councils, village boards, and town boards within Racine County should act to approve a county official map prepared in conformance with the recommended jurisdictional highway system plan, and establish local official maps including the state, county, and local trunk highway facilities.

SUMMARY

Adoption and implementation of the Racine County jurisdictional highway system plan recommended in this report would provide the County with an integrated highway transportation system which will effectively serve the existing, and promote a desirable future, land use pattern, meet the anticipated future travel demand at an adequate level of service; abate traffic congestion; reduce travel time and costs between component parts of the County and the Region; and reduce accident exposure. It would serve to concentrate appropriate resources and capabilities on corresponding areas of need, assuring a more effective use of the total public resources in the provision of highway transportation, and provide a sound basis for the establishment of long-range fiscal policies and for the systematic programming of arterial street and

highway improvements within Racine County. It would also provide a basis for the more efficient planning and design of the total arterial street and highway system, for the efficient multi-jurisdictional management of that system, and for the attainment of the intergovernmental

coordination necessary to the cooperative development of the system. Finally, it should provide a more equitable distribution of highway improvement, maintenance, and operating costs among the various levels and agencies of government concerned.

APPENDICES

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Appendix A

STUDY OF THE EXTENSION OF THREE MILE ROAD BETWEEN GREEN BAY ROAD AND STH 31

INTRODUCTION

On May 2, 1988, Racine County asked the Commission to conduct, as part of the jurisdictional highway planning program for Racine County, a special study of alternative alignments for the extension of Three Mile Road between Green Bay Road and STH 31, and of the potential costs and benefits of such an extension. This appendix presents the findings of the requested study.

The first section of the report describes the alternative roadway extension alignments evaluated. The second section identifies the traffic impacts of each of the alternative alignments. The third section describes the benefits and costs of each alternative alignment. The possible benefits include the potential to provide for more direct routing of travel, the potential to reduce turning movements, and the potential to remove traffic from other segments of the arterial street system. The estimated costs of the roadway extension include construction costs and the cost of required right-of-way, and costs in terms of disruption of adjacent land use. Environmental impacts are assessed to the extent practicable at the system planning level.

The extension of Three Mile Road between Green Bay Road and STH 31 was first recommended in a City of Racine master plan of major streets and highways adopted by the City Plan Commission in 1958. In addition, the original regional transportation plan for southeastern Wisconsin—prepared in 1966 and documented in SEWRPC Planning Report No. 7, The Land Use-Transportation Study (three volumes)—reaffirmed the need for this recommended new facility, as did subsequent, more detailed plans prepared in 1972 and documented in SEWRPC Planning Reports No. 14, A Comprehensive Plan for the Racine Urban Planning District, and No. 22, A Jurisdictional Highway System Plan for Racine County. The original regional transportation plan, and the two more-detailed plans referenced above, recommended the development of a loop freeway extending from IH 94 just north of the Racine-Kenosha County line easterly to the abandoned Chicago North Shore and Milwaukee Electric Railway right-of-way; then northerly along the abandoned railway right-of-way to Four Mile Road; and then westerly to IH 94. The loop freeway was intended to provide good access to and from IH 94 for the City of Racine. One of the interchanges along the proposed loop freeway was proposed to be located on Three Mile Road west of STH 31. The extension of Three Mile Road between Green Bay Road and STH 31 was essential to provide access to the interchange. The loop freeway has since been eliminated from state, regional and county highway system plans owing to opposition by concerned citizens and public officials. However, the extension of Three Mile Road has remained on the adopted system plans to provide a direct connection from the northeastern portion of the Racine urbanized area to STH 31, a major north-south arterial.

Another reason why the extension of Three Mile Road has remained on adopted plans is because it is essential to providing the one-mile spacing of east-west arterial streets that is desirable in areas devoted to medium-density urban land development, as exists in and is planned for this portion of the Racine urbanized area. Three Mile Road is an important element of the grid of north-south and east-west arterial facilities required in the portion of Racine County lying east of STH 31, including the east-west arterial facilities of STH 11, 16th Street, STH 20, Spring Street, STH 38-Rapids Drive, Three Mile Road, and Four Mile Road. The need for a similar grid of arterial facilities in the portion of Racine County west of STH 31, and east of IH 94, was recently reaffirmed and is documented in SEWRPC Memorandum Report No. 9, An Arterial Highway System Plan for Eastern Racine County. In addition, the extension of Three Mile Road has long been planned, as it would serve to reduce the spacing between crossings of the Root River in the northern portion of the Racine urbanized area from about 2.4 miles to 1.2 miles.

The Three Mile Road extension has also remained on adopted long-range plans as it would improve access to IH 94. The extension of Three Mile Road would permit IH 94-oriented traffic to travel directly to and from STH 31 as part of a route to and from IH 94. Also, the Three Mile Road extension may be expected to relieve traffic congestion on other routes to and from IH 94 by removing traffic from those routes.

ALTERNATIVE ROADWAY EXTENSION ALIGNMENTS

Five alternative alignments for the potential extension of Three Mile Road between Green Bay Road and STH 31 were evaluated. These are shown on Map A-1. Alternative 1 would directly extend Three Mile Road from Green Bay Road to STH 31 along U. S. Public Land Survey section lines through the property of St. Monica's Senior Citizens Home and the S. C. Johnson & Son, Inc., Armstrong Park. This alternative would be aligned with the segment of Three Mile Road existing west of STH 31 and extending to Johnson Park Road. This alignment would be about 0.75 mile long, and would include a bridge having a span of about 225 feet over the channel of the Root River. The bridge, as proposed by the Racine County Public Works Department, would entail placing the roadway extension on fill for about 265 feet of the 490-foot width of the floodway of the Root River at this location.

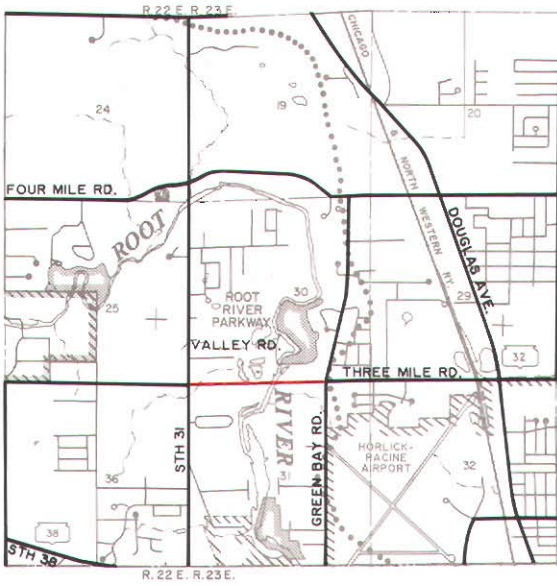
Alternative 2 would, like Alternative 1, extend directly through the St. Monica's Senior Citizens Home property, but then curve to the north to a location generally north of Armstrong Park. The new roadway would be aligned on and replace Valley Road, a land access street that currently provides access to adjacent residential land uses. This alignment would be about 0.80 mile long, and would include a bridge having a span of about 225 feet over the channel of the Root River. Similar to Alternative 1, the roadway would be placed on fill for about 350 feet of the 575-foot width of the floodway of the Root River at this location. An option under this alternative would be to provide a transition roadway approximately 0.30 mile in length connecting the proposed new segment of Three Mile Road to the existing segment of Three Mile Road west of STH 31 which extends to Johnson Park Road.

Alternative 3 would, like Alternative 1, also extend Three Mile Road directly through the St. Monica's Senior Citizens Home property, and, like Alternative 2, would then curve to the north to cross the Root River. The easternmost portion of the segment of this alternative alignment located west of the Root River would be aligned along Valley Road north of the ponds in an abandoned quarry. However, west of the ponds in the abandoned quarry, the roadway extension would be located within the northern portion of Armstrong Park. Valley Road, the land access street serving the residences located to the north of the park, would remain a land access street. This alignment would be about 0.80 mile long, and would include a bridge having a span of about 225 feet over the channel of the Root River. The roadway would be placed on fill for about 350 feet of the 575-foot width of the floodway of the Root River at this location. An option under this alternative would be the construction of a transition roadway approximately 0.30 mile in length connecting the proposed new segment of Three Mile Road to the existing segment of Three Mile Road west of STH 31 which extends to Johnson Park Road.

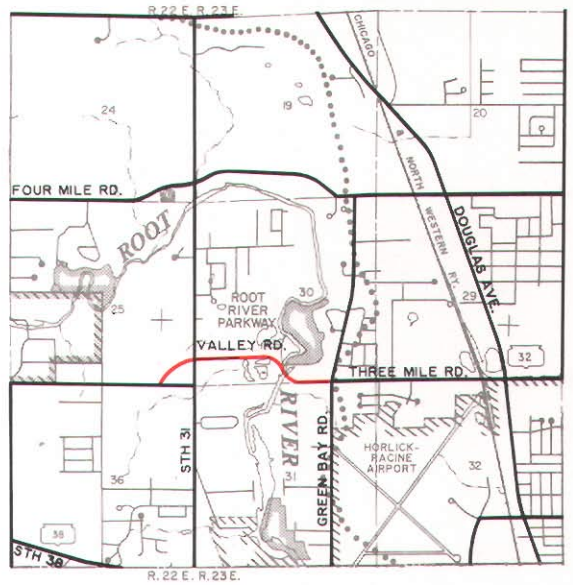
Alternative 4 would, like Alternatives 1, 2, and 3, extend Three Mile Road directly through the St. Monica's Senior Citizens Home property, and, like Alternatives 2 and 3, would then curve to the north across the Root River. The easternmost portion of this segment of this alternative alignment located west of the Root River would, like Alternatives 2 and 3, be aligned along Valley Road north of the ponds in the abandoned quarry. However, west of the ponds, the roadway would be located well within Armstrong Park, generally lying along the edge of a wooded area, and would return to the alignment of a directly extended Three Mile Road to connect with the existing segment of Three Mile Road west of STH 31. No transition roadway would therefore be necessary between the new segment of Three Mile Road and the existing segment of Three Mile Road west of STH 31. This alignment would be about 0.86 mile long, and would include a bridge having a span of about 225 feet over the channel of the Root River. The roadway would be placed on fill for about 350 feet of the 575-foot width of the floodway of the Root River at this location.

ALTERNATIVE ALIGNMENTS FOR THE EXTENSION OF
THREE MILE ROAD BETWEEN GREEN BAY ROAD AND STH 31

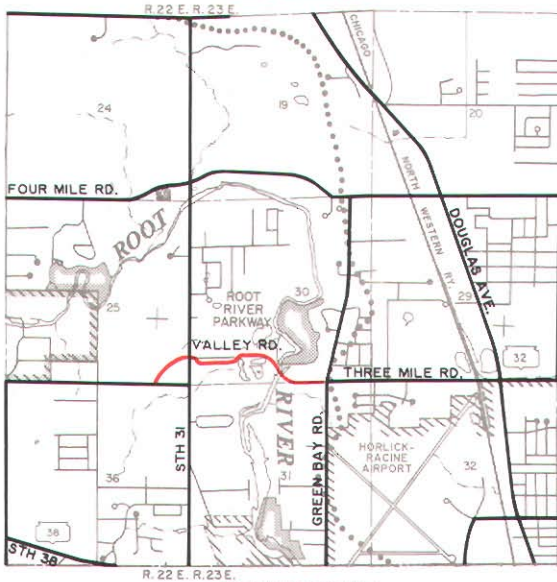
ALTERNATIVE 1



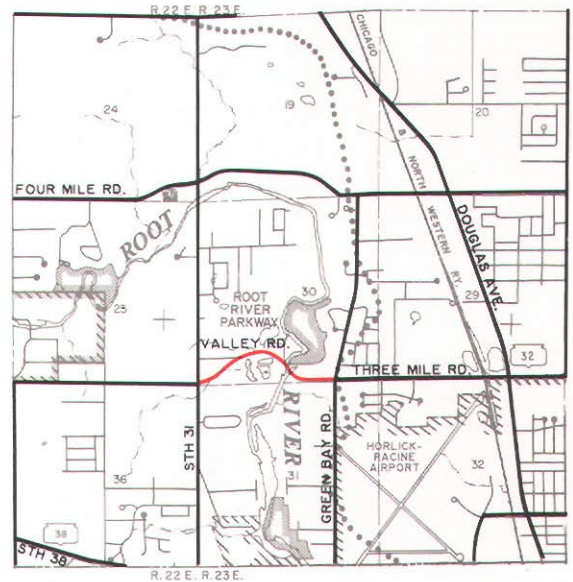
ALTERNATIVE 2



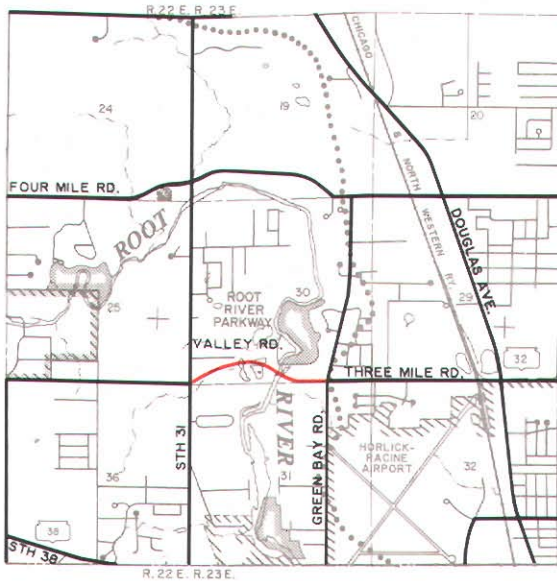
ALTERNATIVE 3





ALTERNATIVE 4

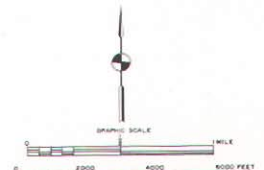


ALTERNATIVE 5



LEGEND

-  EXISTING AND PLANNED ARTERIAL STREET AND HIGHWAY SYSTEM
-  ALTERNATIVE THREE MILE ROAD EXTENSION



Source: SEWRPC.

Alternative 5 would, like the other four alternatives, extend Three Mile Road directly through the St. Monica's Senior Citizens Home property, and, like Alternatives 2 through 4, curve to the north across the Root River. However, the easternmost portion of the segment of this alternative alignment located west of the Root River would be located within the ponds in the abandoned quarry along an alignment which would entail the least amount of filling and structure within the ponds—which are within the floodplain of the Root River—and would have the least impact on residences along Valley Road. West of the ponds in the abandoned quarry, the roadway extension would, like Alternative 4, be located generally along the boundary of the wooded area within Armstrong Park and return to the alignment of a directly extended Three Mile Road to connect with an existing segment of Three Mile Road located west of STH 31. This alignment would be about 0.80 mile long, and would include a bridge having a span of about 225 feet over the channel of the Root River. The roadway would be placed on fill for about 325 feet of the 550-foot width of the floodway of the Root River at this location.

Another alternative considered, but rejected, was the construction of a new east-west arterial roadway using existing public roadways, private drives, and new alignment between Green Bay Road and STH 31 south of Three Mile Road. This alternative was rejected because it would not connect to any other east-west arterial facility, and thus its potential for use would be minimal. Also, the construction cost of this alternative would be greater than for any of the other alternatives considered owing to the longer structure that would be required to carry the facility over the wider Root River channel at this location.

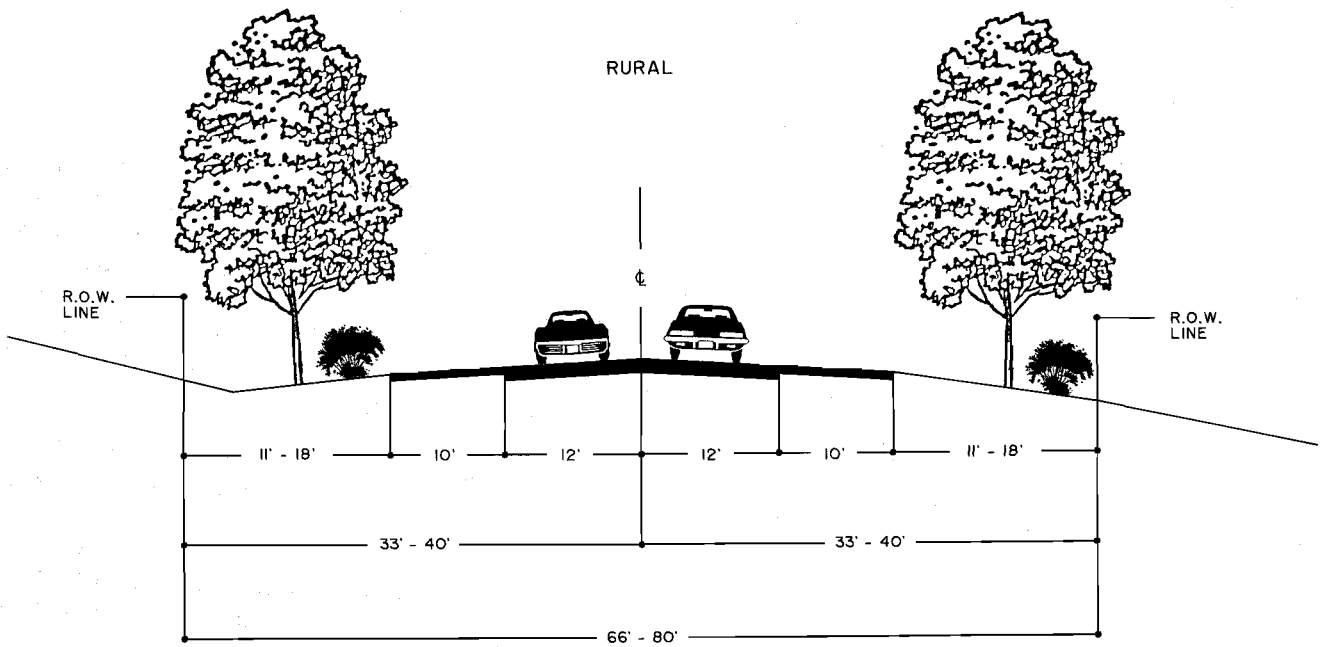
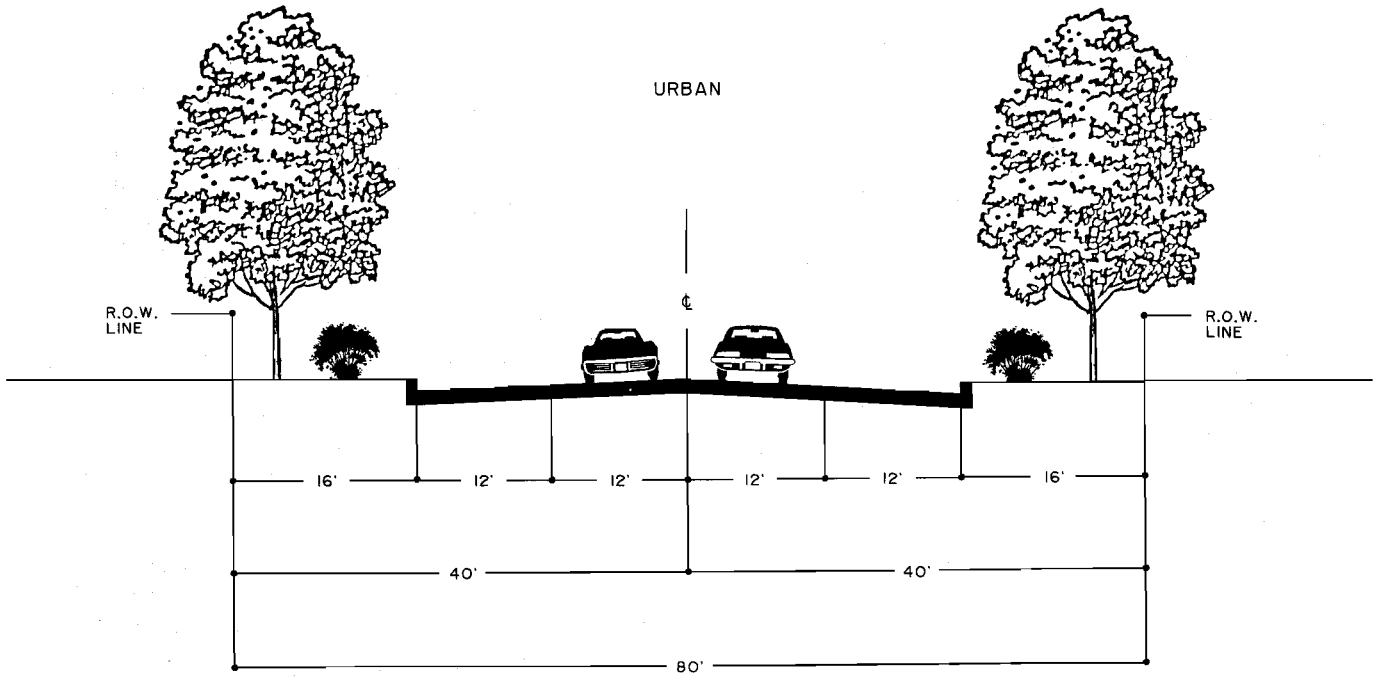
Another alternative considered was the “no build” alternative. Under this alternative, traffic would continue to use Four Mile Road, the next east-west arterial to the north; Rapids Drive/STH 38/CTH MM, the next east-west arterial to the south; and routes using Three Mile Road, Green Bay Road, and the two above-referenced existing east-west arterials. The benefits and costs of the three alternative extensions of Three Mile Road were measured relative to the no build alternative. Four Mile Road was not assumed to require improvement to serve as this “alternative” to the extension of Three Mile Road, as the widening of Four Mile Road would not be expected to attract significant additional traffic to that road. The segment of Rapids Drive between Green Bay Road and STH 38, and of STH 38 between Rapids Drive and CTH MM, would warrant improvement through widening and potential realignment, specifically in the short-range future without the Three Mile Road extension, and in the long-range future with the Three Mile Road extension.

It may be noted in this respect that an improved Four Mile Road has been suggested as an alternative to the extension of Three Mile Road. However, an improved Four Mile Road cannot—like the proposed Three Mile Road extension—provide direct access from Three Mile Road to STH 31, or improved access to IH 94, or provide a better spacing of arterial facilities or Root River crossings. Nor may an improved Four Mile Road be expected to provide the same relief of traffic on other routes. However, under the no build alternative, traffic would use existing routes, including Four Mile Road. Furthermore, the traffic that would be carried by the extension of Three Mile Road would not be expected to be carried solely by Four Mile Road, but rather by both Four Mile Road and Rapids Drive/STH 38/CTH MM, as well as by connecting segments of Green Bay Road and Three Mile Road.

A right-of-way width for the new Three Mile Road of 80 feet is proposed, except for those portions of the roadway located on Valley Road under Alternative 2. The existing 66-foot right-of-way of Valley Road would be retained for that portion of the roadway. The new roadway would generally have a rural cross-section with two 12-foot-wide traffic lanes, two 10-foot-wide gravel shoulders, and open ditches. At locations where a rural cross-section could not be provided, a 48-foot-wide roadway with an urban cross-section would be provided having two 12-foot-wide traffic lanes, two 12-foot-wide parking and/or distress lanes, and curb, gutter, and storm sewer. These roadway cross-sections are shown in Figure A-1. Each of the alternatives would include a pedestrian underpass to link the two parts of St. Monica's Senior Citizens Home divided by the roadway extension. Alternative 1 would include landscaped berms on the south side of the segment of the roadway extension through Armstrong Park. Also, based upon the anticipated traffic volumes, the intersection of Three Mile Road and STH 31 may be expected to be traffic signal controlled, and the intersection of Three Mile Road

Figure A-1

PROPOSED CROSS-SECTION FOR THREE MILE ROAD EXTENSION



Source: SEWRPC.

and Green Bay Road to be stop sign controlled. The Three Mile Road extension would likely be posted for a speed limit of 35 miles per hour, and would permit use by truck traffic, resulting in a reduction of truck traffic on other streets.

TRAFFIC IMPACTS OF PROPOSED THREE MILE ROAD EXTENSION

Under Alternative 1, the proposed extension of Three Mile Road may be expected to carry approximately 4,500 vehicles per average weekday under current land use and transportation system conditions, and approximately 6,500 vehicles per average weekday under design year 2000 conditions. Under Alternatives 2 and 3, the extension may be expected to carry approximately 3,500 vehicles per average weekday under current land use and transportation system conditions, and 5,000 vehicles per average weekday under design year 2000 conditions. Under Alternative 4, the extension may be expected to carry approximately 3,600 vehicles per average weekday under current conditions, and 5,300 vehicles per average weekday under design year 2000 conditions. Under Alternative 5, the extension may be expected to carry approximately 4,000 vehicles per average weekday under current land use and transportation system conditions, and 5,800 vehicles per average weekday under design year 2000 conditions. These traffic volume estimates are based upon traffic simulation modeling which reflects the number, purpose, and origins and destinations of all trips made within Racine County—and, indeed, within all of southeastern Wisconsin—under existing and planned land use conditions; and the characteristics of the existing and planned arterial street and highway systems, including travel times and distances on all segments of these systems.

The areas that would be primarily served by the extension of Three Mile Road are shown on Map A-2. This map identifies the location of the trip ends—origins and destinations—of the vehicle trips that may be expected to use the proposed extension of Three Mile Road. The principal traffic expected to be carried by an extended Three Mile Road is that between the Village of Wind Point/Village of North Bay/northern City of Racine/northeast Town of Caledonia area and locations along STH 31 south of Three Mile Road. Thus, an extension of Three Mile Road may be expected to principally improve access to STH 31 and to IH 94.

Map A-3 identifies the arterial facilities from which the proposed Three Mile Road extension may be expected to attract traffic, and the amount of traffic which may be expected to be removed from other arterials by the proposed extension.

BENEFITS AND COSTS OF PROPOSED THREE MILE ROAD EXTENSION

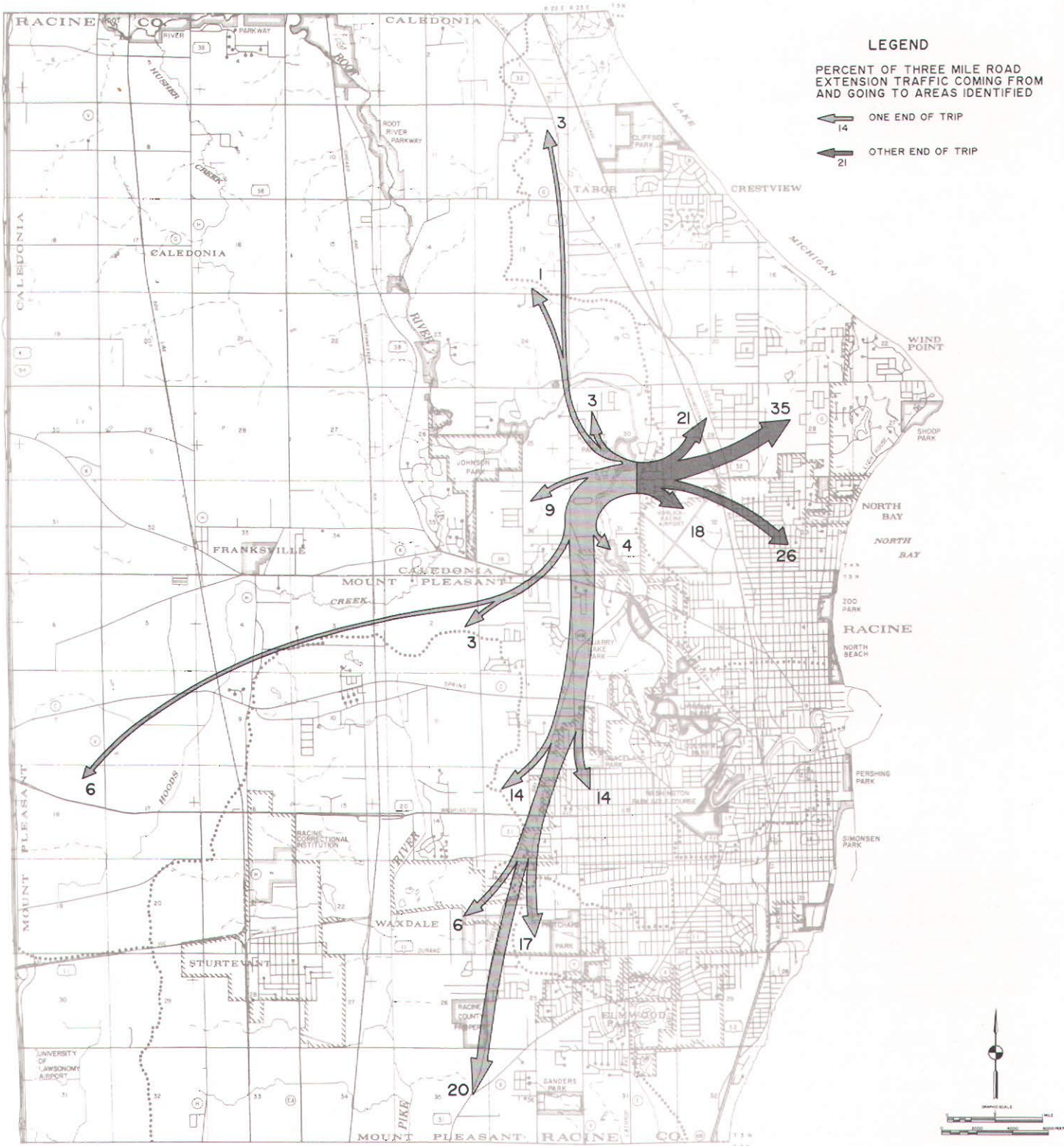
The benefits and costs of the extension of Three Mile Road between Green Bay Road and STH 31, expressed relative to the no build alternative, are presented in Table A-1. The benefits of the proposed roadway extension include its potential to provide a more direct route of travel; to reduce the number of major intersections which must be traversed; to reduce the number of turning movements which must be made by traffic in eastern Racine County; and to provide additional transportation system capacity which will permit a reduction in traffic and traffic congestion and delays on the arterial street system. The implications of these benefits in terms of reduced travel time, vehicle operating costs, and traffic accidents have been estimated and converted to a monetary value.

Alternative 1 may be expected to provide a higher level of benefits than the other alternatives, as more traffic may be expected to be served—and served more directly—by Alternative 1. On an average weekday in the year 2000, Alternative 1 may be expected to provide a reduction in travel indirection of 1,100 vehicle miles, a reduction of 8,200 movements through major intersections, and a reduction of 9,700 turning movements. The annual monetary value of these traffic benefits in terms of vehicle operating costs, travel time, and accident savings may be expected to approximate \$169,000 in the year 2000.

In addition, the direct extension of Three Mile Road under Alternative 1 will provide a reduction in traffic on a number of arterial street segments, as shown in Table A-1, including a reduction in traffic

Map A-2

LOCATION OF ORIGINS AND DESTINATIONS OF VEHICLE TRIPS USING THE THREE MILE ROAD EXTENSION^a

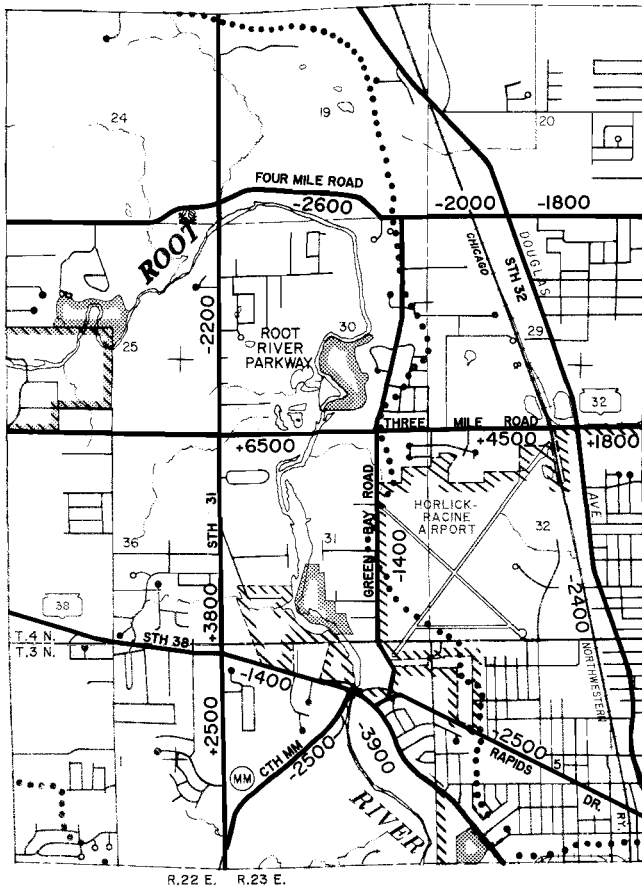


^aThe Three Mile Road extension vehicle traffic origin and destination data shown on this map are based upon implementation of Alternative 1, which would directly extend Three Mile Road between Green Bay Road and STH 31.

Source: SEWRPC.

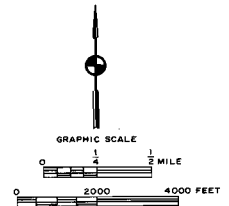
Map A-3

FORECAST YEAR 2000 AVERAGE WEEKDAY TRAFFIC THAT WOULD BE REMOVED FROM, OR ADDED TO, ARTERIAL FACILITIES UPON THE IMPLEMENTATION OF THE PROPOSED THREE MILE ROAD EXTENSION^a



LEGEND

-2200 CHANGE IN AVERAGE WEEKDAY TRAFFIC VOLUME



^aThe information provided in this map indicating the forecast average weekday traffic which the extension of Three Mile Road would be expected to remove from, or add to, arterial facilities in eastern Racine County is based upon the implementation of Alternative 1, which would directly extend Three Mile Road between Green Bay Road and STH 31.

Source: SEWRPC.

on Four Mile Road between STH 32 and STH 31 of 2,000 to 2,600 vehicles per average weekday in the year 2000; a reduction of 2,500 to 3,900 vehicles per average weekday on Rapids Drive between Yout Street and STH 38; and a reduction of 2,500 vehicles per average weekday on CTH MM.

On an average weekday in the year 2000, Alternatives 2 and 3 may be expected to provide a reduction in travel indirection of 600 vehicle miles; a reduction of 7,100 movements through major intersections; and a reduction of 8,100 turning movements. The annual monetary value of these traffic benefits in the year 2000 in terms of vehicle operating costs, travel time, and travel accidents is an estimated \$93,000. Under Alternatives 2 and 3, a reduction of 1,400 to 1,600 vehicles per average weekday may be expected on Four Mile Road between STH 32 and STH 31; a reduction of 2,000 to 3,400 vehicles per average weekday may be expected on Rapids Drive between Yout Street and STH 31; and a reduction of 2,000 vehicles per average weekday may be expected on CTH MM. In general, the benefits of Alternatives 2 and 3 would be approximately 40 to 45 percent less than the benefits to be received under Alternative 1.

On an average weekday in the year 2000, Alternative 4 may be expected to provide a reduction in travel indirection of 500 vehicle miles; a reduction of 7,100 movements through major intersections; and a reduction of 8,100 turning movements. The annual monetary value of these traffic benefits in the year 2000 in terms of vehicle operating costs, travel time, and travel accidents is an estimated \$81,000. Under Alternative 4, a reduction of 1,500 to 1,900 vehicles per average weekday may be expected on Four Mile Road between STH 32 and STH 31; a reduction of 2,000 to 3,400 vehicles per average weekday may be expected on Rapids Drive between Yout Street and STH 31; and a reduction of 2,000 vehicles per average weekday may be expected on CTH MM. In general, the benefits of Alternative 4 would be similar to those of Alternatives 2 and 3, and would be 50 to 55 percent less than the benefits to be received under Alternative 1.

On an average weekday in the year 2000, Alternative 5 may be expected to provide a reduction in travel indirection of 800 vehicle miles; a reduction of 7,600 movements through major intersections; and a reduction of 8,100 turning movements. The annual monetary value of these traffic benefits in

the year 2000 in terms of vehicle operating costs, travel time, and travel accidents is an estimated \$126,000. Under Alternative 5, a reduction of 2,000 to 2,400 vehicles per average weekday may be expected on Four Mile Road between STH 32 and STH 31; a reduction of 2,000 to 3,400 vehicles per average weekday may be expected on Rapids Drive between Yout Street and STH 31; and a reduction of 2,000 vehicles per average weekday may be expected on CTH MM. In general, the benefits of Alternative 5 would be about 35 percent greater than those of Alternatives 2, 3, and 4, and approximately 25 percent less than those of Alternative 1.

In summary, the benefits of the extension of Three Mile Road include the resultant provision of an appropriate spacing of arterial streets and Root River crossings; the provision of more direct routing to STH 31 and IH 94; the provision of a more efficient transportation system with reductions in travel indirection and distance, intersections traversed, and turning movements, and therefore reductions in vehicle operating cost, travel time, and traffic accidents; and reductions in traffic on selected existing east-west and north-south arterial facilities. The anticipated reductions in traffic and attendant traffic congestion and delay, particularly on the segment of STH 38 between CTH MM and Rapids Drive, and on Rapids Drive between STH 38 and Green Bay Road, may be expected to reduce the short-range need to realign and widen these roadway segments and their attendant intersections. By removing substantial traffic from Four Mile Road, the proposed extension of Three Mile Road may also be expected to eliminate the need for improvements of Four Mile Road. The estimated construction cost of realigning and widening STH 38 between CTH MM and Rapids Drive, and Rapids Drive between STH 38 and Green Bay Road, is \$3 million. The estimated construction cost attendant to improving the alignment and cross-section of Four Mile Road between STH 32 and STH 31 is \$2 million.

The estimated costs of the extension of Three Mile Road between Green Bay Road and STH 31 are also presented in Table A-1. These costs include the construction costs of the roadway extension and of the right-of-way that must be acquired for the roadway extension and its impacts on affected property, and costs in terms of the disruption of the proposed roadway extension on existing adjacent land uses. The construction cost of Alternative 1, which would extend Three Mile Road directly between Green Bay Road and STH 31, is an estimated \$1.8 million and includes construction and engineering costs of over \$1.7 million and right-of-way costs of \$30,000, but does not include the costs of appropriate legal arrangements, or of easements that may need to be acquired from properties upstream of the proposed structure carrying Three Mile Road over the Root River.¹ The estimated

¹Cost estimates of the roadway extension were prepared assuming that the structure required over the Root River would partially be built on fill placed within the Root River floodway. Under Alternative 1, the structure would have a length of 225 feet, as proposed by the Racine County Public Works Department, and would entail the filling of 265 feet of the 490-foot width of floodway. This design may be expected to raise the regulatory flood profile upstream of the bridge and require either appropriate legal arrangements or the acquisition of easements, at an unknown cost. Under Alternatives 2, 3, and 4, the estimated length of structure was 225 feet, which would require filling 350 feet of the 575-foot width of the floodway, including an area of backwater within the floodway. Either appropriate legal arrangements would be required, or easements would need to be acquired from affected property owners at an unknown cost. Under Alternative 5, the estimated length of structure was 225 feet, which would require filling 325 feet of the 550-foot width of the floodway. Either appropriate legal arrangements would be required, or easements would need to be acquired from affected property owners at an unknown cost. The construction of a structure under Alternative 1—which would have a length equal to the floodway width and not entail any filling of the floodway—may be expected to increase the cost of Alternative 1 by \$0.9 million—from \$1.8 million to \$2.7 million. The construction of a structure under Alternatives 2, 3, and 4—which would have a length equal to the floodway width—would increase the cost of these alternatives by approximately \$1.3 million—from \$2.3 million to \$3.6 million under Alternative 2; from \$2.4 million to \$3.7 million under Alternative 3; and from \$2.1 million to \$3.4 million under Alternative 4. The construction of a structure under Alternative 5—which would have a length equal to the floodway width—would increase its cost by about \$1.1 million—from \$2.0 million to \$3.1 million.

Table A-1

COMPARISON OF BENEFITS AND COSTS OF EXTENSION OF THREE MILE ROAD BETWEEN GREEN BAY ROAD AND STH 31 RELATIVE TO THE NO BUILD ALTERNATIVE

Benefits and Costs	Alternative Alignments				
	Alternative 1 Direct Alignment Between Green Bay Road and STH 31	Alternative 2 Direct Alignment Between Green Bay Road and Root River and Along Valley Road Between Root River and STH 31 (includes transition roadway to Three Mile Road west of STH 31)	Alternative 3 Direct Alignment Between Green Bay Road and Root River and South of Valley Road Between Root River and STH 31 (includes transition roadway to Three Mile Road west of STH 31)	Alternative 4 Direct Alignment Between Green Bay Road and Root River and Along Valley Road and Within Armstrong Park Between Root River and STH 31	Alternative 5 Direct Alignment Between Green Bay Road and Root River and Within Northern Portion of Armstrong Park Between Root River and STH 31
Benefits					
Reduction in Travel Indirection (vehicle miles per average weekday—year 2000)	1,100	600	600	500	800
Reduction in Number of Major Intersections Traversed (per average weekday— year 2000)	8,200	7,100	7,100	7,100	7,600
Reduction in Number of Turning Movements (per average weekday—year 2000)	9,700	8,100	8,100	8,100	8,100
Annual Monetary Value of Traffic Benefits (year 2000)					
Vehicle Operating Cost Savings	\$ 79,000	\$44,000	\$44,000	\$38,000	\$ 59,000
Travel Time Savings	77,000	42,000	42,000	37,000	58,000
Travel Accident Savings	13,000	7,000	7,000	6,000	9,000
Total	\$169,000	\$93,000	\$93,000	\$81,000	\$126,000
Traffic Volume Changes on Selected Streets with Extension of Three Mile Road (vehicles per average weekday)					
Street Segment					
Rapids Drive Between Yout Street and STH 38 ^a	-2,500 to -3,900	-2,000 to -3,400	-2,000 to -3,400	-2,000 to -3,400	-2,000 to -3,400
STH 38 Between Rapids Drive and CTH MM ^b	-3,900	-3,400	-3,400	-3,400	-3,400
CTH MM Between STH 38 and STH 31 ^c	-2,500	-2,000	-2,000	-2,000	-2,000
Four Mile Road Between STH 32 and STH 31 ^d	-2,000 to -2,600	-1,400 to 1,800	-1,400 to -1,600	-1,500 to -1,900	-2,000 to -2,400
Three Mile Road Between STH 32 and Green Bay Road ^e	4,500	3,400	3,400	3,500	4,000
Costs					
Construction Cost Including Right-of-Way and Engineering	\$1.8 million ^g	\$2.3 million ^h	\$2.4 million ⁱ	\$2.1 million ^j	\$2.0 million ^k
Right-of-Way Required	80-foot-wide right-of-way, 3,750 feet in length 1,400 feet of right-of-way through Senior Citizens Home property 2,350 feet of right-of-way through Armstrong Park	80-foot-wide right-of-way 4,530 feet in length, including transi- tion roadway west of STH 31 (also, existing 66-foot-wide right-of-way of Valley Drive would be used for 1,250 feet) 1,630 feet of right-of-way through Senior Citizens Home property 1,200 feet of right-of-way through residential lands north of Armstrong Park 1,700 feet of right-of-way for transition roadway through agricultural lands and resi- dential lands west of STH 31	80-foot-wide right-of-way 5,890 feet in length including transi- tion roadway west of STH 31 1,630 feet of right-of-way through Senior Citizens Home property 1,500 feet of right-of-way through residential lands north of Armstrong Park 1,060 feet of right-of-way within Armstrong Park 1,700 feet of right-of-way for transition roadway through agricultural lands and resi- dential lands west of STH 31	80-foot-wide right-of-way 4,315 feet in length 1,630 feet of right-of-way through Senior Citizens Home property 1,200 feet of right-of-way through residential lands north of Armstrong Park 1,485 feet of right-of-way through Armstrong Park	80-foot-wide right-of-way 4,025 feet in length 1,220 feet of right-of-way through Senior Citizens Home property 170 feet of right-of-way through residential lands east of Armstrong Park 2,635 feet of right-of-way within Armstrong Park

Table A-1 (continued)

Benefits and Costs	Alternative Alignments				
	Alternative 1 Direct Alignment Between Green Bay Road and STH 31	Alternative 2 Direct Alignment Between Green Bay Road and Root River and Along Valley Road Between Root River and STH 31 (Includes transition roadway to Three Mile Road west of STH 31)	Alternative 3 Direct Alignment Between Green Bay Road and Root River and South of Valley Road Between Root River and STH 31 (Includes transition roadway to Three Mile Road west of STH 31)	Alternative 4 Direct Alignment Between Green Bay Road and Root River and Along Valley Road and Within Armstrong Park Between Root River and STH 31	Alternative 5 Direct Alignment Between Green Bay Road and Root River and Within Northern Portion of Armstrong Park Between Root River and STH 31
Costs (continued) Disruption of Existing Land Use	<p><u>Senior Citizens Home</u> One storage building to be taken</p> <p>Property would be severed, with guest house and Convent of Sisters of St. Rita separated from Senior Citizens Home by roadway</p> <p><u>Armstrong Park</u> One storage building to be taken</p> <p>Park would be severed, with northern one-third of park isolated and its park potential and access limited</p> <p>Park privacy/security would be reduced</p>	<p><u>Senior Citizens Home</u> One storage building to be taken</p> <p>Property would be severed, with guest house and Convent of Sisters of St. Rita separated from Senior Citizens Home by roadway</p> <p><u>Armstrong Park</u> New roadway to be located along northern boundary of park</p> <p><u>Residential Lands North of Park and East of STH 31</u> Four residences to be taken</p> <p>Land access roadway serving 15 remaining residences to be converted to arterial. Traffic to increase from about 100 vehicles per average weekday to 5,000 vehicles per average weekday</p> <p>Front of 15 residences to be generally within 45 feet of nearest edge of roadway</p> <p><u>Agricultural and Residential Lands West of STH 31</u> Agricultural land to be divided by roadway</p> <p>One residence to be taken</p>	<p><u>Senior Citizens Home</u> One storage building to be taken</p> <p>Property would be severed, with guest house and Convent of Sisters of St. Rita separated from Senior Citizens Home by roadway</p> <p><u>Armstrong Park</u> New roadway to be located just within northern boundary of park</p> <p><u>Residential Lands North of Park and East of STH 31</u> Five residences to be taken</p> <p>Front of 14 remaining residences to be generally within 130 feet of nearest edge of proposed roadway</p> <p><u>Agricultural and Residential Lands West of STH 31</u> Agricultural land to be divided by roadway</p> <p>One residence to be taken</p>	<p><u>Senior Citizens Home</u> One storage building to be taken</p> <p>Property would be severed, with guest house and Convent of Sisters of St. Rita separated from Senior Citizens Home by roadway</p> <p><u>Armstrong Park</u> Within eastern portion of park, new roadway to be located along northern boundary of park</p> <p>Within western portion of park, new roadway would be located within park along edge of wooded area</p> <p>Small portion of park to be severed</p> <p><u>Residential Lands North of Park and East of STH 31</u> Four residences to be taken</p>	<p><u>Senior Citizens Home</u> One storage building to be taken</p> <p>Property would be severed, with guest house and Convent of Sisters of St. Rita separated from Senior Citizens Home by roadway</p> <p><u>Armstrong Park</u> New roadway to be located within northern portion of park</p> <p>Ponds would be traversed by roadways, separating northern one-third of ponds. Also, roadway would be located along wooded area in western portion of park</p> <p><u>Residential Lands North of Park and East of STH 31</u> One residence to be taken</p>

^a 1987 current traffic estimate—19,200 to 27,400; traffic estimate under "no build" alternative—23,000 to 30,000.

^b 1987 current traffic estimate—32,500; traffic estimate under "no build" alternative—37,000.

^c 1987 current traffic estimate—21,600; traffic estimate under "no build" alternative—26,000.

^d 1987 current traffic estimate—5,200 to 6,700; traffic estimate under "no build" alternative—8,000 to 10,000.

^e 1987 current traffic estimate—6,000; traffic estimate under "no build" alternative—8,000.

^f The estimated construction cost of the pedestrian tunnel under each alternative was \$80,000, and of the landscaped berms on the southern side of the Three Mile Road extension under Alternative 1 was \$110,000.

^g Of the estimated total \$1.8 million construction cost, approximately \$30,000 is for right-of-way costs, including acquisition, demolition, and relocation.

^h Of the estimated total \$2.3 million construction cost, approximately \$1.96 million is for the construction of the roadway extension between Green Bay Road and STH 31, \$330,000 of which is right-of-way costs, including acquisition, demolition, and relocation. The remaining \$0.37 million is the cost of the transition roadway from STH 31 to existing Three Mile Road between STH 31 and Johnson Park Road, \$140,000 of which is right-of-way costs.

ⁱ Of the estimated total \$2.4 million construction cost, approximately \$2.05 million is for the construction of the roadway extension between Green Bay Road and STH 31, \$410,000 of which is right-of-way costs, including acquisition, demolition, and relocation. The remaining \$0.37 million is the cost of the transition roadway from STH 31 to existing Three Mile Road between STH 31 and Johnson Park Road, \$140,000 of which is right-of-way costs.

^j Of the estimated total \$2.1 million construction cost, \$340,000 is right-of-way costs, including acquisition, demolition, and relocation.

^k Of the estimated total \$2.0 million construction cost, \$110,000 is right-of-way costs, including acquisition, demolition, and relocation.

Source: SEWRPC.

total construction costs of Alternative 2 and Alternative 3 are \$2.3 million and \$2.4 million, respectively, and include right-of-way costs of \$470,000 and \$550,000, respectively. These estimated construction costs are substantially greater than the cost of Alternative 1, as these two alternatives would have a somewhat longer overall length due to their indirection, and entail a transition roadway to Three Mile Road west of STH 31. The estimated total construction cost of Alternative 4 is \$2.1 million and includes right-of-way costs of \$340,000. The construction cost of Alternative 4 is somewhat greater than the cost of Alternative 1, and somewhat less than the cost of Alternatives 2 and 3. The estimated total construction cost of Alternative 5 is \$2.0 million, and includes costs of \$110,000 for right-of-way and \$260,000 for structure and fill within the ponds in Armstrong Park.

The right-of-way required for each roadway alternative is also described in Table A-1, and the disruption of the right-of-way acquisition and roadway operation on affected land uses is described. Each alternative would have impacts on existing land uses. Alternative 1, which would directly extend the proposed roadway extension, would sever Armstrong Park and may be expected to limit the potential to further develop the northern portion of the park for park purposes, as the roadway would be a barrier between the northern and southern portions of the park. The roadway may also somewhat reduce the privacy and security of Armstrong Park, although the construction of landscaped berms is recommended on the southern side of the roadway to limit these impacts. However, the roadway would improve access to Armstrong Park, if desired. Also, the roadway would generally be located away from the heavily used areas of the park. Also, it may be noted that such a minimal roadway is not incompatible with a park, as many parks in southeastern Wisconsin are traversed by roadways of similar design and traffic volume. Indeed, some of the most attractive parkway drives in the Milwaukee area also serve as arterial streets. The roadway would also sever the property of St. Monica's Senior Citizens Home, separating the Home from the Convent of the Sisters of St. Rita and the Senior Citizens Home guest house. However, the Three Mile Road extension would generally be about as close—70 to 80 feet—to the Senior Citizens Home, Convent, and Guest House as existing Green Bay Road is to the Guest House. Also, the roadway could have a beneficial impact of providing improved access to the Senior Citizens Home and to other parts of the property.

Alternatives 2, 3, 4, and 5 would have the same impact on St. Monica's Senior Citizens Home. Impacts on Armstrong Park would be limited under Alternatives 2 and 3, particularly Alternative 2, as this alternative would be located north of Armstrong Park. Alternative 3 would be located just within Armstrong Park. However, both Alternatives 2 and 3 would have impacts on the 19 residences located north of Armstrong park, as the acquisition of four of these residences would be required under Alternative 2 and five of these residences under Alternative 3. Also, Alternative 2 would entail the location of the roadway within 45 feet of the 15 remaining residences, and Alternative 3 would entail the location of the roadway within 130 feet of the 14 remaining residences. It should be noted that two of the residences to be acquired are located in the 100-year floodplain of the Root River and should be considered for removal in any case. Construction of the transition roadway between STH 31 and the existing segment of Three Mile Road between STH 31 and Johnson Park Road would require the acquisition of one additional residence under Alternatives 2 and 3. Alternative 4 would have impacts on both Armstrong Park and the residences north of the park, with the roadway being located within the northern portion of the park and the acquisition of four residences being required. Alternative 5 would have limited impact on the residences north of the park, requiring the acquisition of one residence, but would entail location of the roadway within the northern portion of the park, including through the ponds, resulting in the filling and separation of the northern one-third of the ponds.

Comparison of the costs and benefits of the five roadway extension alternatives indicates that Alternatives 2, 3, and 4 are very similar with respect to costs and benefits; Alternative 5 has both a higher level of benefits and a lower level of construction costs than Alternatives 2, 3, and 4; and Alternative 1 has both a higher level of benefits and a lower level of costs than Alternative 5. With respect to disruption of land uses, each alternative has about the same impact on St. Monica's Senior Citizens Home; Alternatives 1, 4, and 5 do not have the acquisition impact that Alternatives 2 and 3 potentially have west of STH 31, as Alternatives 1, 4, and 5 do not require a transition roadway to connect the proposed roadway extension of Three Mile Road between Green Bay Road and STH 31 to an existing segment of Three Mile Road west of STH 31 between STH 31 and Johnson Park Road.

Each alternative differs with respect to its impact on land uses between the Root River and STH 31. Alternative 1 would be located within Armstrong Park and would divide the northern third of the park from the remainder of the park. Alternatives 2 and 3 would impact primarily residential lands to the north of the park, requiring acquisition of four or five residences. Alternative 4 would impact both the park and the residential lands north of the park, as it would require acquisition of four residences, and the roadway extension would be located along a wooded area in the northern portion of the park. Alternative 5 would require the acquisition of one residence, and the roadway would be located within the ponds in Armstrong Park and along the wooded area in the northern portion of the park.

Benefit-cost ratios, which compare the monetary benefits to the construction costs of the roadway extension, were calculated for each of the roadway extension alternatives. The benefit-cost ratio calculated for Alternative 1 was an estimated 1.5, indicating that the monetary benefits of Alternative 1 would exceed its monetary costs. The benefit-cost ratio for Alternative 5 was an estimated 1.0, indicating that its monetary benefits would be expected to equal its costs. The benefit-cost ratios calculated for Alternatives 2, 3, and 4 were an estimated 0.6, indicating that the monetary benefits of these alternatives would not be expected to exceed their monetary costs.

SUMMARY AND CONCLUSIONS

On May 2, 1988, Racine County asked the Commission to conduct, as part of the jurisdictional highway planning program for Racine County, a special study of alternative alignments for the extension of Three Mile Road between Green Bay Road and STH 31, ascertaining the potential costs and benefits of such an extension. This appendix presents the findings of the requested study.

Five alternative alignments for the extension of Three Mile Road between Green Bay Road and STH 31 were evaluated. Alternative 1 would directly extend Three Mile Road from Green Bay Road to STH 31 along U. S. Public Land Survey section lines through the property of St. Monica's Senior Citizens Home and the S. C. Johnson & Son, Inc., Armstrong Park. Alternative 2 would, like Alternative 1, extend directly through the St. Monica's Senior Citizens Home property, but would then curve to the north to a location generally north of Armstrong Park. The new roadway would be aligned on and replace Valley Road, a land access street which provides access to adjacent residential land uses. Alternative 3 would, like Alternative 1, also extend Three Mile Road directly through the St. Monica's Senior Citizens Home property, and, like Alternative 2, would then curve to the north to cross the Root River. The easternmost portion of the segment of this alternative alignment located west of the Root River would be aligned along Valley Road, and the western portion of the roadway extension would be located within the northern portion of Armstrong Park. An option under Alternatives 2 and 3 would be the construction of a transition roadway approximately 0.3 mile in length connecting the proposed new segment of Three Mile Road to the existing segment of Three Mile Road west of STH 31 which extends to Johnson Park Road. Alternative 4 would, like Alternatives 1, 2, and 3, extend through the St. Monica's Senior Citizens Home property, and, like Alternatives 2 and 3, would then curve to the north across the Root River. Like Alternatives 2 and 3, Alternative 4 would be aligned west of the Root River along Valley Road north of the ponds in the abandoned quarry. West of the pond in the abandoned quarry, the roadway would be located well within Armstrong Park, generally lying along the edge of a wooded area, and would return to the alignment of a directly extended Three Mile Road to connect with the existing segment of Three Mile Road west of STH 31.

Alternative 5 would, like the other four alternatives, extend through St. Monica's Senior Citizens Home property, and, like Alternatives 2 through 4, curve to the north across the Root River. However, west of the Root River, Alternative 5 would be located within the ponds in the abandoned quarry along an alignment which would entail the least amount of filling and structure within the ponds—which are within the floodplain of the Root River—and have the least amount of impact on residences along Valley Road. West of the ponds in the abandoned quarry, the roadway extension would, like Alternative 4, be located generally along the boundary of the wooded area within Armstrong Park and return to the alignment of a directly extended Three Mile Road to connect with an existing segment of Three Mile Road located west of STH 31.

Another alternative considered, but rejected, was the construction of a new east-west arterial roadway using existing public roadways, private drives, and new alignment between Green Bay Road and STH 31 south of Three Mile Road. This alternative was rejected because it would not connect to any other east-west arterial facility, and thus its minimal potential for use would be minimal. This alternative would also have a higher construction cost owing to the wider Root River channel at this location.

Another alternative considered was a "no build" alternative. Under this alternative, traffic would continue to use Four Mile Road, the next east-west arterial to the north; Rapids Drive/STH 38/CTH MM, the next east-west arterial to the south; and routes using Three Mile Road, Green Bay Road, and the two above-referenced existing east-west arterials. In this respect, an improved Four Mile Road has been suggested as an alternative to the extension of Three Mile Road. However, unlike the proposed Three Mile Road extension, an improved Four Mile Road could not provide direct access to STH 31 or improved access to IH 94, or provide the desirable spacing of arterial facilities or Root River crossings. Nor may an improved Four Mile Road be expected to provide the same relief of traffic on other routes. The no build alternative, however, provides an alternative under which traffic would use existing routes, including Four Mile Road. The benefits and costs of the five alternative extensions of Three Mile Road were measured relative to this no build alternative. Four Mile Road was assumed not to require any widening under the no build alternative, as the widening of Four Mile Road would not be expected to attract significant additional traffic to that road. The segments of Rapids Drive between Green Bay Road and STH 38, and of STH 38 between Rapids Drive and CTH MM, would warrant improvement through widening and potential realignment in the short-term future without the Three Mile Road extension; and in the long-range future with the Three Mile Road extension.

A right-of-way for the new Three Mile Road of 80 feet in width is proposed, except for those portions of the roadway located on Valley Road under Alternative 2, where the existing right-of-way of 66 feet would be utilized. The new roadway would generally have a rural cross-section with two 12-foot-wide traffic lanes. Each of the alternatives would include a pedestrian underpass to link the two parts of St. Monica's Senior Citizens Home divided by the roadway extension. Alternative 1 would include landscaped berms on the south side of the segment of the roadway extension through Armstrong Park. Also, the intersection of Three Mile Road and STH 31 may be expected to be traffic signal controlled, and the intersection of Three Mile Road and Green Bay Road to be stop sign controlled. It is anticipated that the Three Mile Road extension will be posted for a speed limit of 35 miles per hour, and will allow use by truck traffic, permitting a reduction of truck traffic on other streets.

The extension of Three Mile Road under Alternative 1 may be expected to carry approximately 4,500 vehicles per average weekday under current land use and transportation system conditions, and approximately 6,500 vehicles per average weekday under design year 2000 land use and transportation system conditions. Under Alternatives 2, 3, and 4, the indirect Three Mile Road extension provided would be expected to carry approximately 3,500 to 3,600 vehicles per average weekday under current conditions, and 5,000 to 5,300 vehicles per average weekday under design year 2000 conditions. Under Alternative 5, the extension may be expected to carry about 4,000 vehicles per average weekday under current conditions, and 5,800 vehicles per average weekday under design year 2000 conditions. The principal traffic expected to be carried by an extended Three Mile Road is that between the Village of Wind Point/Village of North Bay/northern City of Racine/northeast Town of Caledonia area and locations along STH 31 south of Three Mile Road.

With respect to the benefits of the Three Mile Road extension, on an average weekday in the year 2000, Alternative 1 may be expected to provide a reduction in travel indirection of 1,100 vehicle miles, a reduction of 8,200 vehicle movements through major intersections, and a reduction of 9,700 intersection turning movements. The annual monetary value of these traffic benefits in terms of vehicle operating costs, travel time, and accident savings may be expected to approximate \$168,000 in the year 2000. In addition, the direct extension of Three Mile Road under Alternative 1 would reduce traffic on a number of street segments, including a reduction of 2,000 to 2,600 vehicles per average weekday on Four Mile Road between STH 32 and STH 31; and of 3,900 vehicles per average weekday on STH 38 between Rapids Drive and CTH MM. On an average weekday in the design year 2000, Alternatives 2, 3, and 4 may be expected to provide a reduction in travel indirection of 500 to 600

vehicle miles per average weekday; a reduction of 7,100 movements through major intersections; a reduction of 8,100 intersection turning movements; and a reduction in traffic on selected street segments, including a reduction of 1,400 to 1,900 vehicles per average weekday on Four Mile Road between STH 32 and STH 31, and a reduction of 3,400 vehicles per average weekday on STH 38 between Rapids Drive and CTH MM. The annual monetary value of these traffic benefits in the year 2000 in terms of vehicle operating costs, travel time, and travel accidents for Alternatives 2 and 3 is an estimated \$93,000; and for Alternative 4, an estimated \$81,000. On an average weekday in the year 2000, Alternative 5 may be expected to provide a reduction in travel indirection of 800 vehicle miles, a reduction of 7,600 vehicle movements through major intersections, and a reduction of 8,100 intersection turning movements. The annual monetary value of these traffic benefits in terms of vehicle operating costs, travel time, and accident savings may be expected to approximate \$126,000 in the year 2000. In addition, the direct extension of Three Mile Road under Alternative 5 would reduce traffic on a number of street segments, including a reduction of 2,000 to 2,400 vehicles per average weekday on Four Mile Road between STH 32 and STH 31, and of 3,400 vehicles per average weekday on STH 38 between Rapids Drive and CTH MM.

In general, the benefits of Alternatives 2, 3, and 4 would be approximately 40 to 55 percent less than the benefits to be received under Alternative 1. The benefits of Alternative 5 would be about 25 percent less than the benefits to be received under Alternative 1, and about 35 percent greater than those of Alternatives 2, 3, and 4. The benefits of the extension of Three Mile Road would include the provision of an appropriate spacing of east-west arterial streets which, in combination with existing and planned north-south arterial streets, would provide an appropriate grid of arterial streets supporting existing and planned urban development. The extension of Three Mile Road would reduce the spacing of crossings of the Root River from the existing 2.4 miles between STH 38 and Four Mile Road to 1.2 miles with the extension of Three Mile Road. In addition, the extension of Three Mile Road would provide a direct connection from the northeastern portion of the Racine urbanized area to STH 31, a major north-south arterial, and would improve access to IH 94. The extension of Three Mile Road would permit IH 94-oriented traffic to travel directly to and from STH 31 as part of a route to and from IH 94, and would relieve traffic congestion on other routes to and from IH 94 by removing traffic from those routes. Also, the extension of Three Mile Road would provide eastern Racine County with a more efficient transportation system, with reductions in travel indirection and distance, intersections traversed, and turning movements, and therefore reductions in vehicle operating costs, travel time, and traffic accidents. Traffic congestion and delay on key arterials in the vicinity of the Three Mile Road extension would be reduced, including on Rapids Drive between STH 38 and Green Bay Road, and on the segment of STH 38 between CTH MM and Rapids Drive. The short-range need to realign and widen these roadway segments would be alleviated.

The construction cost, including right-of-way, of the Three Mile Road extension under Alternative 1 is an estimated \$1.8 million; Alternative 2, \$2.3 million; Alternative 3, \$2.4 million; Alternative 4, \$2.1 million; and Alternative 5, \$2.0 million. Each alternative would have impacts on existing land uses. Alternative 1 would sever Armstrong Park and potentially reduce park privacy and security, and would sever the property of St. Monica's Senior Citizens Home. Alternatives 2, 3, 4, and 5 would have the same impact on St. Monica's Senior Citizens Home. Impacts on Armstrong Park would be limited under Alternatives 2 and 3, as Alternative 2 would be located north of, and Alternative 3 just within, Armstrong Park. However, both Alternatives 2 and 3 would have impacts on the 19 residences located north and east of Armstrong Park, requiring the acquisition of four of these residences under Alternative 2 and of five residences under Alternative 3, and entailing the location of the roadway within 45 feet of the 15 remaining residences under Alternative 2 and 130 feet of the 14 remaining residences under Alternative 3. Construction of the transition roadway between STH 31 and the existing segment of Three Mile Road between STH 31 and Johnson Park Road would require the acquisition of one additional residence under Alternatives 2 and 3. Alternative 4 would impact both the park and the residences north of the park, as the acquisition of four residences would be required and the roadway would be located along a wooded area in the northern portion of the park. Alternative 5 would require the acquisition of one residence, as the roadway extension would be located within the ponds in the eastern portion of the park and along a wooded area in the western portion of the park.

A comparison of the costs and benefits of the three roadway extension alternatives indicates that Alternatives 2, 3, and 4 are similar with respect to monetary costs and benefits; Alternative 5 has somewhat higher benefits and lower costs than these three alternatives; and Alternative 1 has a higher level of benefits and a lower level of costs than Alternative 5. With respect to disruption of land uses, each alternative would have about the same impact on St. Monica's Senior Citizens Home. Alternatives 1, 4, and 5 would not have the acquisition impact that Alternatives 2 and 3 could have west of STH 31, as Alternatives 1, 4, and 5 do not require a transition roadway. Alternatives 1 and 5 differ from Alternatives 2, 3, and 4 with respect to impact on land uses between the Root River and STH 31 in that Alternatives 1 and 5 are generally located within Armstrong Park, and Alternatives 2, 3, and 4 are located north of the park and would impact primarily residential lands north of the park, requiring acquisition of four to five residences.

Benefit-cost ratios, which compare the monetary benefits to the construction costs of the roadway extension, were calculated for each of the roadway extension alternatives. The benefit-cost ratio calculated for Alternative 1 was an estimated 1.5, indicating that the monetary benefits of Alternative 1 would exceed its monetary costs. The benefit-cost ratio for Alternative 5 was 1.0, indicating its monetary benefits would be equal to its costs. The benefit-cost ratios calculated for Alternatives 2, 3, and 4 were an estimated 0.6, indicating that the monetary benefits of these alternatives would not exceed their monetary costs.

Thus, of the alternatives considered for the proposed extension of Three Mile Road, Alternative 1 may be considered the superior alternative from a transportation perspective, as it would provide a higher level of benefits, lower estimated total construction costs, and, importantly, be the only the alternative for which the estimated monetary benefits may be expected to exceed the estimated monetary costs of the improvements. All five alternatives would have some negative impacts on adjacent land uses. In considering whether to implement the extension of Three Mile Road, it will be important for the county and municipal officials concerned to weigh the benefits of the roadway extension against its construction costs, right-of-way acquisition impacts, and impacts on adjacent land uses. Construction would take from 2.0 to 3.5 years to begin following a decision to implement, with this amount of time being necessary to conduct the location and design—or preliminary engineering—study, including potential preparation of an environmental impact statement; final engineering, including preparation of construction plans and obtaining necessary permits; right-of-way acquisition; and pre-contract administration.