2025 SOUTH WOOD COUNTY AREA TRANSPORTATION STUDY

September 11, 2003

NCWRPC

North Central Wisconsin Regional Planning Commission

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CHAPTER 1
INTRODUCTION

BACKGROUND

This project stems from a number of highway improvement proposals being forwarded to the Wisconsin Department of Transportation by local units within the study area during the later half of 1998. Among the projects WisDOT was asked to comment on were proposals for a north side bypass, a new east side bypass expressway, a Second Avenue bypass, and a new south river crossing. WisDOT's District Office recommended the cooperative undertaking of a long range transportation planning process for the urban area as a means of developing some consensus on the transportation problems and opportunities facing the South Wood County Area.

WisDOT committed to the development of a traffic model for the South Wood County Area and offered the necessary staff assistance to guide the development of a long range plan. In March of 1999, representatives of the communities that make up the South Wood County Urban Area met and agreed to move forward with the long range planning process. Local officials realized that the traffic model would be an invaluable tool for identifying emerging capacity problems so that they could be addressed before becoming critical.

STUDY PURPOSE

The purpose of this study is to prepare a long range transportation plan for the South Wood County Urban Area to guide local units of government in making appropriate transportation decisions through the year 2025. This report represents an initial long range transportation plan for the South Wood County urban area and sets the stage for cooperative transportation planning and decision making into the future.

PLANNING PROCESS

The 2025 South Wood County Area Transportation Study was developed by policy and technical advisory committees. The Policy Committee consists of the chief elected official from each of the local units of government that comprise the urban area, refer to Map 1-1. The Committee members and their respective communities include the following:

President Gary Allworden	Village of Port Edwards
Mayor Jerry Bach	Wisconsin Rapids (Committee Chair)
Chairman Thomas Buss	Town of Grand Rapids
President Donna Lee	Village of Biron
Mayor Gordon Freeman	City of Nekoosa
Chairman Alan Herzberg	Town of Rudolph
Chairman Hugh O'Donnell	Town of Port Edwards
Chairman Melvin Konietzki	Town of Grant
Chairman Terry Rickaby	Town of Saratoga
Chairman James Schuerman	Town of Seneca

This Policy Committee provided general policy direction and oversight for the development of this plan.

The Technical Advisory Committee is comprised of municipal engineering staff, county and regional planners, state Department of Transportation staff, and the Wood County Highway Commissioner as follows:

Jason Grueneberg	Wood County
Matt Halada	WisDOT
Dale Hexom, P.E.	Wisconsin Rapids
Darryl L. Landeau, AICP	NCWRPC
Dave Laspa, P.E.	Wisconsin Rapids
Dennis Lawrence, AICP	NCWRPC
Joleen Nelson	WisDOT
Gary Popelka, AICP	Wood County
Terry Shymanski	City of Nekoosa
Joe Terry, P.E.	Village of Port Edwards
Jim Tremelling	Wood County
Bob Wagner	WisDOT

The Technical Advisory Committee provided technical expertise and resources in the development and review of plan elements.

The authors would also like to acknowledge past members of both the committees, whom came into and out of the process at various times including: Vern Verjinsky, Past Mayor - Wisconsin Rapids; Don Uelmen, WisDOT; Bob Nate, WisDOT; Jim Kuehn, NCWRPC; James Joosten, Past Chair - Rudolph and Jon Evenson, Past President - Biron. Their past contributions have aided significantly in this endeavor.

A travel demand forecast model was used to simulate traffic levels on the street and highway network in 2025. The travel forecast model basically examines the relationship between areawide socioeconomic data (such as population, housing units and employment) and current and future travel demand. Appendix A provides a description of the travel demand modeling process. The area covered by the travel forecast model includes the Cities of Nekoosa and Wisconsin Rapids; the Villages of Biron and Port Edwards; the Town of Grand Rapids; and portions of the Towns of Grant (Portage County), Port Edwards, Rudolph, Saratoga, and Seneca, see Map 1-1. This area was selected in early 1999 by the Policy Committee as representative of the urban and urbanizing area of South Wood County.

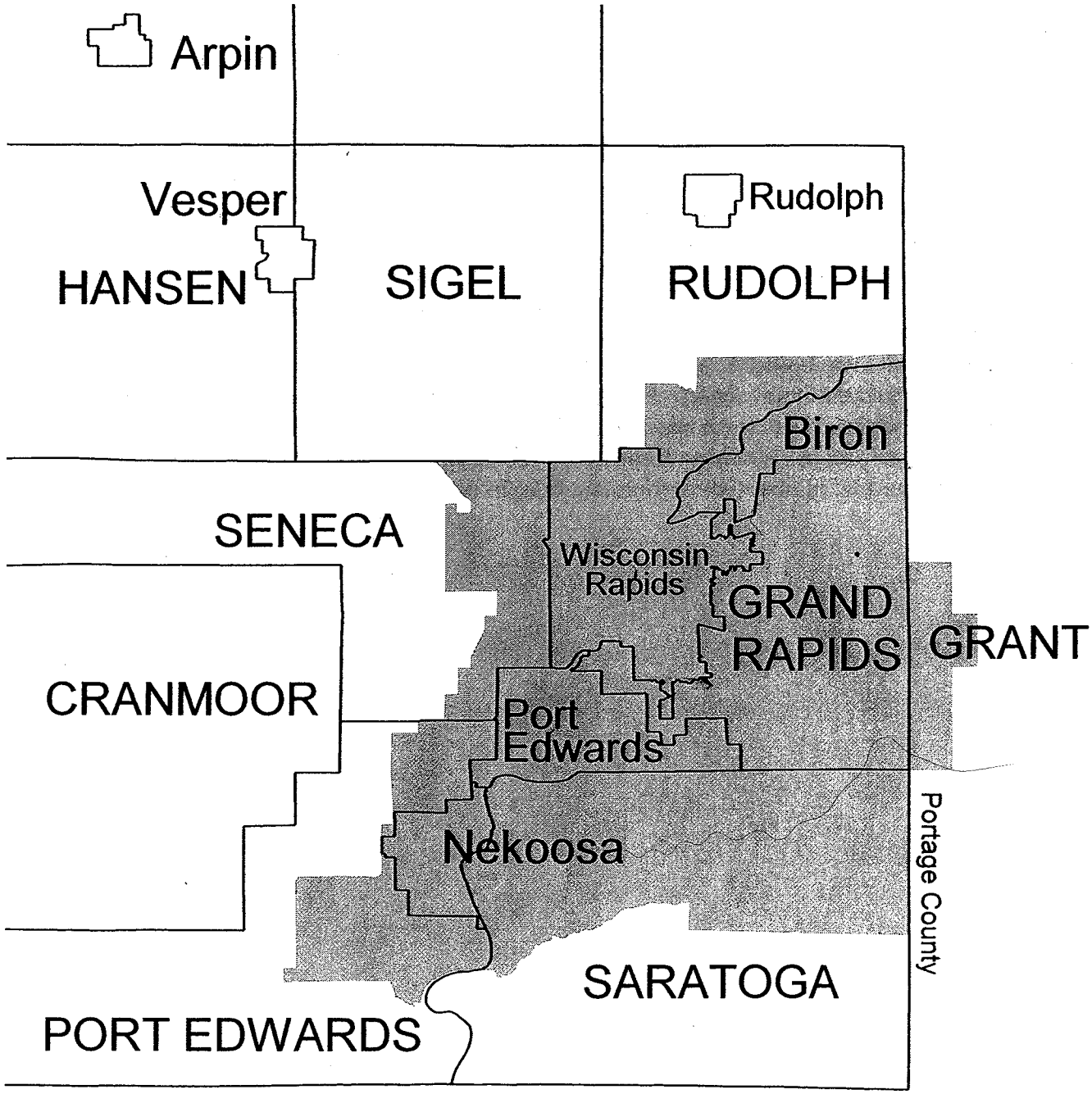
Data used as inputs in the development of the travel demand forecast model included an external origin-destination survey conducted in September of 1999, traffic counts completed by the Wisconsin Department of Transportation, and Census data for 1990 by Census block. In the model, Census blocks are used as Traffic Analysis Zones or TAZs. These zones are the basic geographic level at which population and housing data is summarized for use by the model. A total of 317 TAZs make up the urban area.

Existing land uses were inventoried by TAZ through aerial photo interpretation during the summer of 1999 and then reviewed for accuracy by the respective communities. Land use projections were based on adopted community plans, current development trends, and the insight of local officials on how their communities are likely to develop based on their knowledge of land owner and developer preferences and other activities likely to influence land development. A series of community meetings was held in August and September of 2000 to obtain local government input. TAZs were assigned factors for no, low, moderate or high growth. Appendix B contains a detailed report on the population and employment figures used in the model, including a map showing the TAZs.

UPDATED DATA INCORPORATED

The development of the traffic demand forecasting model and this transportation study involved a significant time period beginning in 1999 and finally wrapping up in 2003. During this time, the best available data was acquired and incorporated into the process as needed. Due to the length of time required for this effort, updated data sources such as new traffic counts (2002) and Census information (2003) were becoming available as the process was winding down. The traffic model was updated with new traffic count values and the revised outputs were incorporated into this study report. The model was also modified to account for other changes in traffic conditions such as the relocation of major traffic destinations. For example, the model was adjusted to shift Wal-Mart traffic to the store's new location. Population estimates and projections used in this study were found to be in line with 2000 Census figures.

Map 1-1
South Wood County Urban Area Transportation Plan Study Area



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N W E S

1 0 1 2 3 4 5 Miles

PLAN GOALS, OBJECTIVES & STRATEGIES

The following set of goals and objectives were developed by the Policy Committee as part of the long-range transportation planning process.

VISION: **The vision of the Year 2025 South Wood County Area Transportation Study is to plan for a means of providing safe, efficient, effective, economical, convenient, aesthetic and multimodal transportation facilities for people, goods and services within the study area, for all trip purposes.**

Goal 1: Provide for an efficient and economical transportation system that affords convenience, safety, and mobility, and that meets the needs of all citizens, including transit-dependent and disabled citizens.

Objective: Promote efficient transportation system management and operation.

Strategy: Emphasize the preservation of the existing transportation system.

Strategy: Balance access needs with traffic flow and safety issues.

Strategy: Relieve congestion and preserve capacity by preventing congestion from occurring where it does not yet occur.

Strategy: Plan and implement transportation projects that preserves capacity, relieves congestion, and increases traffic safety.

Objective: Promote an economical transportation system that optimizes financial resources.

Strategy: Plan and implement transportation projects that result in shorter destination times and less fuel consumption.

Strategy: Manage local transportation systems to promote efficient use of land and efficient use of public services, facilities and tax dollars.

Objective: Increase the safety and security of the transportation system for motorized and non-motorized users.

Strategy: Foster a comprehensive (engineering, enforcement and education) approach to promote and preserve a safe highway system.

Strategy: Consider and implement safety improvements at the time of pavement work where a need is identified based on crash data.

Strategy: Work with WisDOT and the Office of the Commissioner of Railroads to improve safety at highway-rail crossings where warranted.

Objective: Increase the mobility and accessibility options available to people and for freight.

Strategy: Examine ways to improve rail service in the area, to attract local commerce and industry to rail transport.

Strategy: Support additional transportation options for those without access to an automobile, including the elderly, disabled, and children.

Strategy: Coordinate existing public transit services in the urban area to provide the greatest possible efficiency.

Goal 2: Foster economic development and productivity of the urban area and its communities, through an efficient transportation system.

Objective: Target transportation investments, in all modes, to support business and job growth throughout the urban area.

Objective: Enhance the integration and connectivity of the transportation system, across and between modes throughout the South Wood County Area, for people and freight;

Goal 3: Transportation planning and project development should protect and enhance the environment, promote energy conservation and improve quality of life.

Objective: Include aesthetic considerations in the design of arterial and collector routes.

Objective: Where feasible, passenger transportation alternatives to the private automobile should be supported.

Objective: Develop, revise and update long-range bicycle and pedestrian plans and maps.

Objective: Control storm water runoff to minimize impacts on surface and ground waters during and after construction of transportation projects.

Goal 4: Consider the effects of transportation decisions on land use and development and be consistent with the provisions of all applicable short- and long-term land use and development plans and encourage neighborhood designs that support a range of transportation choices.

Objective: Achieve close coordination between the development of transportation facilities and land use planning, land development, and community character preservation.

Strategy: Future road locations, extensions or connections will be considered

when reviewing development plans and proposals.

Strategy: Roadway access will be better spaced along the existing road network to increase safety and preserve capacity.

Strategy: Carefully plan new developments to minimize extensive road construction and avoid burden to local governments for maintenance. Consider implementing local road impact fees for new development projects that place a burden on or require the upgrading of local roads.

Strategy: Consider the secondary land use impacts in the transportation planning process.

Strategy: Improve coordination between transportation and land use through Transportation Impact Analyses (TIAs).

PLAN OVERVIEW

Chapter One of this document introduces the purpose of the study, the planning process that evolved into this report, and the plan goals and objectives established to help guide transportation decision making in the South Wood County Urban Area.

Chapter Two of this report focuses on socioeconomic projections. Topics discussed in that chapter include population, housing units, employment, the 1999 land use inventory and 2025 development projections.

Chapter Three of this study focuses on current and future condition of various elements of the transportation network. Topics discussed include the 1999 and projected 2025 condition of the arterial and collector network and overviews of the air, rail, transit, bicycle and pedestrian transportation systems.

Chapter Four of this plan involves the recommended transportation plan. Topics discussed in that chapter include recommended street and highway improvement projects, recommended transit, air and rail project, and a financial plan for implementing the recommendations within the planning period.

Chapter Five of this plan focuses on the public participation process for this plan.

Chapter Six of this plan focuses on the environmental review of the plan. Topics discussed include an assessment of potential environmental consequences of the plan (addressing potential economic, social and natural resource impacts of plan implementation).

Appendix A of this plan is an overview of the traffic demand modeling process. It provides a general overview of the model and how it operates including a discussion of the inputs that go into the model and the meaning of output provided back from the software.

Appendix B of this plan is the methodology and results of the socioeconomic projections used in this plan and the traffic forecasting model.

Appendix C of this plan is the City of Wisconsin Rapids Official Map. Adopted by City Council in 1995, the Official Map is due to be updated pending results of this study. This map illustrates some the various transportation proposals in and around the central city referred to in certain sections of this document.

Appendix D of the plan contains WisDOT "Wisconsin Rapids Urban Area Road Analysis" which is essentially the state's System Maintenance and Preservation Program for the area. This report shows detailed information for state jurisdiction highways in the urban area. It includes crash rates and projections of the next maintenance or construction project.

CHAPTER 2
SOCIOECONOMIC PROJECTIONS

Socioeconomic projections are an important component of any urban transportation system plan because they are used as inputs to predict travel demand in an urban area in the long term future. A relationship between socioeconomic data and travel demand is established early in the planning process when the travel demand forecast model is adjusted to reflect trends in the "base year" of analysis (1999 in this case). Socioeconomic parameters which are used in projecting future travel demand in the south Wood County urbanized area model include population, housing units, and employment (including manufacturing, trade, commercial, wholesale, service, and other). These data have been projected both for the study area as a whole and for smaller units within the study area known as traffic analysis zones (TAZs). Discussion here focuses solely on the study area projections. Distributing socioeconomic data projections among the TAZs is essential to the successful performance of the travel demand forecast model.

Table 2-1 summarizes population, housing unit and employment projections for the study area through 2025.

Table 2-1
Socioeconomic Projections 1999 - 2025
South Wood County Area Transportation Study

	1999 Base Year	2025 Plan Horizon	% change	Ave. Annual Change
POPULATION	40,259	56,458	40.24%	1.55%
HOUSING UNITS	15,836	22,214	40.28%	1.55%
EMPLOYMENT	17,833	34,467	93.28%	3.59%

Source: NCWRPC, 2001.

POPULATION PROJECTIONS

The South Wood County Area Transportation Study area includes Cities of Nekoosa and Wisconsin Rapids; the Villages of Biron and Port Edwards; the Town of Grand Rapids; and parts of the Towns of Grant, Port Edwards, Rudolph, Saratoga, and Seneca. The 1999 population of this study area was determined to be 40,259 people and is projected to be 56,458 in 2025. This represents a 40 percent increase in population over the period between 1999 and 2025. Historic population trends and projections for the urban area by TAZ within the study area can be found in Appendix B.

HOUSING UNIT PROJECTIONS

The number of housing units in the study area was determined to be 15,836 in 1999 and is projected to be 22,214 in 2025. This represents a 40 percent increase in the number of housing units over the period between 1999 and 2025.

EMPLOYMENT PROJECTIONS

In 1999, it was determined that there were 17,833 employees working within the study area. This number is based on site of employment, not the site of residence. Of these 17,833 employees, approximately 6,783 were employed in manufacturing industries, 1,021 in trade activities, 2,283 commercial, 116 wholesale, 3,645 in the service sector and 3,985 other. A total of 34,467 employees are projected for 2025. This represents a 93 percent increase in the number of employees over the period between 1999 and 2025. Major employers in the urban area are represented on the principle place list used during the origin-destination survey as follows:

1. Alexander Middle School	540 Birch Street	Nekoosa
2. AmericInn of Wisconsin Rapids	3010 8th Street S.	Wisconsin Rapids
3. Assumption High School	445 Chestnut Street	Wisconsin Rapids
4. Brostrom-Kickert Chevrolet Inc	2660 8th Street S.	Wisconsin Rapids
5. Buick Sales & Service Neuville	1830 8th Street S.	Wisconsin Rapids
6. Chrysler Dealer	3332 Plover Road	Wisconsin Rapids
7. City Hall Wisconsin Rapids	444 W Grand Ave	Wisconsin Rapids
8. Stora Enso Inc.	231 1st Ave. N.	Wisconsin Rapids
9. Stora Enso Inc.		Biron
10. Copps Food Center	900 E. Riverview	Wisconsin Rapids
11. County Concrete	2310 40th Street N.	Wisconsin Rapids
12. County Market	2111 8th Street S.	Wisconsin Rapids
13. Courthouse	400 E. Market Street	Wisconsin Rapids
14. Department of Transportation	2610 Industrial St.	Wisconsin Rapids
15. Doctor's Clinic	420 Dewey Street	Wisconsin Rapids
16. East Junior High School	311 Lincoln Street	Wisconsin Rapids
17. Edgewater Haven Nursing Home	1351 Wis. River Dr.	Port Edwards
18. Family Heritage Nursing Home	130 Strawberry Lane	Wisconsin Rapids
19. Domtar Corporation	100 Wis. River Dr.	Port Edwards
20. Domtar Corporation		Nekoosa
21. Golden Eagle Builder	4421 Plover Road	Wisconsin Rapids
22. Humke Elementary School	600 S. Section Street	Nekoosa
23. IGA quality Foods	1811 Baker Street	Wisconsin Rapids
24. IGA Quality Foods	1021 W. Grand Ave.	Wisconsin Rapids
25. IGA Quality Foods	2350 8th Street S.	Wisconsin Rapids
26. Imation	841 Market Street	Nekoosa
27. Imation Distribution Center	1940 Jefferson Street	Wisconsin Rapids
28. Ironside Oldsmobile-GMC	2250 W. Grand Ave.	Wisconsin Rapids
29. JC Penney Co. Rapids Mall	555 W. Grand Ave.	Wisconsin Rapids

30. Johnson's Jeep-Eagle	1910 W. Grand Ave.	Wisconsin Rapids
31. Kmart Stores (due to close 4/03)	4330 8th Street S.	Wisconsin Rapids
32. Lamers Bus Lines	2611 West Grand Ave.	Wisconsin Rapids
33. Lincoln Senior High School	1801 16th Street S.	Wisconsin Rapids
34. Mark Motors	3330 Plover Road	Wisconsin Rapids
35. McCain Food Inc. Ore-Ida	10973 State Highway 54 E.	
36. McMillian Memorial Library	490 East Grand Avenue	Wisconsin Rapids
37. Mead Inn	451 E. Grand Avenue	Wisconsin Rapids
38. Mid State Technical College	500 32nd Street N.	Wisconsin Rapids
39. Nekoosa Corporation	200 Garrison Street	Nekoosa
40. Nekoosa/Port Edwards State Bank	405 Market Street	Nekoosa
41. Nekoosa/Port Edwards State Bank	240 Market Street	Port Edwards
42. Nekoosa High School	500 Cedar Street	Nekoosa
43. Northland Cranberry, Office	2930 Industrial Street	Wisconsin Rapids
44. Northland Cranberry, Office	2321 W. Grand Avenue	Wisconsin Rapids
45. Mead-Witter Foundation	800 1st Avenue	Wisconsin Rapids
46. Northland Cranberry, Plant	3130 Industrial Street	Wisconsin Rapids
47. Our Lady of Heaven School	750 10th Street	Wisconsin Rapids
48. Pacific International LTD	555 Birch Street	Nekoosa
49. Port Edwards High School	801 2nd Street	Port Edwards
50. Rainbow Casino	949 County Road G.	Nekoosa
51. Rapids Ford	2811 W. Grand Avenue	Wisconsin Rapids
52. Rapids Mall	555 W. Grand Avenue	Wisconsin Rapids
53. RCH Enterprises	1430 2nd Street North	Wisconsin Rapids
54. Riverhill Dental	406 Daly Avenue	Wisconsin Rapids
55. Riverview Hospital	410 Dewy Street	Wisconsin Rapids
56. Riverview Manor Nursing Home	921 3rd Street South	Wisconsin Rapids
57. Saint Vincent's Middle School	831 12th Street S.	Wisconsin Rapids
58. Schreiber Foods, Inc.	2321 Jefferson Street	Wisconsin Rapids
59. Sentry Foods	3221 8th Street South	Wisconsin Rapids
60. ShopKo Plaza Mall	1000 E. Riverview Expwy	Wisconsin Rapids
61. Super 8 Motel	3410 8th Street South	Wisconsin Rapids
62. Wal-Mart (relocated 2/01)*	555 W. Grand Avenue	Wisconsin Rapids
63. Warehouse Specialist Inc. Office	3500 Wolosek Avenue	Wisconsin Rapids
64. Warehouse Specialists Inc.	2011 Brown Street	Wisconsin Rapids
65. Warehousing of Wisconsin	1941 Engel Road	Wisconsin Rapids
66. Warsinske Motor Co.	411 8th Street South	Wisconsin Rapids
67. West Junior High School	1921 27th Avenue South	Wisconsin Rapids
68. Wisconsin Rapids Public Library	490 East Grand Avenue	Wisconsin Rapids
69. Wisconsin Rapids Public Schools	510 Peach Street	Wisconsin Rapids
70. Wisconsin Valley Concrete	6110 McKinley Street	Wisconsin Rapids
71. Wood County Telephone Co.	440 East Grand Avenue	Wisconsin Rapids
72. Wood County Highway Dept.	555 17th Avenue North	Wisconsin Rapids
73. YMCA	211 Wisconsin River Drive	Port Edwards
74. Younkers Rapids Mall	555 W. Grand Avenue	Wisconsin Rapids

*Note: Walmart has since relocated from the Rapids Mall on W. Grand Ave. to 4331 8th St. S.

LAND USE INVENTORY AND DEVELOPMENT PROJECTIONS

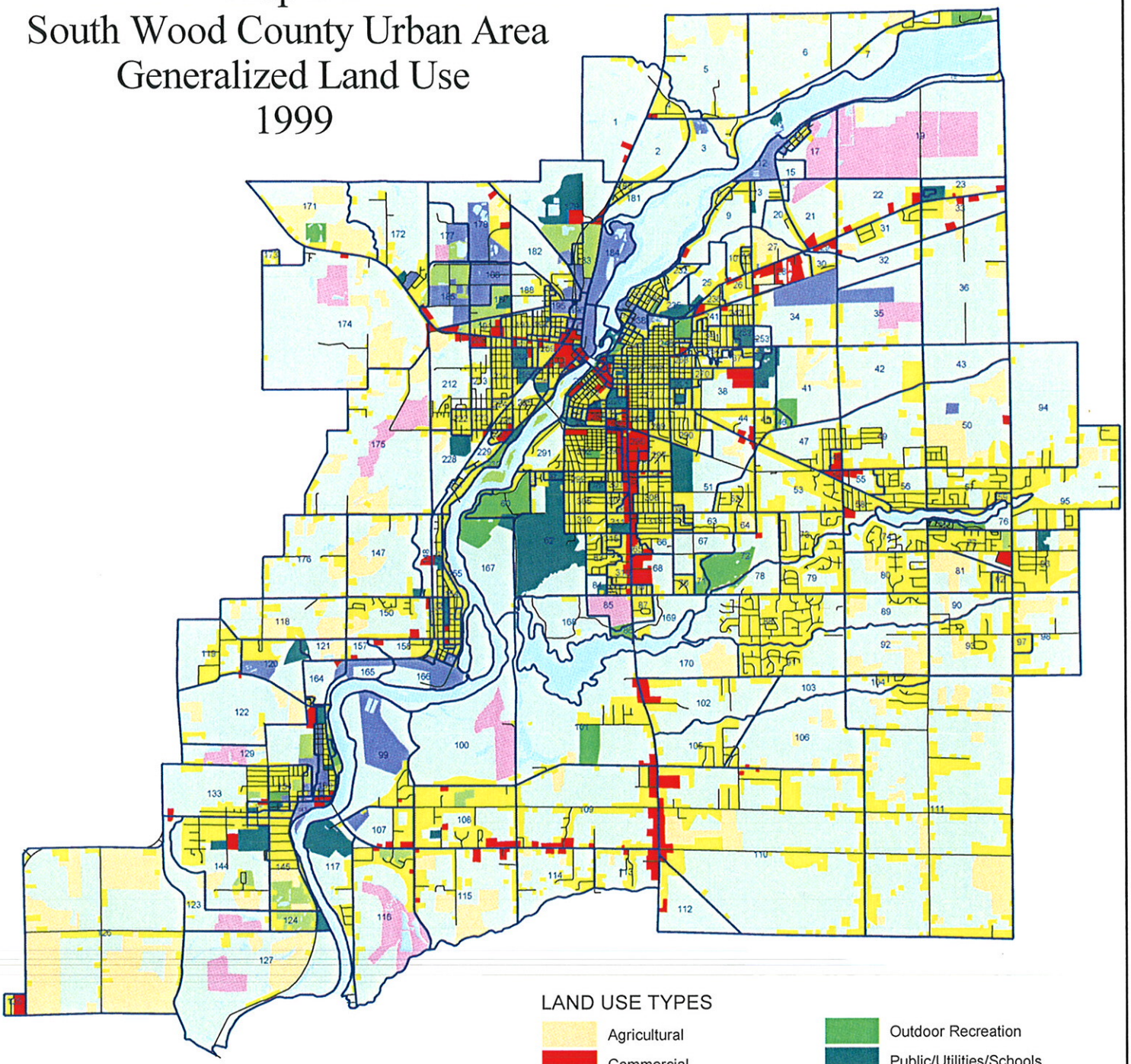
The North Central Wisconsin Regional Planning Commission inventoried land uses in the study area through aerial photo interpretation and field verification in 1999. A series of meetings was held with each local unit of government in the study area to extensively review and revise this inventory. Land uses in the study area in 1999 are shown on Map 2-1; the amount of land devoted to the various uses is shown in Table 2-2. Of the total of approximately 62,444 acres in the study area, 42,422 acres, or 67.9 percent of the total acreage were devoted to undeveloped uses, including woodlands, surface waters, other natural lands and agricultural lands. Developed uses accounted for 20,022 acres, or 32.1 percent of the total acreage.

Table 2-2
Summary of Land Uses, SWCATS Study Area, 1999

Land Use	Acres	% of Developed	% of Undeveloped	% of Total
Residential	12,682	63.3%		20.3%
Commercial	1,303	6.6%		2.1%
Industrial	1,627	8.1%		2.6%
Roads	2,290	11.4%		3.7%
Public	1,351	6.8%		2.2%
Recreation	769	3.8%		1.2%
Developed Subtotal	**20,022**	**100%**		**32.1%**
Woodlands	27,623		65.1%	44.3%
Grasslands	453		1.1%	0.7%
Agricultural	4,822		11.4%	7.7%
Cranberries	736		1.7%	1.2%
Wetlands	8,266		19.5%	13.2%
Water	522		1.2%	0.8%
Undeveloped Subtotal	**42,422**		**100.0%**	**67.9%**
TOTAL	**62,444**			**100.0%**

Source: NCWRPC, 2001.

Map 2-1
South Wood County Urban Area
Generalized Land Use
1999



LAND USE TYPES

- Agricultural
- Commercial
- Cranberries
- Grassland/Prairie/Open Space
- Industrial
- Outdoor Recreation
- Public/Utilities/Schools
- Residential
- Water
- Woodlands

N W E S

0.5 0 0.5 1 1.5 2 Miles

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"Developed" land includes the following uses: residential (all types), commercial, industrial, public, transportation (including streets and highways, railways, airports and other transportation facilities). "Undeveloped" land includes the following uses: agricultural including cranberries, grasslands, woodlands, recreation and natural areas (including surface water, wetlands and other natural areas). Land use data presented represent actual development rather that land zoned but not necessarily used for the zoned purpose at the time.

PLANNED GROWTH SCENARIO

The growth scenario used to generate development projections for 2025 is a "planned" growth scenario based on adopted community plans, current development trends, and the insight of local officials on how their communities are likely to develop based on their knowledge of land owner and developer preferences and other activities likely to influence land development. A series of community meetings was held in August and September of 2000 to obtain local government input. TAZs were assigned factors for no, low, moderate or high growth. Benefits of this type of scenario include compatibility with local community comprehensive plans and/or zoning ordinances and the fact that it is in part driven by the vision of current officials elected to guide the communities.

CHAPTER 3
CURRENT AND FUTURE CONDITION OF THE TRANSPORTATION NETWORK

1999 AND 2025 ARTERIAL-COLLECTOR NETWORK CONDITIONS

The travel demand forecast model developed for the South Wood County was utilized to simulate traffic conditions for a number of development scenarios chosen by the Policy Committee. These scenarios include 1999 base year conditions, projected 2025 conditions assuming no change in the existing transportation network ("no-build alternative"), and four (4) development scenarios. The selected development scenarios include:

1. Double Casino Trips - Simulates the traffic impacts of significant new development surrounding the Casino located in the southwest corner of the area;

2. New East Side Arterial - A new two lane expressway between STH 54 and CTH Z;

3. New Port Edwards Bridge - A new bridge over the Wisconsin River in the Port Edwards area, which would reduce the traffic on the three existing bridges in the South Wood County Area; and

4. Combined East Arterial & New Bridge.

Two additional development scenarios were discussed by the Policy Committee but not selected for further study. These included a north bypass and a bypass of Second Avenue (STH 54/73). With the reconstruction of West Grand Avenue already committed, the Policy Committee determined that it did not make economic sense to have two high cost facilities serving essentially the same function. Additionally, WisDOT would not likely be in favor of supporting parallel facilities in such close proximity to one another. Therefore, the north bypass option was not selected. Second Avenue was determined to be more of a local route and a bypass would have less of an impact on traffic than the proposed east arterial and was also not selected. Refer to the Wisconsin Rapids Official Map in Appendix C. This map illustrates these and other contemplated transportation projects. These other alternatives were not envisioned within the horizon of this plan, but this does not mean they won't become viable in the future.

The Policy Committee reviewed model output (2025 projected traffic) and compared each to 1999 base and 2025 no-build, refer to Appendix A for a sampling of modeled results. In almost all instances, the Combined East Arterial & New Bridge Scenario resulted in greater reductions in traffic congestion than either the East Arterial or New Bridge alone. For example: traffic on the Riverview Expressway between 8th and 12th Streets is projected to be 21,590 vehicles per day in 2025 with no changes in the current road network. Under Scenario 2 with the East Arterial only, traffic on the Expressway drops to 16,800, while under Scenario 3 with the New Bridge only, the traffic would be 21,040. However, the combination of the Arterial and Bridge projects (Scenario 4), reduces traffic on the Expressway to 15,080. Based on these results, the Policy Committee reached a general consensus that Scenario 4 would be the "preferred" project alternative.

Table 3-1 displays the 1999 base year conditions and the system wide impacts of the 2025 projected

development. The 2025 system-wide transportation impact data result from model assignments made to the existing street and highway network and the "preferred" system development scenario. Travel demand conditions in 2025, given the existing base road network, result in significant increases in vehicle mile traveled (+ 61%), vehicle hours traveled (+ 62%), and fuel consumption (+ 61%). Average trip length (in time) within the study area increases from 11.5 minutes to 13.2 minutes, a 14 percent increase. The future east arterial and new bridge scenario (Scenario 4) would result in approximately a one percent savings across the board. While this may not appear significant, it equates to a savings of about 1,050 gallons of fuel per day (and 425 fewer vehicle hours and 11,246 fewer vehicle miles traveled per day).

Table 3-1
System-wide Transportation Impacts of 2025 Development Scenarios

	1999 Base Year	2025 Base Network	2025 Scenario 4
Average Daily Vehicle Miles Traveled	781,210	1,258,732	1,247,486
Average Daily Vehicle Hours Traveled	26,447	42,921	42,496
Average Internal Trip Length (minutes)	11.5	13.2	13.1
Average Daily Fuel Consumption (gallons)	72,859	117,404	116,355
Total System (miles)	181.99	181.99	184.79
Congested or Approaching Congestion (miles)	4	9.72	8.22
% System Congested/Approaching Congestion	2.2%	5.3%	4.5%
Congestion Delay (vehicle hrs.)	10	170	111
% Vehicle Hours Traveled In Delay	0.04	0.40	0.26
Carbon Monoxide Emissions (tons)	9.189	14.802	14.669
Nitrogen Oxide Emissions (tons)	1.197	1.928	1.911

Source: South Wood County Area Transportation Study travel demand forecast model and NCWRPC, 2003.

Map 3-1 highlights arterial and collector corridors or corridor segments in the study area which were either "approaching congestion" (have average daily traffic volumes at 75 to 100 percent of roadway capacity) or were "congested" (have average daily traffic volumes at more than 100 percent of roadway capacity) in 1999, the base year for this study. Map 3-2 shows congested areas in 2025 if there were no changes in the existing road network (do-nothing scenario). Map 3-3 highlights arterial and collector corridors or corridor segments in the study area which are projected to either "approach congestion" or be "congested" by 2025 assuming implementation of Scenario 4. Table 3-2 identifies arterial and collector corridors or segments in the study area which involve a congested

or nearly congested condition in 1999 and/or 2025; map location numbers correspond to numbered segments on Maps 3-1, 3-2 and 3-3.

Table 3-2
Arterial and Collector Facilities - Congested or Approaching Congestion in 1999 and 2025
South Wood County Study Area

Map ID	Facility	Segment Description	Percent of Capacity		
			1999 Base	2025 Base No Build	2025 w/ Scenario 4
1	Market St. (Nekoosa)	Garrison - STH 73	60	**84**	**83**
2	STH 54/73	Hurley - Riverview Exp.	65 - **79**	**96 - 101**	65 - 73
3	STH 73	Nekoosa Bridge - STH 13	43 - 59	68 - **79**	67 - **78**
4	STH 13	CTH Z - Riverview Exp.	60 - **76**	**98 - 119**	73 - **99**
5	Baker St.	1st St. - 16th St.	54 - 64	**89 - 98**	**80 - 90**
6	Riverview Exp. Bridge		**81**	**113**	**100**
7	High St.	E. of STH 34	64	**90**	**90**
8	4th Ave.	High St - Grand Ave	56	**79**	**79**

Source: SWCATS Travel Demand Forecast Model, 2003.

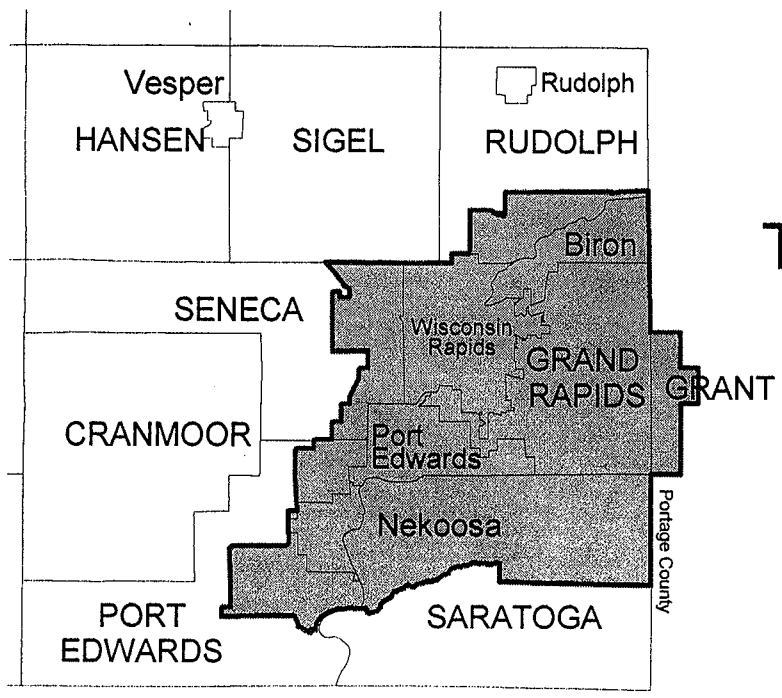
The model indicates the number of segments approaching congestion increases from 3 to 8 between 1999 and 2025 given the existing street and highway network (no build/do-nothing). Traffic levels are projected to be at 98 % of capacity on segments of Baker Street, 113% on the Riverview Expressway Bridge, 84 % on Market Street in Nekoosa, 90 % on High St. east of STH 34, and 119 % on STH 13 (8th St.) between CTH Z and Riverview Expressway. Implementation of Alternative 4 would result in some degree of relief on 6 of the 8 segments with capacity issues in 2025. Under this alternative, the level of congestion on High St. and 4th Ave. is unaffected. Traffic on parts of Baker would drop to 89%, and on Riverview Expressway Bridge volumes also drop to 100% of capacity and on STH 13 from Griffith to Riverview Expressway volumes drop to below 75 % of capacity except in the vicinity of Wal-Mart which will remain at 99 % of capacity. Traffic on Market (Nekoosa) would only drop 1 % (from 84 to 83).

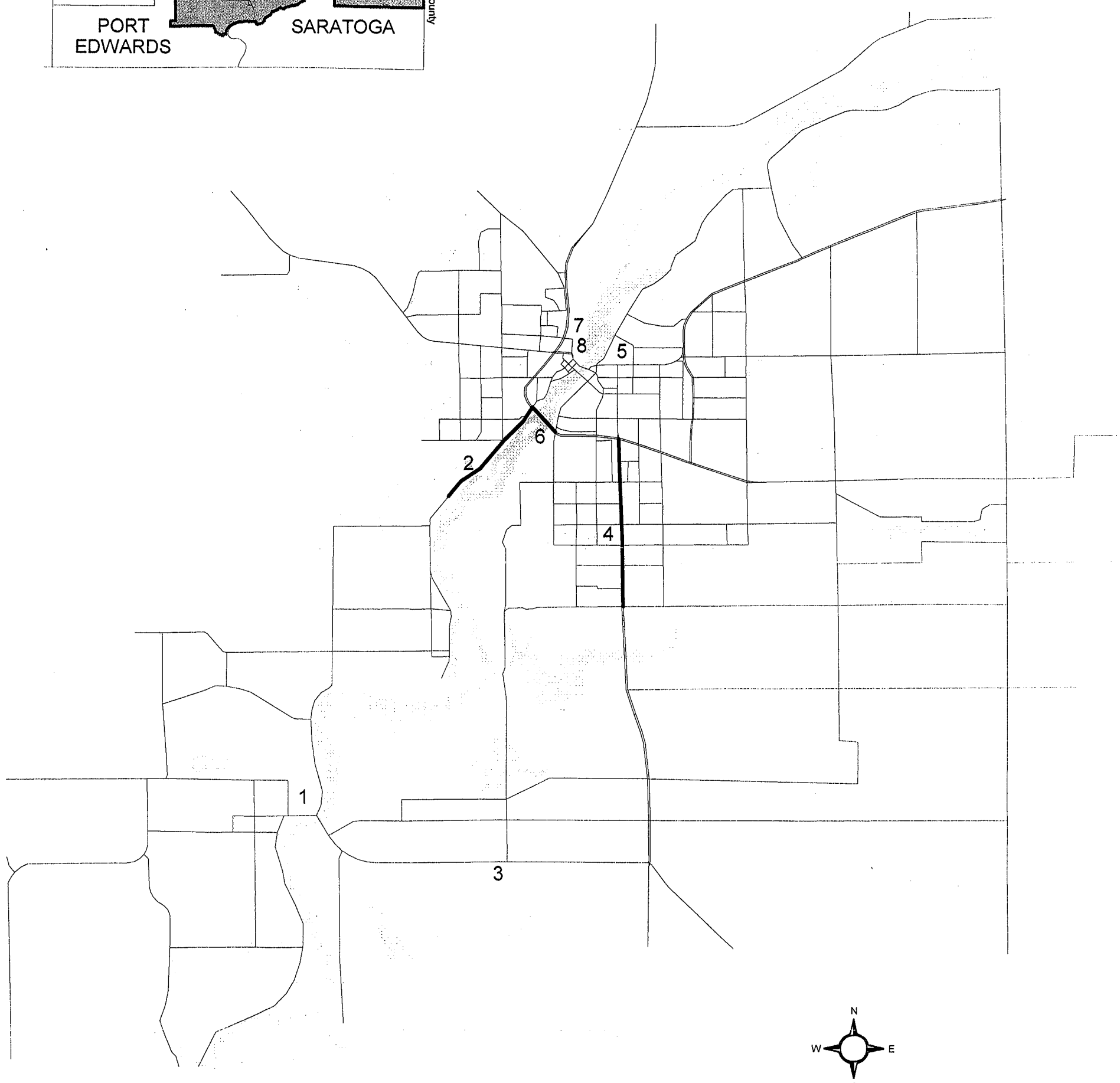
COMPARISON OF TRAVEL DEMAND PROJECTIONS UNDER 1999 AND 2025 BASELINE CONDITIONS AND UNDER 2025 CONDITIONS WITH SCENARIO 4

The following is a summary of observations concerning various travel statistics between 1999 and 2025 for the arterial and collector network:

- Vehicle miles traveled are expected to increase by 61.13 percent between 1999 and 2025; this increase will be 59.69 percent if Scenario 4 is implemented;
- Vehicle hours traveled are expected to increase by 62.29 percent between 1999 and 2025; this increase will be 60.68 percent if Scenario 4 is implemented;
- About four average days of vehicle hours traveled will be saved over the course of a year by 2025 if Scenario 4 is implemented;
- Fuel consumption increases from 1999 to 2025 by 59.70 percent (61.14 % w/o plan);
- The arterial and collector network increases by 2.8 miles if the plan is implemented (an increase of only 1.5 %);
- Vehicle hours spent in congestion delay decrease by 35 percent when Scenario 4 is implemented;
- Carbon monoxide emissions decrease by 16.6 percent from projected 2025 levels, if Scenario 4 is implemented; and
- Nitrogen oxide emissions decrease by 1.8 percent from projected 2025 levels, if Scenario 4 is implemented.

Map 3-1
South Wood County Area Transportation Study
Two-Way Volume-To-Capacity Ratios
1999





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0 - 0.75
0.76 - 1
1.01 - or Greater
Water

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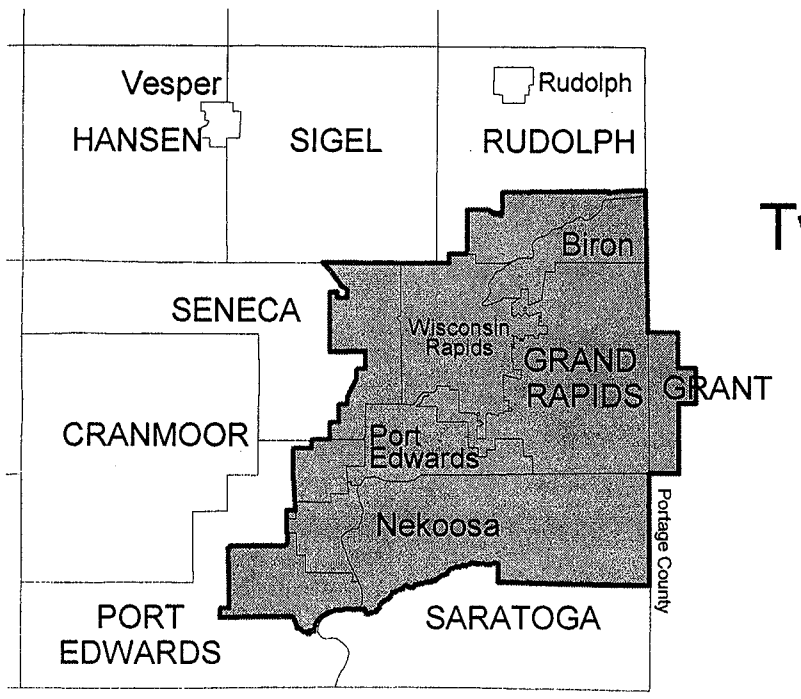
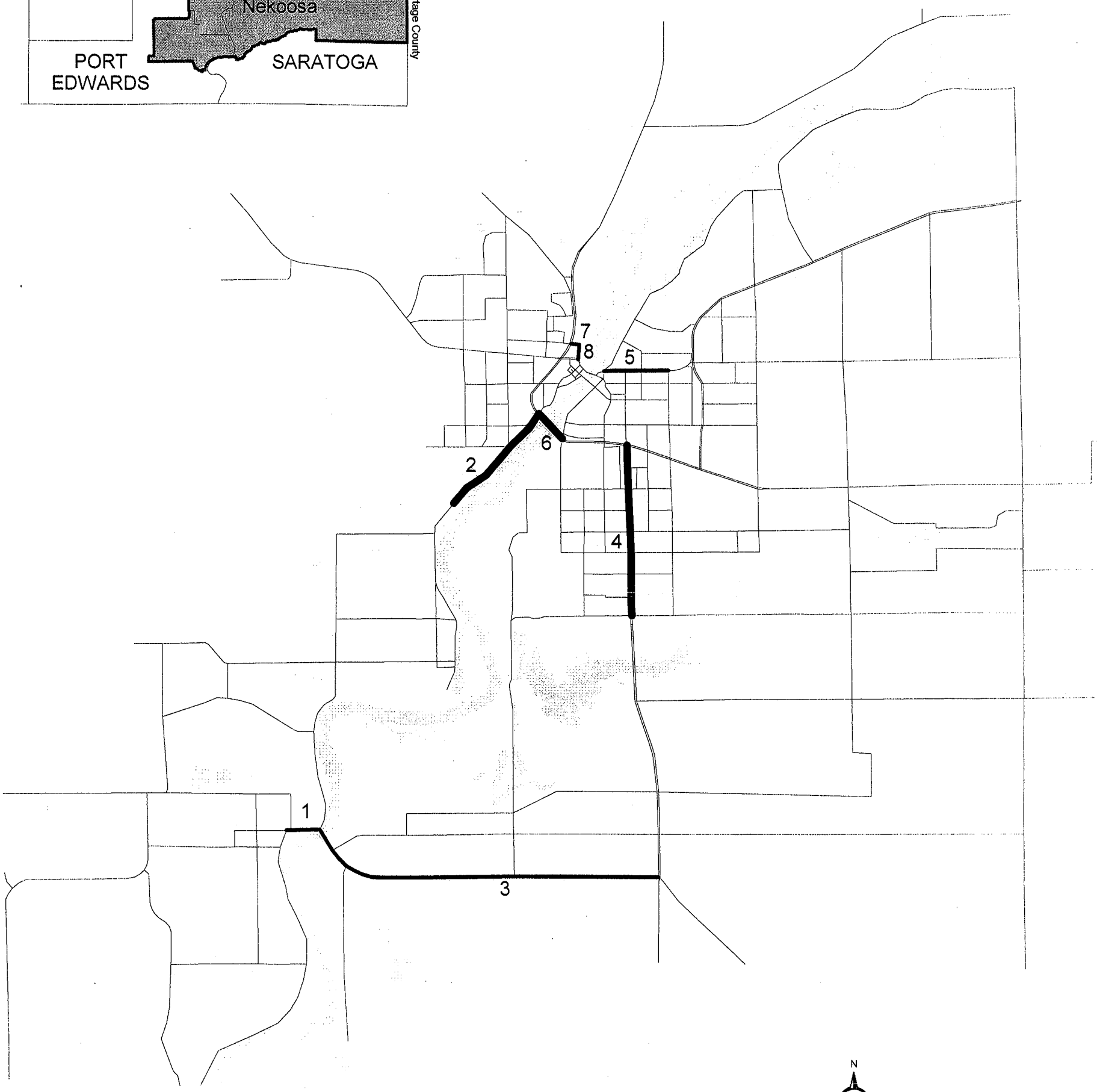
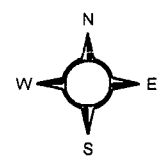
Map 3-2
South Wood County Area Transportation Study
Two-Way Volume-To-Capacity Ratios
2025 Base







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1.01 - or Greater
Water

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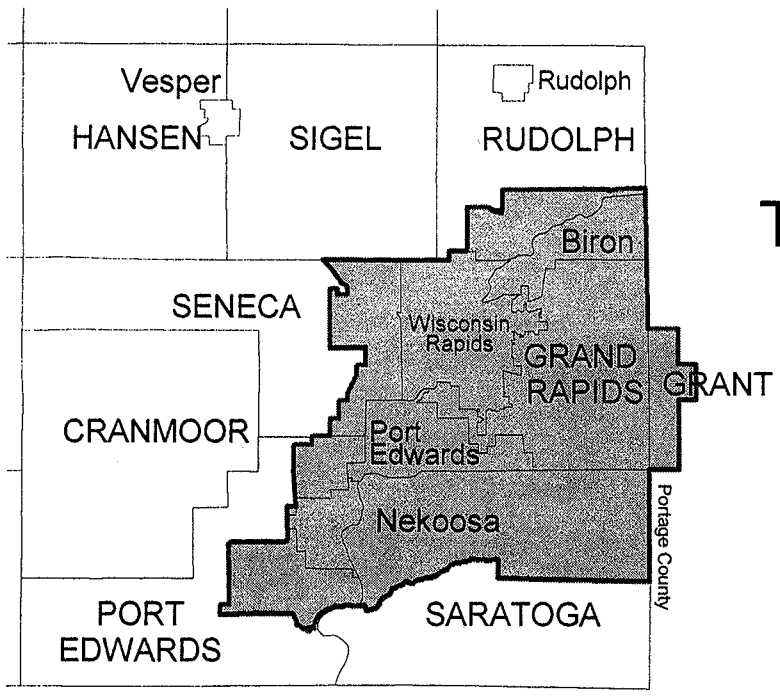
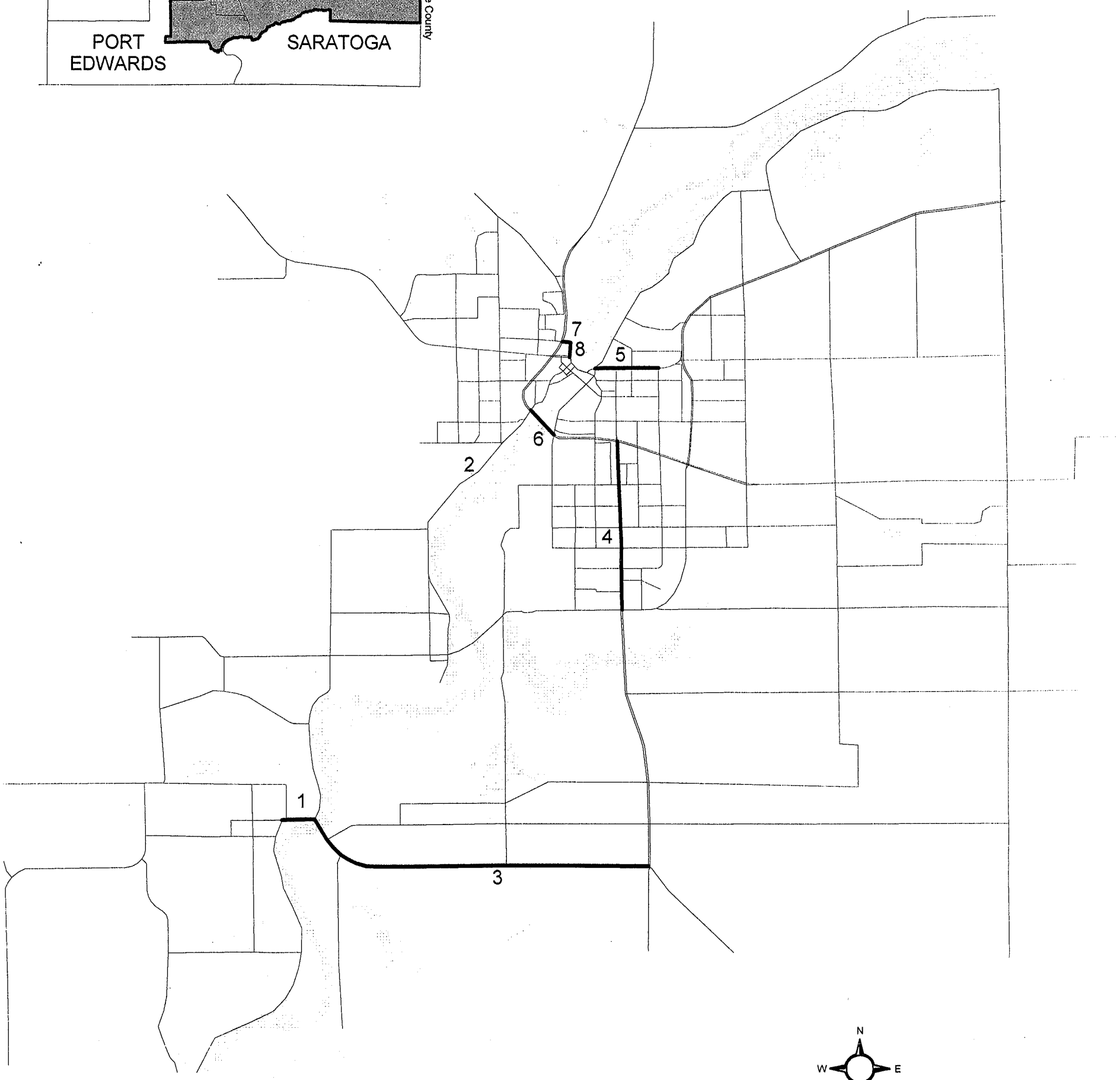
Map 3-3
South Wood County Area Transportation Study
Two-Way Volume-To-Capacity Ratios
2025 w/Alt. 4





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0 - 0.75
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TRANSIT SYSTEM OVERVIEW AND ISSUES

Transit Overview

The City of Wisconsin Rapids currently contracts for shared-ride taxi services through River City Cab. This is a demand responsive service to all areas within the city limits of Wisconsin Rapids. Service to and from points out of the city limits is also provided at a higher fare structure. The service operates seven days per week with a current fleet of 13 cars and 2 vans. Hours of operation are 5:00 A.M. to 12:00 Midnight, Monday through Thursday; 5:00 A.M. to 1:00 A.M., Friday and Saturday; and 7:30 A.M. to 4:30 P.M., on Sundays.

In order to meet the requirements of the Americans with Disabilities Act of 1990, River City Cab maintains accessible vehicles and provides the same level of service to individuals with disabilities as offered to individuals without disabilities. Backup accessible services are contracted to Wheels of Independence, Inc.

Other transportation providers operating in the area include:

Wood County Department of Aging
United Cerebral Palsy Mobile
Wood County Department of Social Services
Wheels of Independence, Inc.
Radio Cab (Inter-city Service to Greyhound Bus Lines)
Wood County Department of Unified Services

Coordination efforts are on-going through a Transportation Coordinating Committee. River City Cab coordinates their services daily with the other providers listed above to facilitate agency programming and to eliminate duplication of service.

Financial support for River City Cab is provided through fares and other operating revenues, as well as through federal, state and local subsidies. The base fare for adult passengers is $3.25 within the city limits of Wisconsin Rapids. If either the point of origin or point of destination is outside the city limits, the fare is $1.25 per mile with $3.25 minimum. Reduced fare schedules are available for child/student, elderly or disabled passengers.

Service demand is expected to increase with the Riverview Hospital Cancer addition being built, the anticipated construction of a Marshfield Clinic facility, and the new Senior Center being developed from the old Wal-Mart building. Planned acquisition of a 15-passenger van for same-time group employment trips will free up more time for the regular cabs to service unscheduled fares.

Utilization of the shared ride taxi service in the Wisconsin Rapids area has shown dramatic growth. Between 1980 and 2000, ridership increased 147%. Table 3-3 shows passenger ridership for River City Cab for 1980, 1990 and 2000. Periodic fare increases have had little effect on demand, and service has continued to expand over this time.

Table 3-3 Shared Ride Taxi Service Passengers - Wisconsin Rapids Area 1980 to 2000			
1980	1990	2000	% Change '80 - '00
30,323	59,494	74,856	146.9%
Source: WisDOT Bureau of Transit			

Table 3-4 shows short-term projections through 2006. Note that transit operations planning is typically done on a five-year planning horizon due to volatility in the reliability of transit funding sources in the long term.

Ridership is expected to increase slightly before leveling off at around 86,000 in 2005-2006 with a fare increase slated for 2004. Total miles of service is expected to increase steadily, in part due to the addition of a multi-passenger van for work trips.

Table 3-4 River City Cab System Projections to 2006				
	2003	**2004**	**2005**	**2006**
Passengers	83,000	84,000	86,000	86,000
Passenger Revenues	226,500	233,520	239,080	237,360
Total Miles	365,855	375,000	380,000	385,000
Source: River City Cab, 2002.				

Transit Issues

Transit issues have been identified and include the following:

- Need for better coordination of transportation services within the south Wood County area.
- Development of ideas to capitalize on transportation initiatives of the W-2 program.

Recommended transit funding and projects will be addressed in the next chapter of this plan.

BICYCLE AND PEDESTRIAN TRANSPORTATION OVERVIEW AND ISSUES

Bicycle Transportation Overview

The Wood County Bicycle and Pedestrian Plan was prepared by private consultants in conjunction with the Wood County Planning Department in 1994 (update in progress) and includes the south Wood County area. Recommendations from that plan are incorporated by reference as recommendations in Chapter Four of this report.

Pedestrian Transportation Overview

Pedestrian facility planning for the study area can be appropriately and effectively managed through the development of policies and design standards. Pedestrian transportation policies and design standards are recommended in Chapter Four of this report for communities in the study area. While these recommendations are advisory in nature within the context of this plan, local governments in the study area are encouraged to seek consideration and adoption of a set of pedestrian policies.

Bicycle and Pedestrian Transportation Issues

Bicycle and pedestrian transportation issues that should be addressed in developing transportation projects include the following:

- The need for better connection between cities/villages and towns;
- The need to coordinate bicycle facility projects with routine construction projects;
- The need to take advantage of rail abandonment for trail conversion purposes;
- The need to implement amenities for bicyclists along important facilities; and
- The need for effective intersection controls for bicyclists and pedestrians.

RAIL TRANSPORTATION OVERVIEW AND ISSUES

Rail Transportation Overview

There are significant industries within the South Wood County Area that are dependant on rail to bring raw materials and supplies and take out large quantities of heavy product. Rail lines were established in the study area over a century ago. Today, much of the routing is the same as when it was established. One east-west route originating in Stevens Point and a north-south route from Wausau and Junction City through Wisconsin Rapids and Babcock to Necedah serve the area. Each route currently has about six trains per day.

Stora Enso's operation alone generates tons of product movement. The Converting Division has 5 rail docks. Canadian National Railroad built a new yard on the northwest side to accommodate the

extra traffic generated from a new converting machine. Rail is also essential for transportation of raw wood for the Kraft Mill. Logs are brought in from a rail yard at Fifield in Price County. Domtar paper mill operations dominate both Nekoosa and Port Edwards and are rail dependant. In Port Edwards another major industry, Vulcan Chemicals, is also rail dependent.

Rail Transportation Issues

The Highway 54 E. Rail Corridor is accessible for spurs to the Biron Industrial Park and the Wisconsin Rapids East Commerce Center.

There is currently a proposal to relocate part of the north-south route to the outskirts of the urban area. The concept would eliminate 7 existing rail crossing while creating 3 new crossing for a net reduction of 4 crossings. This would decrease the total vehicle crossing exposures by 109,000 per day. Also, traffic queuing at West Grand intersection (ADT = 16,100) would be eliminated. The new routing would allow for faster train speeds, increasing the efficiency of rail transport in the area.

Some concerns with the proposal include residences on Gaynor Avenue being nearer to the track. The primary issues the proposal hinges on include an estimated cost of over $4 million, some opposition to the proposed routing and General Chemical, the only direct railroad customer to be affected, which would have to be relocated. The Town of Seneca is not opposed to the relocation, but has gone on record opposing the relocation being on the City - Town boundary line. The Town is not opposed to the line being relocated in County forest land.

AIR TRANSPORTATION OVERVIEW AND ISSUES

Air Transportation Overview

Alexander Field, South Wood County Airport (see Figure 3-1), is jointly owned by the City of Wisconsin Rapids, Village of Port Edwards, and Town of Grand Rapids. The Airport is governed by a commission comprised of the heads of each these units of government. The Airport lies partly within the City of Wisconsin Rapids, but the majority is in the Town of Grand Rapids with a portion on the southern boundary in the Village of Port Edwards. The airport property is bordered by First Street South, Two Mile Avenue, Sampson Street, County Trunk Z and Range Line Road. It encompasses approximately 427 acres and has portions of One Mile and Two Mile Creeks flowing through the southeast corner of the property. Nepco Lake is located south of County Z and at the end of the Runway 02. The City of Wisconsin Rapids wastewater treatment plant is at the north end of the runway. The runway's asphalt surfaces and markings are in good condition. Four instrument approaches and up-to-date navigational aids make Alexander Field an all-weather airport.

Wings Air Charter service operates from the airport. Major airframe and powerplant service is available. Other services provided include: fuel, parking, hangers, passenger lounge and flight training. There are three hotels within one mile of the field. The field is one-half mile west of access to Highway13 and is about two miles from downtown Wisconsin Rapids.

The airport is part of the Wisconsin State Airport System and is classified as a Transport/Corporate

airport. This type of airport is intended to serve corporate jets, small passenger and cargo jet aircraft used in regional service and small airplanes (piston or turbo prop) used in commuter air service. This classification is not expected to change between now and 2025.

Approximately 69 aircraft are based on the field, including: 51single engine airplanes, 4 multi-engine airplanes, 2 helicopters and 12 ultralights. Aircraft operations average about 44 per day and are comprised of about 49% transient general aviation, 41% local general aviation, 10% air taxi and less than 1 % military. The following table shows current and projected operations at the airport.

Table 3-5
Forecast Total Aviation Operations
South Wood County Airport

2000	2010	2020
37,330	37,930	39,230

Source: WisDOT, 2000.

Air Transportation Issues

The FAA lists runway obstructions including trees, ranging from 2,700 to 1,200 feet from the various runways, and a road 200 feet from Runway 11. The FAA also indicates that terrain drops off sharply 100 feet from Runway 02. Animals, including deer, on and around the runways are also a concern.

Any future expansion of the airport may be restricted by the roads and urban development that border the property. One and Two Mile Creeks and the Wisconsin River, ½ mile west, are significant barriers to expansion.

CHAPTER 4
RECOMMENDED TRANSPORTATION PLAN

RECOMMENDED STREET AND HIGHWAY IMPROVEMENT PROJECTS

Recommended street and highway improvement projects include a limited number of capacity improvement projects as well as system preservation projects. Capacity improvement projects are defined as projects which add travel lanes to an existing arterial or collector street or highway (system improvement projects) or involve the construction of an arterial or collector facility on a new alignment (system expansion projects). System preservation projects include a broad category of projects which improve the physical condition of an arterial or collector street or highway without adding capacity to that facility.

It is important to note that the projects listed in this long range plan are proposals that need to be negotiated. Open discussion of project concepts does not necessarily mean that it will be as presented. The proposal may evolve to take on a new form or a new and different proposal may emerge to take its place.

Capacity Improvement Projects

Two capacity improvement projects are recommended for implementation in the long range transportation plan, see Map 4-1. In fact, the model data supports the combination of both projects including a proposed east side arterial and a proposed bridge at Port Edwards. Two options for executing these projects are presented. Option A presents the two proposals as independent local projects. Option B explores the possibility of combining the two proposals into a single coordinated project. An overview of each option follows:

OPTION A - Independent Local Projects

1. Proposed East Side Arterial

DESCRIPTION:

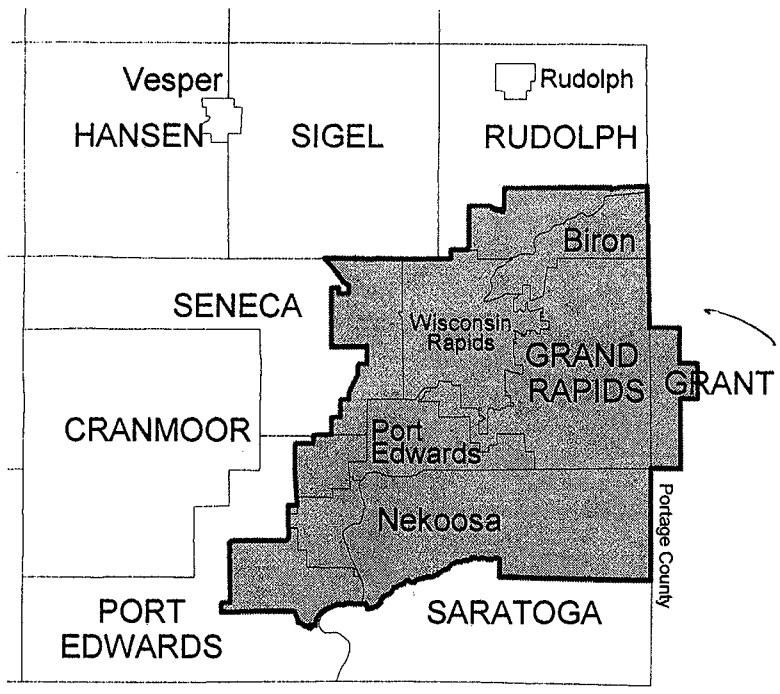
- Construct two-lane urban route extending between STH 54/CTH W on the north and STH 13/CTH Z on the south; approximate project length, 2.1 miles.

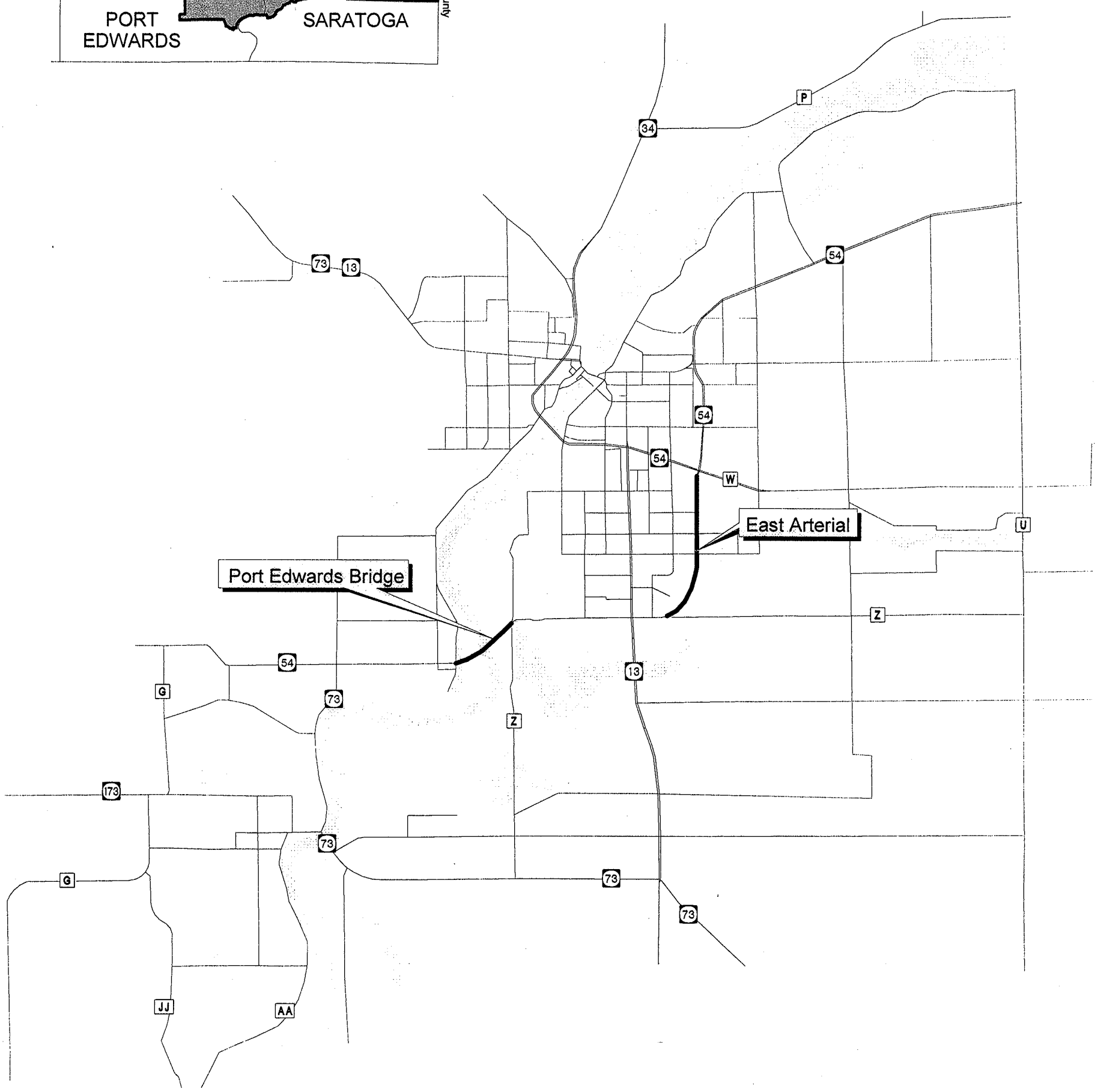
- Preserve/acquire right-of-way for eventual expansion to four lanes as future transportation and economic conditions warrant.

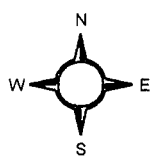
- Plan for and implement access control to maintain functionality of route. Note that access controls would be required if federal funding for project is to be obtained.

- Pursue relocation of STH 13 off 8th Street to new route, but maintain "Business Highway" designation on 8th Street. (State Trunk mileage added through new route is roughly equal to mileage of 8th Street segment.) Refer to Map 4-2.

Map 4-1
South Wood County Area Transportation Study
Major Planned Improvements







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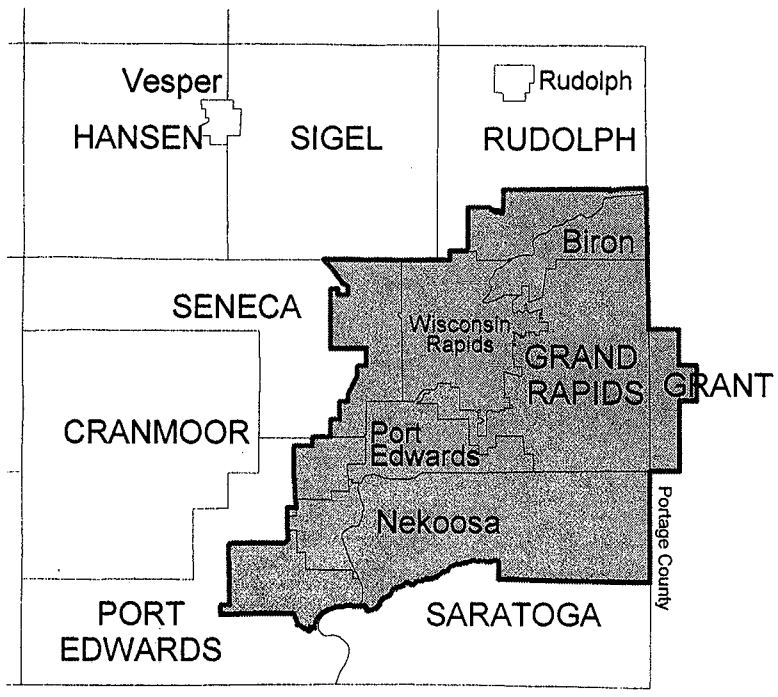
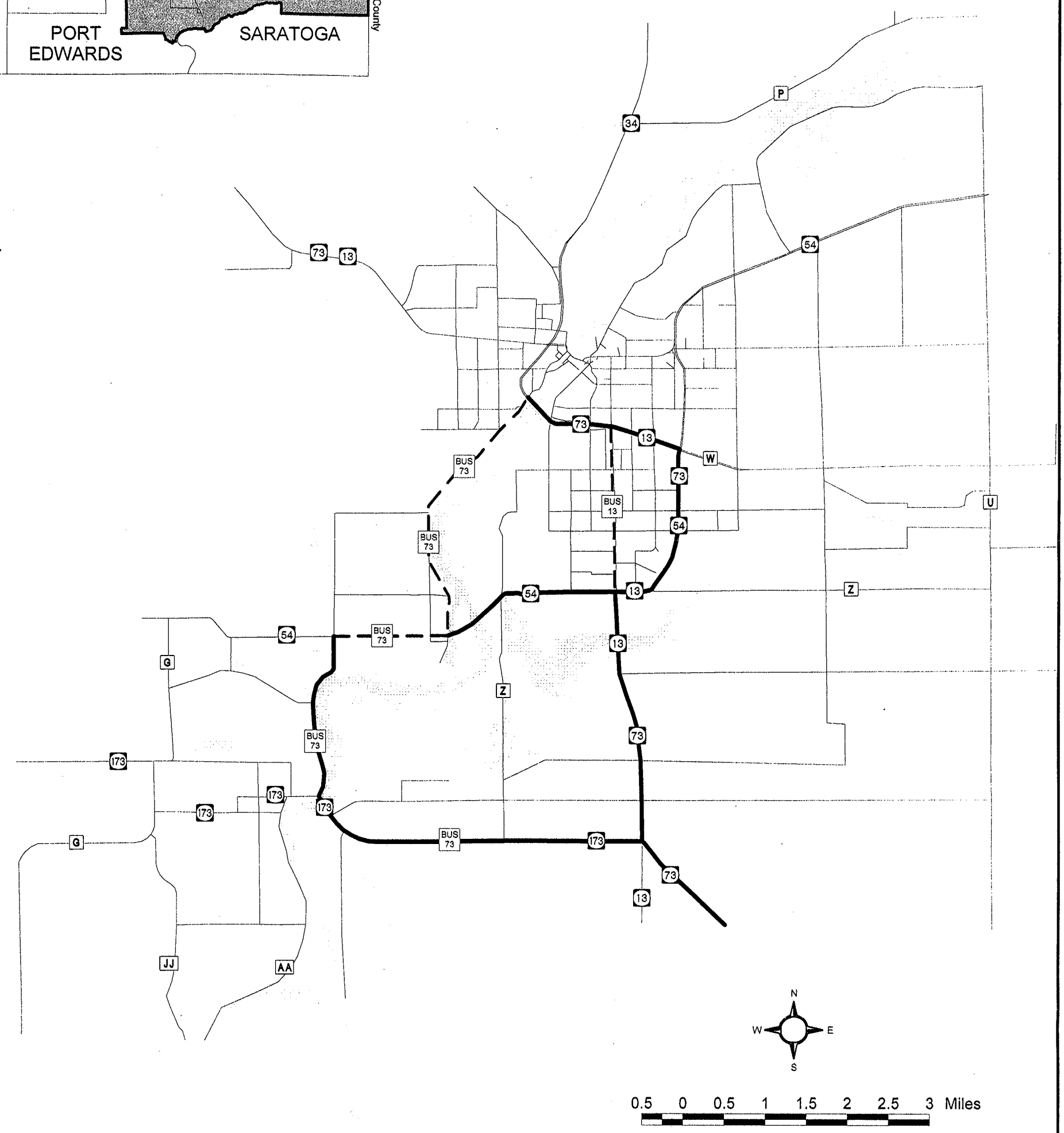
Map 4-2
South Wood County Area Transportation Study Potential Future STH 13, 54, 73, & 173 Routing





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Potential STH 13, 54, 73, & 173 Routing

Potential Business STH 13, 73 Routing

Water

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OUTCOMES:

- Relocation of STH 13 enhances 8th Street business district by relieving congestion and particularly through truck traffic, improving traffic flow and access to businesses.
- Creates business designation and identity for 8th Street (Business Highway 13).
- Addresses capacity problem on 8th Street.
- Reduces need for restricting access on 8th Street or the necessity for broad safety measures such as a barrier median or other pedestrian safety measures.
- In conjunction with proposed Port Edwards bridge, significant truck traffic (on STH 54 bound for I39) could be diverted from Downtown Wisconsin Rapids and neighborhoods in central and western Wisconsin Rapids as well as in Port Edwards. This reduction in truck traffic would enhance these areas by decreasing traffic noise levels and should have a positive effect on property values.

FUNDING:

- Estimated Project Cost: $ 6.6 million (construction and real estate)
- STP Urban and local funds

IMPLEMENTATION STEPS:

- Environmental/feasibility study - $100,000 set aside for 2005.
- Reach agreement on jurisdictional transfer of 8th Street.
- Develop agreement between the urban area's communities on how project will be funded.
- Develop preliminary design environmental assessment and identify access locations.

2. Proposed Port Edwards Bridge

DESCRIPTION:

- Construct two-lane bridge to cross Wisconsin River in Port Edwards between CTH Z/Griffith Avenue and STH 54-73/Letendre Avenue; approximate project length includes two bridge spans of 500' and 1000' with approximately 0.62 mile of surface street connecting the spans.
- It is recommended that the bridges be designed/built to accommodate potential future state trunk designation, as well as eventual expansion if warranted.

OUTCOMES:

- Increase land use options for planned growth.
- Opens areas (Nepco Lake) for residential development, potentially increasing property values/village tax base. Port Edwards indicates this area currently remains undeveloped in large part due to lack of good access by village emergency and maintenance vehicles.
- Reduces urban sprawl by facilitating development of vacant lands between built up areas of the city and village.
- Provides better link for businesses in Port Edwards to airport.
- In conjunction with proposed East Side Arterial, significant truck traffic (on STH 54 bound for I39) could be diverted from Downtown Wisconsin Rapids and neighborhoods in central and western Wisconsin Rapids as well as in Port Edwards. This reduction in truck traffic would enhance these areas by decreasing traffic noise levels and should have a positive effect on property values.

FUNDING:

- Estimated Project Cost: $ 6.9 million (construction and real estate)
- Potential High Cost Local Bridge program (ss.84.11): current funding formula is 1/3 local; 1/3 county; 1/3 state. The potential for this formula to change, especially in light of the current budget situation, warrants careful consideration.

IMPLEMENTATION STEPS:

- Conduct cost benefit and environmental analysis.
- Develop agreement between the urban area's communities on how project will be funded.

OPTION B - Combined Project

DESCRIPTION:

- Combined East Side Arterial and Port Edwards Bridge; project lengths identified above.
- Upgrade of CTH Z linking the new arterial and bridge; approximate project length, 1.52 miles.
- Potential relocation of STH 54 to new alignment, refer to Map 4-2.

OUTCOMES:

- Benefits discussed under the individual projects still apply.
- Congestion is reduced on 8th St. (STH 13) and the Riverview Expressway Bridge (STH 13/54) in 2025. This would reduce or delay the need to construct additional lanes to increase the traffic carrying capacity on these segments.
- Improved traffic flow on STH 54, if relocated.
- Potential to relocate STH 73/173, refer to Map 4-2. (Results in 1 mile net decrease in STH mileage.)

FUNDING:

- Estimated Project Cost: $ 16.6 million

IMPLEMENTATION STEPS:

- Cost benefit and environmental analyses.
- Reach agreements on jurisdictional transfers of 2nd Ave. S. (STH 54/73), 8th St. (STH 13) and Griffith Ave (CTH Z.).
- Consider closure of some low-use roads along the proposed route, such as Range Line Road (north of CTH Z) to improve traffic flow and safety by eliminating intersections.
- Investigate options for submitting proposal to WisDOT as a Major Highway Project.
- Develop agreement between the urban area's communities on how project will be funded.

System Maintenance And Preservation

The design life of arterial and collector streets is approximately 35 years, meaning that a street newly constructed today will require complete replacement 35 years from now. The design life for local streets is approximately 50 years. The difference in design life is due to differences in both overall traffic and truck usage. In order to realize the design life, however, a number of interim measures are applied. Pavement preservation would follow this sequence for arterials and collectors:

- 10 years: seal
- 16 years: seal
- 22 years: seal
- 28 years: seal
- 35 years: reconstruct.

For local streets, the preservation program would be:

- 10 years: seal
- 20 years: seal
- 30 years: seal
- 40 years: seal
- 50 years: reconstruct.

The pavement preservation costs were projected for each functional class of road using the above sequence of operations. Table 4-1 shows the projected preservation costs for the planning period.

Table 4-1
Projected System Preservation Needs

Facility Type	Treatment and Cost per Mile	Frequency within Planning Period*	Total Need for Planning Period
Arterial or Collector (182.2 miles)	Seal $16,000	2.9	$8,454,080
	Reconstruct $1,100,000	.71	$142,298,200
Local (322.7 miles)	Seal $8,000	2	$5,163,200
	Reconstruct $345,000	.5	$55,665,750
		Total:	$ 211,581,230
		Average Annual:	$ 8,463,249

Source: NCWRPC, 2003. * Occurrence of treatment type over life of plan based on recommended treatment sequences.

State System Condition Inventory

The Wisconsin Department of Transportation maintains a detailed inventory of the State Highway System. Sophisticated evaluation systems such as the Pavement Distress Index or PDI are utilized to monitor the condition of each roadway. WisDOT uses this data to identify State Trunk Highway needs and to program the appropriate system maintenance and preservation or construction projects.

Appendix D contains a summary of the WisDOT inventory for the State Trunk Highway System in the Wisconsin Rapids urban area. The report includes projections of the next maintenance, preservation or construction treatment needed on each segment of highway and when the project might be scheduled.

RECOMMENDED TRANSIT PROJECTS

The shared-ride taxi system capital costs and operating expenses are projected in Table 4-2. Taxi cabs are replaced after 200,000 miles. Operating expenses are projected to increase modestly with inflation over the planning period.

Table 4-2
Recommended Transit Capital Items and Operating Expenses

15-passenger van (used)	$6,000	2003
Cab Replacement (3 sedans)	$70,000	2005
Cab Replacement (2 sedans)	$48,000	2006
Accessible Van	$30,000	2007
Cab Replacement (3 sedans)	$85,000	2012
Cab Replacement (3 sedans)	$95,000	2018
Cab Replacement (3 sedans)	$105,000	2024
Total Capital Costs:	$439,000	
Operating Expenses:	$18,852,285	2003 - 2025

Source: River City Cab & NCWRPC, 2002.

RECOMMENDED BICYCLE AND PEDESTRIAN STRATEGIES

Bicycle Transportation Strategy

The Wood County Bicycle and Pedestrian Plan is currently being updated by the Wood County Planning Department. That plan will identify recommended bicycle and pedestrian transportation projects. Specific information concerning individual projects recommended for the planning period will be available in the updated *Wood County Bicycle and Pedestrian Plan*, including project termini, design type, implementing jurisdiction(s) and approximate project cost.

Pedestrian Transportation Strategy

Municipalities in the study area are encouraged to seek consideration and adoption of a set of pedestrian policies. At a minimum, sidewalks should be installed on urban streets in commercial and multifamily areas, on school routes and on high traffic routes. The City of Wisconsin Rapids has a sidewalk ordinance in place. This ordinance specifies the procedures for construction or repair of sidewalks. In Wisconsin Rapids, sidewalks are only required to be installed in commercial or multifamily areas on a property where the main building is constructed. Sidewalk to be installed in all other cases is at the determination of the common council based on the guidelines in the City's ordinance.

RECOMMENDED RAIL FACILITIES PROJECTS

Accessible rail transportation is an asset that the South Wood County Area should take to its full advantage. Heavy mainline rail currently passes through and serves industry in the City of Wisconsin Rapids West Industrial Park. Industry in Nekoosa and Port Edwards also depend on rail for raw materials and finished product. The highway 54-east corridor passing through the Village of Biron, City of Wisconsin Rapids and the Town of Grand Rapids also has a heavy mainline rail following the same corridor. The ready availability of rail transportation should be exploited to the fullest extent possible in business and industrial recruitment efforts that may benefit the area.

In the South Wood County Urban Area the following rail facilities project has been identified:

- West Side Rail Relocation (est. $4.5 million for construction and ROW.)

This project has a number of benefits potentially associated with it including: improved traffic safety via the elimination of a number of crossings; reduction in traffic delays; reduction in delays and increased spacing for rail operations; decrease in noise pollution for urban area neighborhoods.

Funding for this project will likely be federal rail road safety funds, WisDOT rail funds, local funds and corporate investment.

RECOMMENDED AIRPORT PROJECTS

The South Wood County Airport is a public facility that operates somewhat like a private, for profit enterprise. Revenue is generated through a number of service charges and fees. These include fuel sales, parking fees and hanger rental. Federal and state airport funding in the forms of federal entitlement and block grants and state airport aids. These funds are primarily for major maintenance and capital improvements. The three local units that own the facility, Wisconsin Rapids, Port Edwards and Grand Rapids, also contribute funding including match for the federal and state aids. The airport is currently looking at five improvement projects, including items to address some of the identified areas of concern. These projects are as follows:

- Land Acquisition in Runway 11 Approach $ 75,555

- Install Deer Fence and Relocate Road	$ 425,000
- Reconstruct Hanger Area Taxiways and Apron	$ 750,000
- Reconstruct/Expand Terminal Apron	$ 250,000
- Relocate Access Rd and Reconstruct Parking Lot	$ 80,000
	$1,500,555

FINANCIAL PLAN

This section presents an assessment of the collective financial capacity of transportation providers in the study area to implement the transportation improvements envisioned in this plan. The term "financial capacity" refers to the ability of each provider of transportation facilities and services to maintain and preserve the existing transportation system and to finance the planned improvements described earlier in this chapter.

It should be noted that only 2.8 centerline miles will be added to the arterial and collector network over the planning period under this plan. When a total system of 182 miles is considered, this amounts to an increase of only 1.5 percent. However, larger investments are expected in system maintenance and preservation over the planning period. In this analysis, bicycle and pedestrian facilities are considered a component of the streets and highways system.

The financial capacity analysis compares the estimated long range funding with the estimated long range needs and explores the capability of existing funding sources to meet the maintenance, preservation and improvement needs of the transportation system.

A review of existing conditions indicates an organizational and financing structure that will require additional funding in order to sustain and improve the current urban transportation system:

Estimated Long Range Funding

The following analysis is based in part on the annual bulletin of *County and Municipal Revenues and Expenditures*, published by the Wisconsin Department of Revenue (DOR). Each jurisdiction in Wisconsin is required to file a report on revenues and expenditures and is provided a Financial Report Form by the Department of Revenue. Transportation expenditures are reported to DOR on a line-item basis that includes four categories: maintenance and administration, highway construction, road related facilities and other transportation costs.

Revenues for use in transportation programs are not as segregated as on the expenditure side. Instead, the report more generally accounts for various transportation revenue sources within the following categories: various federal grants and aids including those for transportation, state shared revenues, state highway aids, all other state aids for transportation other that highways, other local government aids including highway and bridge aids such as connecting highway funding, public charges including passenger revenues, and others. These figures do not include the funds used by WisDOT for costs incurred by the state for highways within the study area. Revenue sources used for transportation generally keep pace with inflation.

Due to the blending of transportation revenue sources, the revenue data is not adequate to accurately reflect actual transportation program revenues. For this reason, the more segregated DOR expenditures are used to identify the level of revenues that will be directed to transportation from the various sources. Local units within the Region tend to budget consistently for transportation expenditures from year to year to minimize budget fluctuations. The annual amount is projected in constant dollars over the life of the plan and is assumed to be a reasonable estimate of anticipated local revenue. On average, jurisdictions in the study area spend over $ 8 million annually on the transportation system, see Table 4-3. The largest portion, over $5 million (about 63%), is spent by the City of Wisconsin Rapids. The total anticipated local spending over the life of the plan is over $203 million.

Table 4-3
Annual Local Transportation Expenditures
Projected Revenue 2000 - 2025

South Wood County Study Area	Local Annual Transportation Expenditure $	Percent of Total Expenditure
Village of Biron	$211,700	2.6 %
Town of Grand Rapids	$785,200	9.6 %
Town of Grant[1]	$44,369	0.5 %
City of Nekoosa	$581,400	7.1 %
Portage County[1]	$45,866	0.6 %
Town of Port Edwards[1]	$62,777	0.8 %
Village of Port Edwards	$374,100	4.6 %
Town of Rudolph[1]	$53,934	0.7 %
Town of Saratoga[1]	$227,323	2.8 %
Town of Seneca[1]	$79,202	1.0 %
City of Wisconsin Rapids	$5,117,000	62.9 %
Wood County[1]	$556,243	6.8 %
Total Local Expenditure	$8,139,114	100 %
Projected Local Revenue	$8,139,114 X 25 Years	$203,477,850

Source: DOR 2000 & NCWRPC 2003. [1]Partial budget in proportion to study area.

Estimated Long Range Need

The first half of this chapter explores physical needs of the transportation infrastructure in terms of operation, maintenance and improvement. Major capacity adding improvements are recommended by this plan, along with the necessary system maintenance and preservation. The following table presents a summary of these needs and their representative costs projected over the life of the plan.

Table 4-4
Transportation System Needs Summary 2000 - 2025

Recommended Projects	$ 16,600,000
System Preservation	$ 211,581,230
Transit	$ 19,291,285
Rail	$ 4,500,000
Air	$ 1,500,555
Total	$ 253,473,070
Ave. Annual	$10,138,922

Compiled by NCWRPC (various sources), 2003.

A comparison of funding and needs reveals a shortfall of nearly $ 50 million. The amount of revenue that local units anticipate spending on transportation does not match the level of need projected by this study. It will be necessary to seek additional funding sources to fill this gap. While it is difficult to accurately project actual outcomes 25 years into the future, the figures presented appear to be reasonable. There is time for the urban area to develop solutions to the potential funding shortfall. The following recommendations suggest an initial approach to achieving a financially constrained plan for the urban area. Area legislators have been very effective at leveraging special project funding in recent years and should be enlisted in this effort.

Shortfall Strategy

A three-fold approach is recommended to begin dealing with the possible funding shortfall: (1) encourage "majors project" status for the recommended projects; (2) defer projects and undertake more system management measures; and (3) develop new local transportation funding sources.

1. Encourage Major Project

Finding maximum outside funding for the east side arterial and Port Edwards bridge project would be a first step in relieving the anticipated shortfall. The significant benefits to be realized from these projects make it difficult to recommend against proceeding with their development.

Under state law, a major highway project has a total cost of more than $5 million and constructs a new route of 2.5 or more miles, adds capacity to five or more miles of an existing highway, or converts an existing multi-lane divided highway of 10 or more miles to freeway standards. The basic steps in the majors process are as follows:

- **Project needs analysis & TPC approval for further study** - Approval to begin a project needs analysis must come from the Highway Program Committee comprised of WisDOT Central Office and district office senior managers. The analysis evaluates a project based on its level of community support and its potential to enhance traffic flow, safety and contribute to the local economy. In the fall of odd numbered years, WisDOT recommends to the Transportation Projects Commission (TPC), a list of projects that merit further study. The TPC is a 15-member panel that includes five state senators, five assembly representatives, three private citizens and the WisDOT Secretary. The TPC reviews the list and authorizes certain projects to move forward to the next phase.

- **Environmental Impact Study** - An EIS identifies the social, economic and environmental impacts of building the proposed project. The EIS must be approved by all affected federal and state regulatory agencies.

- **TPC approval for enumeration** - Based on information from the previous steps WisDOT assigns each proposal a score. The criteria consider a project's ability to enhance the state's economy (40%), improve traffic flow (20%), minimize environmental impacts (10%), and serve community objectives (10%). The TPC then holds public hearings and WisDOT recommends to the TPC the top candidates for "enumeration" (placement on the list for construction). The TPC makes a final recommendation to the legislature. Note that state law now prevents the TPC from recommending projects unless funding is available to begin work within six years. Once a major highway project is approved by the full legislature and the Governor as part of the biennial state budget, it is considered "enumerated".

- **Final design and construction** - Once a major highway project is enumerated, final design and construction plans can begin. A final round of public outreach sessions are held to finalize design details and minimize construction-related disruptions.

Although there is some debate as to the long-term effect of the Governor's proposed (March 2003) budget, transportation funding would be preserved at least in the near term. Efforts to schedule these projects should begin sooner than later in the event that the transportation funding picture, in fact, grows worse rather than improving over time. It should be noted that there is significant backlog in the currently enumerated projects, and at its most recent session, the TPC chose not to select any additional projects for enumeration. However, the US Department of Transportation has introduced a bill ("SAFETEA") to increase transportation funding by 13 % from the last six-year funding cycle under TEA-21.

2. Project Deferral

Various projects might be staged over longer periods of time than standard practices dictate. The Urban Group should work together to use system management tools such as the new Wisconsin

Information System for Local Roads (WISLR) and Paserware, the pavement management computer software. These tools can provide the necessary data to prioritize and schedule projects most effectively.

3. New Funding Resources

As a long-term venture, it could be wise for the urban area communities to set into motion the creation of their own regional transportation fund. This could be similar to creating a funding pool for public agency consortiums for self-insurance purposes.

Such a regional fund could be aimed at filling future gaps as the available federal/state funds decrease. The long-term goal would be to create more of a regional self-reliance for funding of transportation.

Such a fund would have the flexibility to use funds for multi-modal or better, for inter-modal purposes. It would not be just a roadway improvement fund. It also would be useable for new and preservation projects.

Such a funding concept would require inter-agency agreements. This would not require creating a new layer of government. Funds could be managed through the auspices of the Urban Group.

The sources of money for this urban area transportation fund could be several:

a. Develop contributions – this could be in lieu of payments.

b. County transportation impact fee – the state recently enacted legislation authorizing such impact fees; these would be used to acquire funds from new development.

c. User fees – this could be in the form of wheel taxes or fees, local option fuel tax might be considered (if State law allows, or may have to be proposed), sales tax.

d. Special benefit or improvement taxing districts.

Multiple sources would represent a strategy to place the burden on a broad spectrum of users and beneficiaries of the transportation system – residents, visitors, new development, and existing property owners.

The urban area transportation fund and its sources of income could be part of the general implementation strategy that has three principal parts:

1. Financial resource augmentation – the creation or development of more resources (at minimum to retain level of current funding).

2. Minimize the need for funding via:

    a. Programs to reduce the need for transportation improvements – lower overall

vehicle miles of travel (vmt) and reduce peak-hour travel.

b. System management to enhance the efficiency/effectiveness of maintenance and preservation programs.

c. Value engineering to produce project designs that gain the most optimal construction cost to value relationship.

3. Resource allocation – using available (now and future) funding to achieve the most effective results, given consideration of local goals, objectives, and policies, this would also entail achieving a more equitable balance between those benefitting from a transportation investment and those paying the cost.

CHAPTER 5
PUBLIC PARTICIPATION PROCESS

INTRODUCTION

Public participation is essential to any planning effort and is incorporated into the long range transportation planning process. Public involvement efforts were directed to each impacted unit of government and the general citizenry emphasizing the provision of information, education on transportation issues and the solicitation of input and opinion. Specific elements of the public participation process include regular meetings of the local policy advisory committee, meetings at committees and governing bodies representing the urban area, and public informational meetings to solicit input on the draft plan.

MEETINGS OF THE LOCAL POLICY ADVISORY COMMITTEE

All meetings of the South Wood County Area Transportation Study Policy Advisory Committee were open to the public. This Committee was comprised of local elected officials who represent the interests of their respective publics.

MEETINGS WITH LOCAL GOVERNING BODIES

Project staff attended a series of meetings at each local unit comprising the urban study area. The purpose of these meetings was to inform elected officials and administrative staff not attending the Advisory Committee sessions about the project and solicit their input on community data being collected. The long-range, land use development vision for each community was also discussed.

These were regular meetings of their respective bodies, posted and open to the public. Local media was in attendance at some of these meetings, and subsequently ran stories regarding the project. These articles further served to add public awareness of the planning process.

Each governing body will discuss adoption of the plan in open, public meetings to complete the process and set implementation of the final plan into motion.

PUBLIC INFORMATIONAL MEETING

A public informational meeting was held on July 31, 2003. Legal notice of this meeting was published in the local newspaper and a press release was issued. Notices for posting were sent to each affected unit of government. There were 21 people in attendance. A general overview of the plan and its recommendations was provided and public input was solicited. Comments were received from the Town of Seneca and a few private citizens. All comments received during this process were reviewed and included in the plan as appropriate.

CHAPTER 6
ENVIRONMENTAL REVIEW

ECONOMIC AND SOCIAL IMPACTS OF 2025 PLAN

Economic Impacts

Direct economic impacts are projected to be similar in each of the alternative scenarios due to the same projection of employment growth for each by 2025. Identifying the differences between these alternatives occurs when one compares the locations of projects and the differences in congestion and traffic flow.

Each alternative produced increases in the amounts of vehicle hours traveled (VHT) and vehicle miles traveled (VMT) on streets and highways in the study area. The combined projects scenario realizes a savings in VHT and VMT when compared to 2025 base network scenario. This savings will also produce a reduction in vehicular wear and tear and energy savings.

Table 6-1
Travel Impacts Of Growth Scenarios
1993-2025

Alternative	VHT INCREASE	VMT INCREASE
2025 - No Planned Projects	62.29%	61.13%
2025 - Planned Projects A & B	60.68%	59.69 %

Source: Travel Demand Model and NCWRPC, 2002.

Implementation of the recommended transportation plan contributes to efficiency in travel distances and time, with nearly 11,246 vehicle miles saved and over 425 vehicle hours saved on a daily basis in 2025 when compared to projected levels. System preservation is emphasized in the recommended transportation plan, as illustrated by only a 1.5 percent increase in system mileage between 1999 and 2025.

Land Use Impacts

Implementation of the recommended transportation plan contributes to the desired land use pattern established in developing the growth scenario, including the various local "plans" on which that scenario was based.

Traffic Congestion

Prior to the testing of capacity adding improvements, the existing road network would be unchanged under each of the growth scenarios. The only additions to the present day network would be the addition of access points to accommodate new developments and neighborhoods, along with any new residential streets and frontage roads which would be local in function.

Overall, the study area has low levels of traffic congestion. However, implementation of the recommended transportation plan does contribute to a reduction in the level of congestion, as is

documented in Chapter Four. The percentage of the system approaching congested or already congested decreases by about 15 percent compared to baseline 2025 levels when the recommended transportation plan is implemented. The number of vehicle hours which motorists spend in congestion delay decreased by over 34 percent when compared to baseline 2025 levels when the recommended transportation plan is implemented.

Noise

Before planned projects could be built, the noise impacts would have to be assessed.

Historical/Cultural Resources

Before project construction, the environmental documentation will analyze impacts on any historical or other cultural resources in the study area.

NATURAL RESOURCE IMPACTS OF 2025 PLAN

Wetlands

Some wetland areas would most likely need to be filled or otherwise disturbed by planned projects. If wetlands were disturbed, this impact would have to be mitigated. Wetland banks are available which could be utilized to mitigate this impact.

Threatened Or Endangered Species

Before project construction, the environmental documentation will analyze impacts on any threatened or endangered species in the study area.

Air Quality

Although the South Wood County Urban Area is not currently subject to Clean Air Act regulations and emissions budgets, implementation of the recommended transportation plan also contributes to reductions in nitrogen oxide and other emissions when compared to the 2025 baseline.

IMPACT SUMMARY

The 2025 growth scenario will in one way or another impact the present land use and the environment. The extent to which this occurs is the major difference between the 2025 baseline and implementation of this plan. This would be true for each of the topics mentioned previously. Implementation of the recommended transportation plan contributes to enhanced economic (travel time, mileage and fuel savings) and environmental conditions (improved air quality) in the South Wood County Urban Area.

APPENDICES

APPENDIX A
URBAN TRAVEL DEMAND MODEL OVERVIEW

South Wood County Area Transportation Study Travel Demand Model

This appendix seeks to describe and explain the urban travel demand modeling and forecasting process in non-technical terms. It is written so that elected officials and local and regional planning and engineering staffs can gain an introductory understanding of the application of traffic models to long-range land use and highway plan development. The long-range transportation planning process meets the 3-C planning process goal of being cooperative, comprehensive and continuous. Transportation and planning for land use needs must be a cooperative effort between adjoining units of governments, various local, county and regional planning agencies and local citizens. The outcome of the cooperative planning effort culminates in the adoption and implementation of a comprehensive long-range regional transportation investment plan. The planning and modeling process is continuous, providing a systematic methodology for solving urban transportation and land use problems as they arise over time. This continuity involves monitoring changes occurring to the transportation system infrastructure and land use growth and development that could make it necessary to modify and update the long-range transportation plan. These travel demand models provide the means to test and evaluate various land use growth scenarios to see how traffic impacts both the existing and future highway systems and infrastructure.

The travel demand forecasting and modeling process is a key component of long-range urban transportation planning and highway assessment. The traffic model is a very good systemwide planning assessment tool when used to analyze congestion and deficiencies on the current highway system. The objective in its use is to test and evaluate a wide range of transportation alternatives, seeking to better manage the demand and circulation of the existing highway system. Transportation models are also used to project future traffic volumes. This valuable information can then be used by decision-makers to determine the need for new highways, expansion of the current highway system and to make changes in land use policies and growth patterns. Model results are very important to decision-makers because transportation plans and highway investment decisions are all based on the model's predictions of future traffic volumes and travel patterns. These estimates of future traffic and travel conditions can be used as the foundation for the following objectives:

- Transportation plan development
- Major benefit-cost project investment analysis
- Environmental impact assessments
- For setting highway investment priorities
- Project scheduling and programming
- For engineers to determine the optimal geometric and structural design of a bridge, highway or intersection.

A well-established and defined transportation/land use modeling and forecasting process has been in place for some time for each of our Metropolitan Planning Organizations (MPO's) statewide. A traditional 3-step transportation planning, forecasting and modeling structure has a long history of being employed since the 1960's in Wisconsin. Examples of local studies include Marshfield, Stevens Point and Wausau.

The computerized modeling process is comprised of the following three (3) steps: trip generation,

trip distribution and route assignment. Trip Generation is the first step of the travel demand modeling process. The number of trip origins and trip destinations are estimated by Traffic Analysis Zone (TAZs). In the trip generation step, number of travel attempts are assigned to each TAZ. In other words, the number and rate of trips generated by different types of use like residential subdivisions, shopping centers or industrial parks are different. For this study, an extensive land use data base is needed to drive the trip generation step. By definition, the following demographic and economic variables are included in the database:

- Population
- Dwelling units
- Households
- School enrollments
- Manufacturing employment
- Trade employment
- Commercial employment
- Wholesale employment
- Service employment
- Other employment
- Total employment

The demographic and economic data are quantified for each TAZ. The objective of the trip generation process seeks to mathematically quantify the amount of trip making to and from each TAZ as measured by the type and magnitude of demographic and economic land use data.

The second step is Trip Distribution: a procedure that determines where the trip origins produced in one TAZ will be destined for, based on the attractiveness of another TAZ. The decision on where to go (the "attractiveness" of a TAZ) is represented by comparing the proximity and accessibility of urban activity and the travel time to reach that destination, e.g., home based shopping trips. A trip maker is more likely to travel to a nearby TAZ with a high level of activity than to a distant TAZ with a lower level of activity.

The third and final step of the travel demand modeling process is Route Assignment. The purpose of the route assignment step is to develop a procedure that predicts which highway or combination of highways auto and truck trips will take between their origin and destination. For example, if a trip begins in Biron and is destined for Port Edwards, the model will simulate which specific highways are used based on the travel time and congestion on any given route. The existing highway system is used for the initial trip assignments, which includes the current functionally classified system of streets and highways. The output of the route assignment analysis step shows the volume of traffic using each highway segment throughout the entire transportation system. A comparison of model assigned traffic volumes is shown in Table A-1, below.

For a travel demand forecasting model to be valid and applicable for project evaluation, it must reasonably replicate/match existing traffic volumes and travel patterns over the planned/proposed highway projects by reasonably predicting future traffic volumes based on a set of future land use and growth management assumptions.

When forecasting future highway traffic volumes, it is quite important and imperative to have a base year model that provides realistic and accurate traffic information. The first order of business is to create a base year model that can replicate existing highway system traffic volumes and travel patterns. An extensive and comprehensive data base is necessary to conduct the travel demand planning, modeling and forecasting process. The data inventory sources are to include:

- Land use data represented as population and employment data and quantified by TAZ
- An external origin-destination travel survey to assess the origin and destination of vehicle trips that start outside the study area and end inside the study area or for trips that completely pass through the study area
- Development of an existing highway system and network that represents all major streets and highways (functionally classified rural and urban arterials and collectors that includes jurisdictional facilities like County Trunk Highways and State Trunk Highways) for the movement and circulation of auto and truck trips.

A model must be calibrated. In transportation modeling terminology, calibration is a technical process that seeks to have computer generated traffic volumes replicate traffic counts for the base year, 1999. Several quality control measures are employed to check how well the base year computer simulation model is duplicating existing traffic and travel patterns. The most critical measurement to determine base year model validity is to compare actual traffic counts to model generated traffic volumes. If the base year model replicates existing traffic counts within well-defined statistical tolerance levels by type of highway, then it is logical to assume that the base year model will provide a reasonable forecast of future traffic volumes given a new set of input land use data.

With a base year model calibrated and validated, development of a future year travel demand model can begin. As with the development of the base year model, land use plans and policies must be generated for the future year, in this case, 2025 and quantified by TAZ, so as to measure the growth and impact of traffic on existing highway facilities. Transportation planning is directly related to land use planning. Future traffic volumes and trip making is predicated on the growth and distribution of population and employment forecasts. These demographic and economic variables serve as the catalyst to generate future traffic volumes by highway as forerunners to being able to identify congestion and deficiency systemwide.

Using the sequential travel demand modeling process of trip generation, trip distribution and route assignment, planners and engineers can obtain realistic estimates of the effects that land use policies have on travel demand and highway usage. Once base year and future year traffic volumes are estimated for the transportation system, planners and engineers can evaluate the performance of the highway system in terms of level of service, operating speeds, travel time, energy use, pollution and accidents. With information on how well highway systems perform and operate, as measured by the volume of traffic and their corresponding impacts, planners and engineers can provide decision-makers with a variety of information and data needed to develop highway investment priorities as part of their local and regional capital improvements program. Overall, the three step travel demand planning, modeling and forecasting process is an effective tool to test and evaluate a cross-section

of different highway projects and proposals. This could consist of new bridges, relocated highway corridors, extensions of existing streets and highways, community bypasses, removal of on-street parking to add two more moving lanes for traffic, adding more lanes to an existing highway to increase its carrying capacity, changing posted speed limits on a highway to see the impact on traffic volumes, analyzing existing or new route(s) to be designated a potential truck facilities, etc. The travel demand modeling process serves as the only planning and evaluation tool that assesses highway performance and operations for a range of highway project proposals based on locally defined land use plans.

TABLE A-1
SOUTH WOOD COUNTY AREA TRANSPORTATION STUDY
SMOOTHED MODEL ASSIGNMENT COMPARISON

LOCATION	1999 Base Network	2025 Base Network	(Double Casino) Scenario 1	(East Arterial) Scenario 2	(New Bridge) Scenario 3	(E. Art. & New Bridge Scenario 4
NEKOOSA						
CTH 'G'						
CTH 'AA' - CTH 'JJ'	3500	3910	7610	3920	3930	3930
CTH 'JJ' - Wood	4300	7220	9200	7210	7190	7210
Bridge in Nekoosa	10000	13390	12850	13420	12120	12130
PORT EDWARDS						
Port Road						
North of STH 54	3600	6490	4760	6430	5380	4600
Letendre Avenue (STH 54)						
1st - 2nd Street	4700	9670	12050	9620	11520	12290
Seneca						
Port Road - 3rd Street	3100	5120	3680	5110	4060	3570
Wisc. River Drive (STH 54)						
Market St.-Letendre Ave.	2900	3830	3820	3850	3980	3970
Letendre Ave.-Verbunker	5500	8120	8440	8120	6630	6600
Verbunker-Seneca	7400	10820	7450	10810	7560	7540
Proposed Bridge	NA	NA	7630	NA	6280	6610
STH 13 (8th Street)						
Townline Rd-Griffith (CTH'Z')	13800	22380	22870	22500	22360	22760
Griffith (CTH 'Z')-Whitrock	16400	28420	23700	23550	32320	23700
WISCONSIN RAPIDS						
STH 13 (8th Street)						
Riverview Exp.-Goodnow	23700	31100	24890	25750	31230	24990
East Grand Avenue						
10th Avenue-Riverview Exp.	15500	20910	20770	20860	20880	20880
10th Avenue-12th Avenue	14900	20760	20600	20690	20700	20710
2nd Avenue (STH 54/73)						
Riverview Exp.-Gaynor	12900	16620	11830	16600	12480	12010
Gaynor-Seneca Road	10700	15820	10700	15810	11310	10740
Three Bridges						
Jackson Street	11400	16190	14840	16150	15530	14920
East Grand Ave.	6700	7430	7370	7430	7430	7450
Riverview Expressway	25300	35380	30990	35410	31060	31310
Downtown Wisc. Rapids						
Spring Street-Baker Street	12100	18850	19120	19140	18880	19160
Baker Street-Chestnut Street	8300	12150	14370	13080	12810	14350
Chestnut Street-Riverview Exp.	7600	11110	13530	12270	11710	13490
Baker Street						
16th Street-STH 54	9900	15710	14180	15380	15160	14240
Riverview Expressway						
8th Street - 12th Street	14300	21590	14970	16800	21040	15080
Proposed East Arterial						
S. of Riverview Expressway	NA	NA	17380	15000	NA	17380
S. of Whitrock Avenue	NA	NA	19260	15740	NA	19260

APPENDIX B
SOUTH WOOD COUNTY AREA TRANSPORTATION STUDY
2025 POPULATION & EMPLOYMENT PROJECTIONS

South Wood County Area Transportation Study
2025 Population & Employment Projections

I. OVERVIEW

II. POPULATION AND DWELLING UNIT PROJECTIONS

1. Review and Edit 1999 Baseline Data
2. Discussions with Local Entities
3. Determination of Available Acres
4. Zero Growth TAZs Identified
5. Develop General Control Number
6. Population Distribution to Growth Areas
7. Population Distribution to Moderate Growth Areas
8. Population Distribution to Minimal Growth Areas
9. Sum to Determine Final Projection Number

III. EMPLOYMENT PROJECTIONS

1. Review and Edit 1999 Baseline Data
2. Determine Ten-Year Growth Trends from 1989 to 1999
3. Project Employment to 2025
4. Distribute Employment

ATTACHMENTS:

MAP 1: South Wood County Urban Area Study Area

MAP 2: South Wood County Urban Area TAZ Boundaries

MAP 3: South Wood County Urban Area Generalized Land Use – 1999

TABLE 1: Generalized Land Use by TAZ

TABLE 2: 1990 - 1999 Population and Dwelling Unit Adjustments

TABLE 3: Summary of Population Projections

TABLE 4: 1999 Existing Employment

TABLE 5: Summary of Employment Projections

SYNOPSES: Community Meeting Summaries

I. OVERVIEW

In 1999, the North Central Wisconsin Regional Planning Commission (NCWRPC), with assistance of the Wood County Planning and Zoning Department (WCPZ) developed population and employment projections to the year 2025 for the South Wood County Urban Area. The urban area incorporates the Cities of Wisconsin Rapids and Nekoosa, the Villages of Biron and Port Edwards, and the Town of Grand Rapids, and parts of the Towns of Grant, Port Edwards, Rudolf, Saratoga and Seneca. All of these entities are within the boundaries of Wood County with the exception of the Town of Grant in Portage County.

For projection purposes, the area was divided into 317 transportation analysis zones (TAZ). TAZ's are homogeneous areas for the collection of socioeconomic data. They become the building blocks of the modeling effort. See Map 1.

All projections were prepared following locally provided input and adopted land use plans where available. These projections provide the data necessary for a transportation modeling effort being conducted by the Wisconsin Department of Transportation (DOT) and a comprehensive transportation study that will follow this process.

II. POPULATION AND DWELLING UNIT PROJECTIONS

Nine basic steps were undertaken to develop projections within the study area. See Table 3.

1. Review and Edit 1999 Baseline Data

   Baseline data was developed by updating 1990 Census data with local building permit records to 1999. The data was reviewed for accuracy by local officials, edited as necessary, and displayed in Table 2 as 1999 population and dwelling units.

2. Discussions with Local Entities

   Meetings were held with each local entity in the urban area to determine how the community is growing. Growth areas were identified. See Meeting Summaries.

3. Determination of Available Acres

   Using information obtained from the local meetings, available land use and zoning plans, and the 1999 generalized land use cover (see Map 2 & Table 1), vacant residential acres were calculated. Thus, if an area was indicated for about 50 acres residential, and the land use cover showed about 20 acres in use, the balance or 30 acres were considered available.

   Two important ratios are calculated using this information, the dwelling units per acre (DUPA) and the persons per household (PPHH). The DUPA is determined by total 1999 dwelling units/total residential land area (15,836/12,682) which equals 1.25. The PPHH is calculated by persons/dwelling units (40,259/15,836) which equals 2.54.

4. Zero Growth TAZs Identified

Areas that were already at build out were considered no growth. Of the 317 TAZs, 174 were found to have no available residential land.

Thus, TAZ 8 with a current population of 95 and 45 dwelling units was projected with zero growth for 2025 since there was no available land for development.

5. Develop General Control Number

A generalized percentage growth rate for the usage of land was selected that roughly followed some historic trends and from discussions with the municipalities. These growth rates of 40%, 25% and 10% were distributed to the areas identified as "growth", "moderate growth" and "minimal growth", respectively.

A rough control number was determined at about 56,458. This was checked against DOA projections and with DOT's "ballpark" estimate for the area.

6. Population Distribution to Growth Areas

Population growth was distributed to these areas based on the 40 percent growth rate determined above and available acres for that particular TAZ.

*Thus, TAZ 72 has 95 acres available * 40% equals 38 additional acres that will develop. Then this 38 is multiplied by the pphh and dua to arrive at the total projections for 2025 population and dwelling units, 189 and 76 respectively.*

7. Population Distribution to Moderate Growth Areas

Population growth was distributed to these areas based on the 25 percent growth rate determined above and available acres for that particular TAZ.

*Thus, TAZ 52 has 27 acres available * 25% equals 7 additional acres that will develop. Then this 7 is multiplied by the pphh and dua to arrive at the total projections for 2025 population and dwelling units, 301 and 102 respectively.*

8. Population Distribution to Minimal Growth Areas

Population growth was distributed to these areas based on the 10 percent growth rate determined above and available acres for that particular TAZ.

*Thus, TAZ 1 has 219 acres available * 10% equals 22 additional acres that will develop. Then this 22 is multiplied by the pphh and dua to arrive at the total projections for 2025 population and dwelling units, 95 and 39 respectively.*

9. Sum to Determine Final Projection Number

All 317 TAZs are added to arrive at the final *2025 projection of 56,458*. This number then serves as the "Control" number. Meaning that any adjustments within the individual TAZ's would not change the overall population figure. Basically, an increase to one TAZ would require a reduction equal to another or a group of TAZs.

Population Summary:

The 1999 population for the area was 40,259. It is projected to grow 40% to a total of 56,458. The majority of the population growth is expected in the fringe area with some areas of infill.

III. EMPLOYMENT PROJECTIONS

Four basic steps were undertaken to develop projections for the study area. See Table 5.

1. Review and Edit 1999 Baseline Data

Baseline data was provided to the NCWRPC by the WI DOT in the form of DWD Tape File employment figures aggregated to TAZ through geo-coding. All data was reviewed for accuracy and edited, if needed, and is displayed in Table 4 as 1999 employment.

One important ratio is determined from this data. That is the employment per acre or EPA. This is calculated using total 1999 employment divided by the total number of acres used for employment use. Thus, total employment was 17,833 and the total acres used was 2,710. Thus, the EPA equals 6.58.

A determination of available areas was also completed. Again, this is determined using information obtained from the local meetings, available land use and zoning plans, and the 1999 generalized land use cover (see Map 2 & Table 1). Thus, if an area was indicated for about 100 acres commercial, and the land use cover showed about 75 acres in use, the balance or 25 acres were considered available.

2. Determine Ten Year Growth Trends from 1989-1999

Department of Workforce Development (DWD) numbers for the entire County were collected for 1989 and 1999 for the major economic sectors of the economy. To determine the ten year trend of change we calculated the annual rate of change for these six sectors.

Employment Sector	1989 Employ Estimate	1999 Employ Estimate	County Ave. Annual 89-99 Change	Projected 2025 Growth	Employment Added
Manufacturing	9,834	9,839	0.01	9,865	26
Trade	1,231	2,054	6.69	5,627	3,573
Commercial	7,373	7,753	0.52	8,801	1,048
Wholesale	1,341	1,408	0.50	1,591	183
Service	13,220	18,282	3.83	36,487	18,205
Other	1,975	3,118	5.79	7,812	4,694
Totals	34,974	42,454	NA	70,183	27,729

Since the majority of the economic growth occurs in urban areas, the countywide numbers are assumed to be reflective of its urban areas and in this case split between the two major centers: Wisconsin Rapids and Marshfield.

The above table displays growth rates for manufacturing, trade, commercial retail, wholesale, services and other sectors for Wood County.

3. Project Employment to 2025

The 2025 projections and the total employment added to the urban area.

The important number from this step is "employment added". Thus, assuming a 60/40 split between the urban centers, 16,637 acts as the control number for the urban area's total employment growth. The distribution of that growth is shown in the following steps.

4. Distribute Employment

Once the 1999 base employment was determined and the control number was calculated we were ready to distribute employment.

First, we determined the amount of non-residential land available for development in each TAZ. Combined there are 4,540 available acres for industrial, commercial and other employment related land uses. We can determine the future utilization rate, based on the current employment per acre ratios. Earlier we determined the EPA at 6.58.

Next we calculate the future land utilization rate. To add 16,637 additional employees, 2,528 acres (16,637 employees/6.58 employees per acre) will be utilized. This assumes the current rate of utilization over the planning period. The employees are then proportionally distributed where available land is located.

Thus, TAZ 22 has 96 acres of available land. Ninety-six acres is proportionally equal to 53 utilized acres, or equal to 351 additional employees.

Individual TAZs will be modified and refined with input from the technical and advisory committees based on local knowledge.

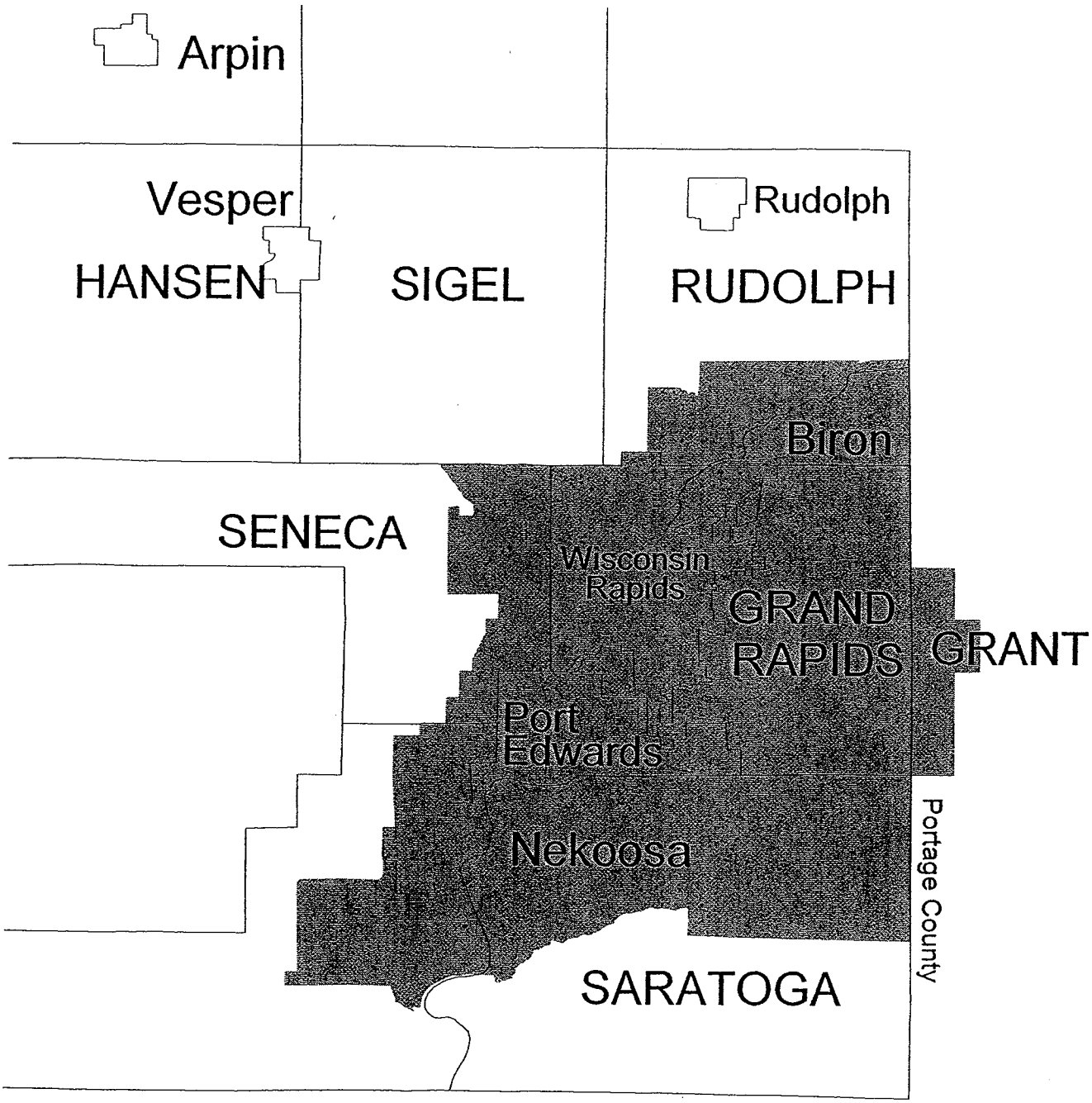
Employment Summary
We determined that 16,637 additional persons would be employed in the area by 2025. Total employment would be 34,467. This is an increase of over ninety- percent from the 1999 employment level of 17,833.

Growth from new employment will utilize over half of the existing available lands for employment related uses.

ATTACHMENTS

MAP 1: South Wood County Urban Area Study Area

South Wood County Urban Area Transportation Plan Study Area



Prepared By:

NCWRPC

North Central Wisconsin Regional Planning Commission

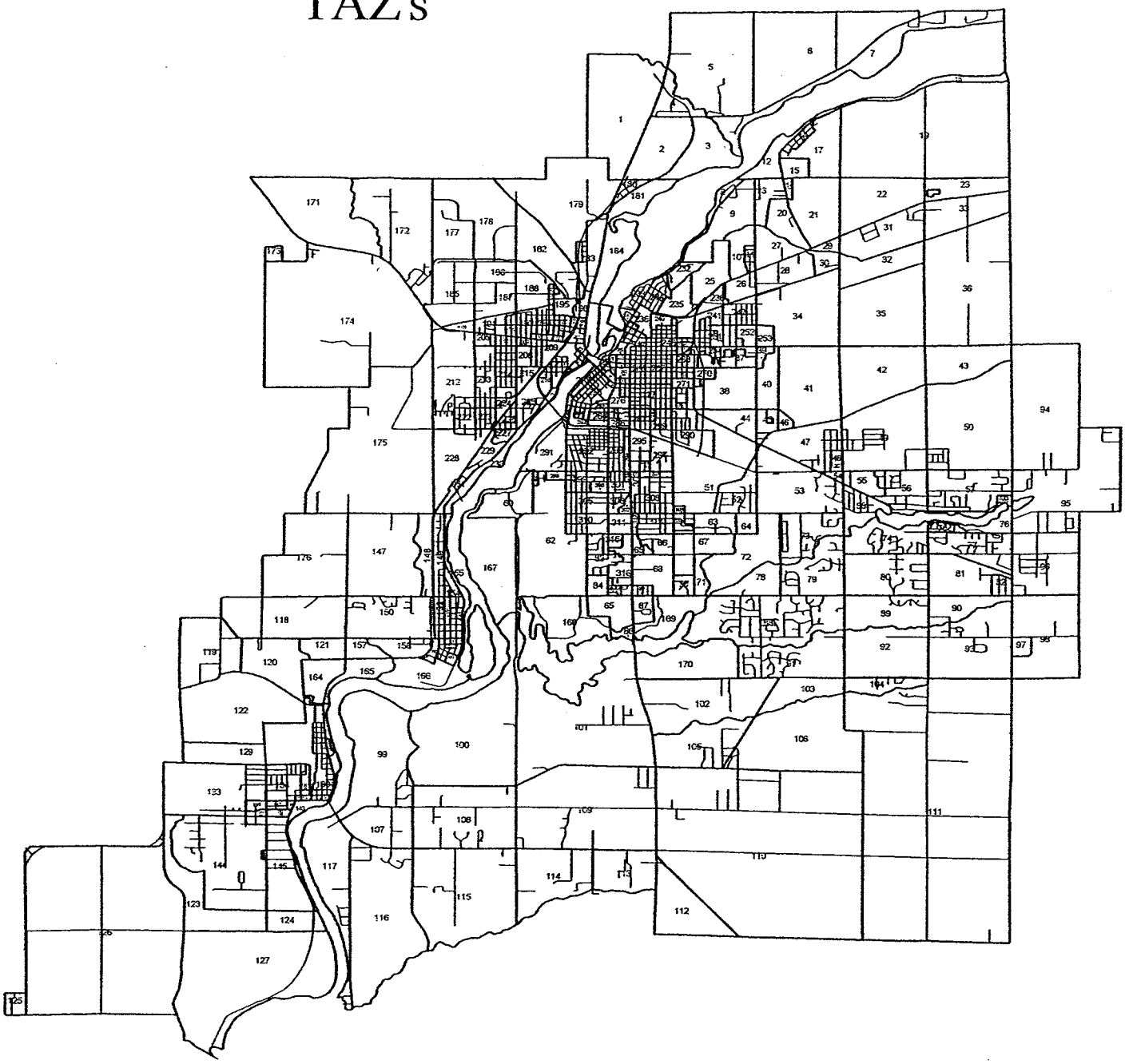
210 McClellan Street, Suite 210, Wausau, Wisconsin 54403 (715) 849-5510

N W E S

0.8 0 0.8 1.6 Miles

MAP 2: South Wood County Urban Area TAZ Boundaries

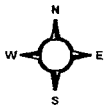
South Wood County Urban Area
TAZ's



Prepared By:

North Central Wisconsin Regional Planning Commission

NCWRPC



0.8 0 0.8 1.6 Miles

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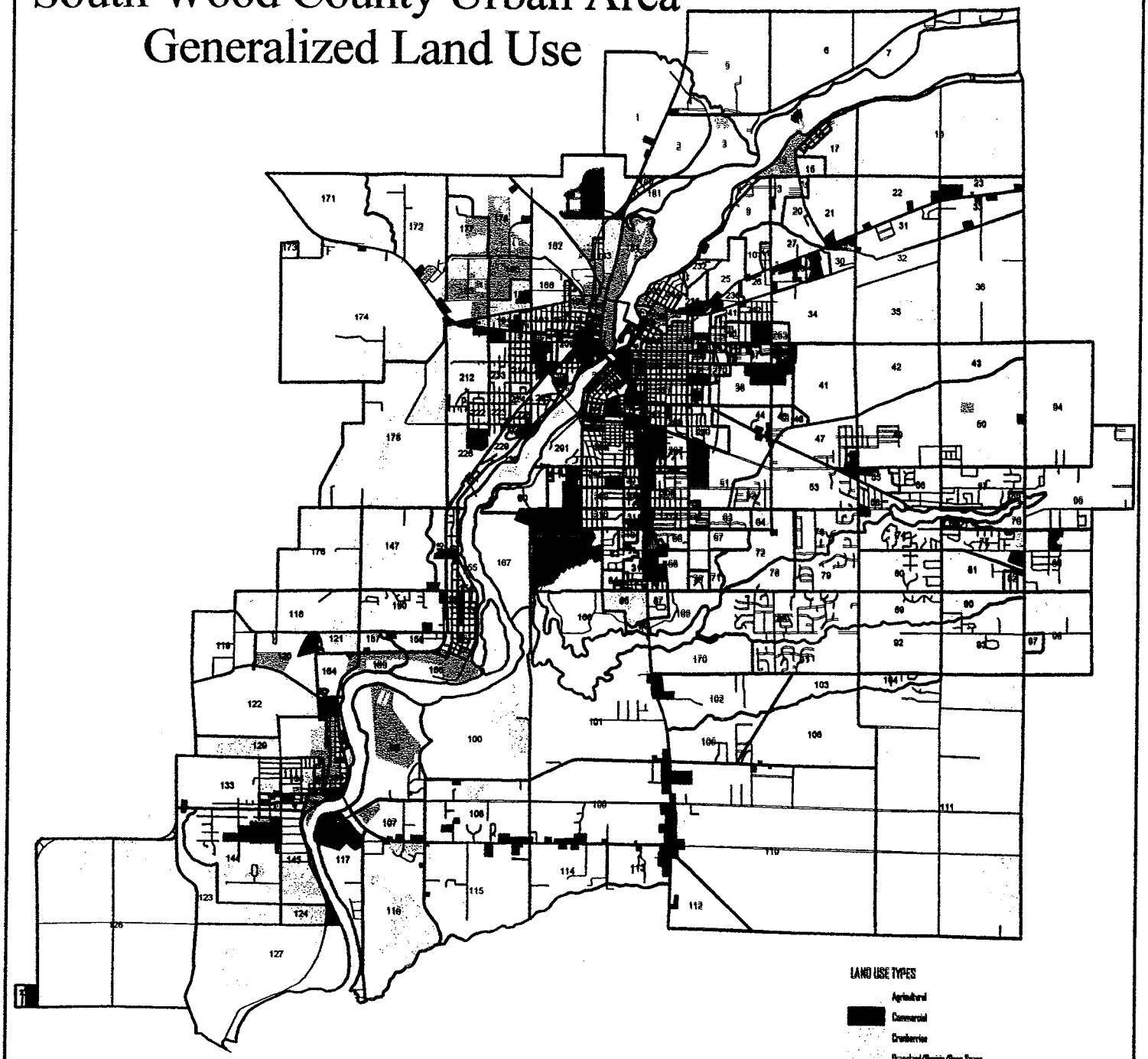
MAP 3: South Wood County Urban Area Generalized Land Use - 1999

South Wood County Urban Area
Generalized Land Use



LAND USE TYPES

- Agricultural
- Commercial
- Cranberries
- Grassland/Prairie/Open Space
- Industrial
- Outdoor Recreation
- Public/Utilities/Schools
- Residential
- Water
- Woodlands

N W E S

0.5 0 0.5 1 Miles

Prepared By:

NCWRPC

North Central Wisconsin Regional Planning Commission

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TABLE 1: 1999 Generalized Land Use by TAZ

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
1		7						10	15	1	392	219	643
2								6	40	0	124	102	272
3	0				15			3	11	4	97	91	221
4		4						9	44	1	23	24	105
5	89							12	42	1	231	366	742
6	62							16	47	1	228	489	842
7	19				0	42		17	78	14	108	120	398
8		1			1			5	31	9		0	47
9		3						7	51	0	42	120	223
10		1						2	29	0	38	18	89
11								4	20				24
12			4		73			7	4	12	8	0	108
13	0						4	6	19	0	4	57	90
14								1	2		0	11	14
15			0					0	0		17	33	51
16			0		6			6	16			3	31
17			19					3	2	1	160	24	210
18			0					5	7	8	2	45	67
19	11		150					13	5	10	706	431	1328
20								2	22	3	17	64	109
21		11	9					5	44		41	163	274
22	5	18	4					7	50		0	234	319
23	19	6					24	4	15			69	136
24							6						6
25		1					7	1	26		60	41	136
26		5						3	42	0	2	12	64
27	78				1			4	21	0	7	0	112
28	16	69						7	6	5	0	37	139
29		14						1			4	6	24
30								2	23		6	20	51
31	14	1						9	81		17	136	258
32								2	6		20	156	184
33	31	16						7	51		1	126	232
34	103	3						6	68	0	10	271	463
35	5		7					6	27	1	157	342	546
36	37							14	41	0	140	703	935
37								5	46	0	0	18	70
38		45						8	54			106	213
39							14	2	2	1	3	0	22
40						2	49	2	13	3	11	25	106
41	82					36	6	5	14		1	288	432
42	16							7	72		13	320	427
43								3	0		0	239	242
44		11						5	59	0	0	26	102
45		1				4		5	42	1	3	0	56
46						14				1	5	0	21

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
47						0		13	91	0	24	115	244
48		14						2	7				22
49								22	178		6	335	541
50	193	6			13			12	96	0	23	388	733
51	28	7					86	12	53		7	237	431
52								13	97			27	138
53		0						18	218	4		161	402
54		12						2	1				14
55		13						4	15			39	70
56								17	118	1		44	180
57								27	189	0		80	296
58		10						10	64	0	17	13	115
59								4	29	2		1	36
60						136	6	6	11	2	0		163
61								1	6				7
62							401	15	22		16	159	613
63								8	56			32	96
64	19							2	19				40
65		10						3	11			0	25
66		0						5	26	0		24	55
67						3		7	6			139	155
68		49						5	8			75	137
69								4	17				20
70								5	36				40
71						23		2	20				45
72		3				126		2	26	3	20	106	287
73								16	124	0	19	61	222
74								15	100	4	10	90	220
75						22		6		0			28
76						13		4	1	10		39	67
77	3	16		12				22	143			27	223
78						1		2	16	0	26	81	128
79								15	166		21	68	271
80	31							17	156			119	323
81	90							6	43			87	226
82								5	33				37
83								10	70	1			82
84							8	2	2			27	39
85			100			6		3	2			0	111
86						18		1		1		0	20
87								3	38			11	52
88								43	344	2	37	204	630
89	27							8	58		14	147	253
90	20							5	7	1	7	100	141
91	1							18	179	0	10	154	363
92	120							5	30		12	214	382

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
93	44							18	128	1	19	291	500
94	23							12	72		67	603	777
95	36							30	286		99	249	700
96	75						21	23	178		20	73	389
97								2	32				34
98	59							12	94		16	306	488
99		1			195			9	79	18	75	261	638
100			73		0			8	41	17	469	351	960
101	10	21				64		23	145	80	62	752	1156
102		25						11	117		20	352	526
103								4	0		9	153	166
104	2							7	38		17	40	103
105								11	110		32	168	321
106	74	1						8	34	0	30	570	718
107		14			23			9	59			118	223
108		28		23			9	26	362			148	596
109	30	81						31	224			675	1041
110	157	68						65	642	1	37	1913	2882
111	403							58	716	1	114	2264	3556
112		9						4	38	1	8	239	297
113	5	32						8	70	1	2	119	237
114	19	8						16	88	0	5	246	382
115	176	23						19	135	0	14	468	835
116		4	67	32				18	132	13	321	241	828
117							116	11	64	8	48	139	386
118	133						0	12	57	1	65	194	463
119		1						14	101			227	343
120	11	0			49		28	6	63	2	3	100	261
121	30	0					4	1	3	0	26	19	83
122	105	2			0			8	22	2	281	216	636
123	11	2	18					7	10	6	103	165	322
124	1			54				2	20	2	7		87
125		23						1	17				42
126	1081	1						38	175			1040	2335
127	171		93	0			1	19	40	18	325	535	1202
128								2	5		0	1	9
129	12	16	10	30	30			8	24	7	152	84	373
130		3			49		16	19	30				117
131						7		0					7
132				19		14		2		2			37
133		6		9				20	112	2	137	188	474
134		1		3	4	7		16	66		18		115
135				7	10			2	3				21
136		3					4	2	10	0			19
137							8	3	5	0			17
138								1	4				5

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
139		0			6		1					7
140		7			0		2					9
141							2	10				12
142							2	14				16
143		5			22		2	3	1	0		34
144	62	16		19			69	24	182	0	148	165	685
145	46			71				17	132	6	7		280
146				0			16	1		0			17
147	115						5	8	54	2	98	259	541
148		9					2	1	7	1	16	72	108
149		2					9	9	27			36	84
150	19	10						14	126		78	83	330
151								1	7				8
152								6	33				39
153							13	2					15
154		3						15	61				78
155								4	38	6			48
156								1	6				6
157		2			1			2	6		13	39	62
158		5			0			5	33		22	27	91
159					6			2	12				20
160								5	20				25
161		2						2	5				9
162								1	4				4
163					9			1		0			10
164	1	3			13			1	3	0	28	70	120
165				1	29			2		1	33	29	95
166					97			4	5	10	58	154	328
167						91	14	1		5	146	172	429
168			2			1		11	10	8	8	274	314
169								6	12	1	19	131	170
170	95							6	1	3	8	198	311
171	211					31		4	41	4	148	105	546
172	16	1		8	13		5	12	74	3	188	286	607
173	9							0	14			0	24
174	217	12	12		0		0	26	38	5	510	921	1743
175	194		151					22	87	7	170	718	1348
176	68							10	67	2	119	295	561
177			14	15	43			2	0	15	22	79	191
178	33	10			129			8	54	18	46	102	400
179		19		55	11		67	13	10	30	213	185	603
180		0						5	27			0	33
181		0			0			2	6	0	74	26	108
182					23			10	30		105	94	262
183		6		68	30			12	7		10	1	134
184					127			2		21	29	1	180

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
185		8	2	84	91			11	5	2	7	42	251
186				0	119			8		0	1		129
187				40			15	4	3		26		87
188								7	29		31	66	134
189								3	10				12
190		5		2	1			1	2		9	2	22
191		10		5				6	14		19		53
192		2						3	14		1		21
193		3						9	34			6	51
194							2	9	28			7	46
195					25			3	12				39
196					23			3	2				28
197								3	13				16
198					6			1	0				6
199		0			8			2					9
200		1						3	10				14
201		2						2	6				11
202		4						1	4				10
203		13			2			3	3				21
204					54			3		0			58
205		17						3	4		0		24
206								3	16				19
207		4						5	19				29
208		4					27	3	4				38
209		7						4	27				38
210		35						10	19			0	63
211		5					3	2					10
212	33	12						20	68	2	79	129	344
213								14	31		9	65	119
214								17	81				98
215							18	3	14				35
216		1					12	4	14				31
217								3	12	1			15
218								1	2				3
219		2						1					3
220		3						2	3				7
221		0					0	1					1
222								7	43				49
223								6	32				38
224								3	26				29
225							5	9	45			24	83
226		3						6	25				33
227		11						3	10				23
228	16	2					39	3	17	1	30	112	220
229								2	15	3	9	23	51
230		0				29	12	5	40	4			90

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
231								4	11			22	37
232								3	28		5	12	47
233					7			7	21	6	6		47
234					0	5		11	39		5		61
235						0	26	4	1		48	4	83
236		8						4	29				41
237					3	1		2	7	3			15
238					30	0		4	7		0	1	43
239								1	4				5
240					5	32		3	6			10	57
241		2						3	20	0	4	11	41
242		4						11	52			11	77
243								1	4				5
244						5	5	1		4	7	0	22
245		1						1	1				3
246						9		2	2				13
247								9	31				41
248						2		20	63				85
249		3						3	8				14
250		2						1	1				4
251				1		0	3	15	67				87
252							29	2			4		35
253								1	0		2	30	34
254								7	30			9	46
255		2						1					3
256							4	1					5
257								2	8				10
258		3			2	2	1	2		48	9	0	67
259		2						1	1				4
260		3						1					4
261		3						1	2				6
262								1	4				5
263							7	2	5				14
264		8						1	0				9
265								2	6				7
266							1	10	30				41
267								17	53				70
268		2						5	24				31
269								5	18				23
270								3	23			0	26
271							26	4	4				35
272		9				5		5	5	2			26
273		9						17	51				77
274		3						1					3
275		2						3	8				13
276							26	2					28

Table 1:
South Wood County Urban Area
1999 Generalized Land Use By TAZ (In Acres)

TAZ	AGRICULTURAL	COMMERCIAL	CRANBERRIES	GRASSLANDS	INDUSTRIAL	RECREATION	PUBLIC	ROADS	RESIDENTIAL	WATER	WETLANDS	WOODLANDS	TOTAL ACRES
277		4						20	70				95
278								5	24			0	29
279						7		1		1			9
280						2		0		0			2
281								2	7				10
282				5			12	3	4				24
283							6	2	3				11
284		14					0	5	13				32
285		2						3	9				14
286		16						4	3				23
287		8						9	26				44
288							5	1					6
289								9	45			0	54
290								14	83		3	25	126
291				2				8	60	1	61	16	148
292		12		9		10		35	109				175
293		19						11	30				60
294		20						4	1				25
295		51						5	1				57
296		8						3	8				19
297								7	60				67
298							12	1	3				16
299								11	54				64
300							15	2					17
301		5						6	27				38
302		5						1					6
303		22						4					25
304		2						3	16				21
305								11	72				82
306		2						4	24				30
307		9						1	4				14
308								19	103	0			122
309								1	7				8
310								9	68	2			79
311		5					19	4	17				44
312		10						2					12
313								11	56				67
314								3	21				23
315								4	26				30
316		22						7	49				78
317		3						5	18				26
	4922	1303	736	573	1407	769	1351	2290	12682	522	8266	27623	62443

Generalized totals are rounded. Zeros reflect less than one acre present.

TABLE 2: 1990 - 1999 Population and Dwelling Unit Adjustments

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
1	9	3	12	19	8	27
2	19	-	19	52	-	52
3	7	-	7	21	-	21
4	41	1	42	113	3	116
5	27	4	31	86	10	96
6	20	1	21	51	3	54
7	32	5	37	69	13	82
8	42	3	45	87	8	95
9	68	1	69	144	3	147
10	18	5	23	45	13	58
11	53	2	55	136	5	141
12	3	-	3	6	-	6
13	48	-	48	131	-	131
14	5	-	5	14	-	14
15	-	-	-	-	-	-
16	65	-	65	137	-	137
17	3	-	3	5	-	5
18	12	-	12	8	-	8
19	18	-	18	37	-	37
20	13	-	13	27	-	27
21	26	2	28	72	5	77
22	14	3	17	38	8	46
23	4	-	4	7	-	7
24	-	-	-	-	-	-
25	5	-	5	14	-	14
26	22	1	23	60	3	63
27	30	-	30	73	-	73
28	16	-	16	40	-	40
29	8	-	8	18	-	18
30	5	7	12	15	18	33
31	36	5	41	105	13	118
32	1	1	2	5	3	8
33	12	2	14	34	5	39
34	19	4	23	52	10	62
35	7	3	10	24	8	32
36	9	2	11	23	5	28
37	16	1	17	37	3	40
38	18	3	21	41	8	49
39	-	-	-	-	-	-
40	1	1	2	2	3	5
41	3	2	5	4	5	9
42	8	6	14	21	15	36
43	-	-	-	-	-	-
44	25	2	27	68	5	73
45	16	1	17	61	3	64
46	-	-	-	-	-	-
47	78	4	82	227	10	237
48	7	2	9	20	5	25

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
49	89	5	94	275	13	288
50	47	2	49	133	5	138
51	18	2	20	47	5	52
52	84	10	94	254	25	279
53	60	50	110	169	127	296
54	1	-	1	2	-	2
55	17	2	19	52	5	57
56	136	26	162	320	66	386
57	168	30	198	498	76	574
58	73	5	78	196	13	209
59	-	1	1	-	3	3
60	9	1	10	20	3	23
61	15	1	16	42	3	45
62	25	1	26	81	3	84
63	75	2	77	238	5	243
64	-	-	-	-	-	-
65	31	-	31	87	-	87
66	42	-	42	114	-	114
67	-	2	2	-	5	5
68	14	3	17	45	8	53
69	22	2	24	67	5	72
70	26	6	32	66	15	81
71	2	-	2	2	-	2
72	28	1	29	68	3	71
73	83	40	123	244	101	345
74	44	37	81	150	94	244
75	1	-	1	-	-	-
76	3	-	3	4	-	4
77	97	30	127	293	76	369
78	8	-	8	26	-	26
79	105	11	116	348	28	376
80	107	29	136	292	73	365
81	3	14	17	9	35	44
82	39	2	41	105	5	110
83	100	4	104	290	10	300
84	-	1	1	-	3	3
85	3	1	4	5	3	8
86	1	-	1	2	-	2
87	25	-	25	78	-	78
88	227	101	328	759	256	1,015
89	50	8	58	153	20	173
90	8	-	8	25	-	25
91	39	104	143	129	263	392
92	10	11	21	27	28	55
93	68	6	74	222	15	237
94	30	16	46	92	40	132
95	124	65	189	336	164	500
96	100	19	119	291	48	339

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
97	7	4	11	20	10	30
98	17	3	20	51	8	59
99	47	1	48	128	3	131
100	19	-	19	48	-	48
101	82	5	87	227	13	240
102	43	12	55	115	30	145
103	-	-	-	-	-	-
104	16	3	19	42	8	50
105	56	8	64	165	20	185
106	28	5	33	83	13	96
107	38	3	41	118	8	126
108	149	6	155	424	15	439
109	157	11	168	449	28	477
110	236	25	261	648	63	711
111	141	57	198	430	144	574
112	11	3	14	25	8	33
113	71	6	77	193	15	208
114	60	5	65	166	13	179
115	65	4	69	220	10	230
116	70	3	73	190	8	198
117	51	4	55	125	10	135
118	30	1	31	82	3	85
119	61	1	62	167	3	170
120	49	-	49	122	-	122
121	8	-	8	17	-	17
122	15	-	15	41	-	41
123	18	-	18	54	-	54
124	11	-	11	35	-	35
125	10	-	10	38	-	38
126	71	8	79	200	20	220
127	18	-	18	44	-	44
128	31	-	31	71	-	71
129	24	3	27	49	8	57
130	112		112	293	-	293
131	-	-	-	-	-	-
132	-	-	-	-	-	-
133	174	10	184	494	25	519
134	190	3	193	447	8	455
135	11	-	11	30	-	30
136	45	-	45	60	-	60
137	20	1	21	77	3	80
138	-	-	-	-	-	-
139	6	-	6	8	-	8
140	28	-	28	51	-	51
141	23	1	24	69	3	72
142	35	-	35	88	-	88
143	-	-	-	-	-	-
144	88	8	96	263	20	283

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
145	224	3	227	567	8	575
146	-	-	-	-	-	-
147	31	3	34	89	8	97
148	24	-	24	30	-	30
149	106	-	106	406	-	406
150	108	33	141	325	83	408
151	-	-	-	-	-	-
152	69	-	69	154	-	154
153	1	-	1	4	-	4
154	187	-	187	418	-	418
155	9	-	9	20	-	20
156	16	-	16	38	-	38
157	3	-	3	9	-	9
158	36	2	38	88	5	93
159	1	-	1	-	-	-
160	64	-	64	180	-	180
161	13	-	13	42	-	42
162	8	-	8	15	-	15
163	-	-	-	-	-	-
164	-	-	-	-	-	-
165	-	-	-	-	-	-
166	9		9	21	-	21
167	1	-	1	2	-	2
168	10	1	11	5	3	8
169	2	3	5	5	8	13
170	1	-	1	1	-	1
171	20	-	20	59	-	59
172	43	-	43	118	-	118
173	3	-	3	11	-	11
174	44	2	46	133	5	138
175	54	9	63	141	23	164
176	46	5	51	116	13	129
177	-	-	-	-	-	-
178	7	-	7	18	-	18
179	28	-	28	78	-	78
180	68	-	68	201	-	201
181	4	-	4	12	-	12
182	26	1	27	64	3	67
183	38	-	38	95	-	95
184	-	-	-	-	-	-
185	-	-	-	-	-	-
186	-	-	-	-	-	-
187	3	-	3	4	-	4
188	20	-	20	50	-	50
189	42	-	42	115	-	115
190	24	-	24	46	-	46
191	15	-	15	37	-	37
192	43	1	44	100	3	103

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
193	168	-	168	397	-	397
194	160	-	160	426	-	426
195	13	-	13	30	-	30
196	13	-	13	48	-	48
197	63	-	63	139	-	139
198	1	-	1	2	-	2
199	7	-	7	1	-	1
200	66	1	67	122	3	125
201	25	-	25	66	-	66
202	15	-	15	43	-	43
203	-	-	-	-	-	-
204	-	-	-	-	-	-
205	10	-	10	35	-	35
206	62	-	62	143	-	143
207	91	-	91	230	-	230
208	20	-	20	47	-	47
209	10	-	10	17	-	17
210	153	-	153	259	-	259
211	-	-	-	-	-	-
212	181	16	197	423	40	463
213	32	7	39	85	18	103
214	276	2	278	694	5	699
215	31	-	31	95	-	95
216	40	-	40	89	-	89
217	17	-	17	58	-	58
218	14	-	14	23	-	23
219	-	-	-	-	-	-
220	8	-	8	21	-	21
221	-	-	-	-	-	-
222	96	6	102	182	15	197
223	219	-	219	352	-	352
224	28	36	28	47	91	138
225	116	2	118	262	5	267
226	60	-	60	136	-	136
227	68	-	68	66	-	66
228	25	-	25	64	-	64
229	33	2	35	90	5	95
230	17	-	17	39	-	39
231	40	-	40	132	-	132
232	27	1	28	209	3	212
233	77	1	78	199	3	202
234	122	3	125	289	8	297
235	-	1	1	-	3	3
236	37	5	42	88	13	101
237	10	-	10	22	-	22
238	30	-	30	76	-	76
239	25	-	25	45	-	45
240	11	-	11	28	-	28

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
241	20	9	29	69	23	92
242	49	14	63	142	35	177
243	1	-	1	5	-	5
244	-	-	-	-	-	-
245	20	-	20	57	-	57
246	24	-	24	58	-	58
247	151	-	151	371	-	371
248	303	1	304	696	3	699
249	25	12	25	57	30	87
250	16	-	16	36	-	36
251	167	15	182	421	38	459
252	-	-	-	-	-	-
253	-	-	-	-	-	-
254	51	5	56	119	13	132
255	-	-	-	-	-	-
256	1		1	6	-	6
257	42	1	43	102	3	105
258	-	-	-	-	-	-
259	11	-	11	17	-	17
260	2	-	2	2	-	2
261	15	-	15	32	-	32
262	24	-	24	62	-	62
263	26	-	26	60	-	60
264	-	-	-	-	-	-
265	24	-	24	53	-	53
266	149	-	149	340	-	340
267	264	-	264	549	-	549
268	77	2	79	163	5	168
269	74	1	75	155	3	158
270	16	-	16	46	-	46
271	35	-	35	74	-	74
272	98	-	98	153	-	153
273	202	3	205	482	8	490
274	-	-	-	-	-	-
275	42	-	42	91	-	91
276	-	-	-	-	-	-
277	343	2	345	755	5	760
278	66	-	66	149	-	149
279	6	1	7	19	3	22
280	-	-	-	-	-	-
281	34	-	34	86	-	86
282	9	-	9	131	-	131
283	14	-	14	40	-	40
284	48	-	48	132	-	132
285	56	-	56	101	-	101
286	50	-	50	103	-	103
287	127	-	127	278	-	278
288	1	-	1	2	-	2

Table 2:
South Wood County Urban Area
1990-1999 Population & Dwelling Unit Adjustments

TAZ	DU 1990	PERMITS 90-99	TOTAL 1999 DU	POP 1990	POP 90-99*	TOTAL 1999 POP
289	147	7	154	343	18	361
290	143	23	166	386	58	444
291	28	20	48	64	51	115
292	377	15	392	822	38	860
293	157	1	158	362	3	365
294	4	1	5	6	3	9
295	11	1	12	19	3	22
296	23	-	23	65	-	65
297	80	9	89	170	23	193
298	-	-	-	-	-	-
299	139	10	149	336	25	361
300	3	-	3	6	-	6
301	71	1	72	163	3	166
302	4	-	4	9	-	9
303	15	-	15	24	-	24
304	24	1	1	57	3	60
305	148	15	163	426	38	464
306	59	1	60	137	3	140
307	4	1	5	8	3	11
308	341	28	369	712	71	783
309	-	7	7	-	18	18
310	134	3	137	346	8	354
311	26	1	27	56	3	59
312	18	-	18	38	-	38
313	134	8	142	354	20	374
314	40	2	42	110	5	115
315	52	4	56	133	10	143
316	76	-	76	197	-	197
317	108	-	108	191	-	191
Totals	14,605	1,303	15,836	36,962	3,297	40,259

* Permits (DU) X 2.53 (1990 PPHH)**

** 90 POP. / 90 DU = 1990 PPHH (36,962 / 14,605 = 2.53)

Sources: U.S. Census, Local Building Permit Data & NCWRPC

TABLE 3: Summary of Population Projections

Table 3:
South Wood County Urban Area
Summary of Population Projections

revised

dupa 1.25
pphh 2.54

growth rate: high 40%
moderate 25%
low 10%
none 0%

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
1	424	219	10%	22	27	70	27	96
2	170	102	10%	10	13	32	52	84
3	130	91	10%	9	11	29	21	50
4	81	24	10%	2	3	8	116	123
5	286	455	10%	46	57	145	96	241
6	291	551	10%	55	69	175	54	229
7	259	139	10%	14	17	44	82	126
8	46	0	0%	-	-	-	95	95
9	103	120	10%	12	15	38	147	185
10	71	18	10%	2	2	6	58	64
11	24	0	0%	-	-	-	141	141
12	108	0	0%	-	-	-	6	6
13	33	58	10%	6	7	18	131	149
14	3	11	10%	1	1	4	14	18
15	17	33	10%	3	4	11	-	11
16	28	3	10%	0	0	1	137	138
17	186	24	10%	2	3	8	5	13
18	22	45	10%	4	6	14	8	22
19	885	442	10%	44	55	140	37	177
20	44	64	10%	6	8	20	27	47
21	110	163	10%	16	20	52	77	129
22	79	144	10%	14	18	46	46	91
23	48	35	10%	4	4	11	7	18
24	6	0	0%	-	-	-	-	-
25	95	41	10%	4	5	13	14	27
26	52	12	10%	1	2	4	63	66
27	34	47	10%	5	6	15	73	88
28	86	11	10%	1	1	3	40	43
29	19	0	10%	-	-	-	18	18
30	30	20	10%	2	3	6	33	39

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
31	108	90	10%	9	11	29	118	146
32	28	156	10%	16	19	49	8	57
33	76	94	10%	9	12	30	39	69
34	89	75	10%	7	9	24	62	86
35	198	347	10%	35	43	110	32	142
36	196	665	10%	67	83	211	28	239
37	52	18	10%	2	2	6	40	45
38	107	11	10%	1	1	3	49	52
39	22	0	0%	-	-	-	-	-
40	80	25	10%	3	3	8	5	13
41	62	37	10%	4	5	12	9	21
42	91	336	10%	34	42	107	36	143
43	3	239	10%	24	30	76	-	76
44	76	21	10%	2	3	7	73	80
45	56	0	0%	-	-	-	64	64
46	21	0	0%	-	-	-	-	-
47	129	115	10%	12	14	37	237	274
48	22	0	0%	-	-	-	25	25
49	205	335	10%	34	42	106	288	394
50	151	465	10%	47	58	148	138	286
51	166	265	10%	26	33	84	52	136
52	111	27	25%	7	8	22	279	301
53	241	161	25%	40	50	128	296	423
54	14	0	0%	-	-	-	2	2
55	31	19	10%	2	2	6	57	63
56	136	44	10%	4	6	14	386	400
57	217	80	10%	8	10	25	574	599
58	103	11	10%	1	1	4	209	212
59	35	1	0%	-	-	-	3	3
60	163	0	0%	-	-	-	23	23
61	7	0	0%	-	-	-	45	45
62	454	159	0%	-	-	-	84	84
63	64	32	25%	8	10	25	243	268
64	21	19	25%	5	6	15	-	15
65	25	0	0%	-	-	-	87	87
66	31	24	25%	6	8	19	114	133
67	16	139	25%	35	44	111	5	116
68	62	37	25%	9	12	30	53	82
69	20	0	0%	-	-	-	72	72
70	40	0	0%	-	-	-	81	81
71	45	40	40%	16	20	51	2	53
72	181	95	40%	38	47	121	71	191
73	160	61	25%	15	19	49	345	394

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
74	130	90	40%	36	45	115	244	359
75	28	0	0%	-	-	-	-	-
76	28	39	0%	-	-	-	4	4
77	181	37	10%	4	5	12	369	381
78	47	81	25%	20	25	64	26	90
79	202	68	25%	17	21	54	376	430
80	173	150	25%	37	47	119	365	484
81	49	177	25%	44	55	140	44	185
82	37	0	0%	-	-	-	110	110
83	82	0	0%	-	-	-	300	300
84	12	0	25%	-	-	-	3	3
85	111	0	0%	-	-	-	8	8
86	19	0	0%	-	-	-	2	2
87	41	11	25%	3	3	9	78	87
88	426	204	25%	51	64	162	1,015	1,176
89	80	173	25%	43	54	138	173	311
90	21	120	25%	30	38	95	25	120
91	208	155	25%	39	48	123	392	515
92	48	334	25%	84	104	265	55	320
93	165	335	25%	84	105	266	237	503
94	151	626	10%	63	78	199	132	331
95	415	285	10%	28	36	90	500	591
96	241	148	10%	15	18	47	339	386
97	34	0	0%	-	-	-	30	30
98	122	366	10%	37	46	116	59	175
99	377	0	25%	-	-	-	131	131
100	609	351	25%	88	110	278	48	326
101	394	609	25%	152	190	483	240	723
102	173	282	25%	70	88	224	145	369
103	13	153	25%	38	48	121	-	121
104	62	42	25%	10	13	33	50	83
105	153	168	25%	42	53	134	185	319
106	74	645	25%	161	201	512	96	607
107	105	24	25%	6	7	19	126	144
108	425	137	25%	34	43	109	439	548
109	336	564	25%	141	176	448	477	924
110	813	1656	25%	414	517	1,314	711	2,025
111	888	2667	25%	667	834	2,117	574	2,691
112	59	191	25%	48	60	151	33	184
113	113	99	25%	25	31	79	208	287
114	117	212	25%	53	66	168	179	347
115	191	516	25%	129	161	409	230	639
116	555	273	25%	68	85	217	198	414

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
117	247	139	25%	35	43	110	135	245
118	136	327	25%	82	102	260	85	344
119	115	227	25%	57	71	180	170	350
120	150	55	25%	14	17	44	122	166
121	34	44	25%	11	14	35	17	52
122	315	321	25%	80	100	255	41	296
123	146	177	25%	44	55	140	54	194
124	32	55	25%	14	17	44	35	79
125	42	0	25%	-	-	-	38	38
126	214	2121	25%	530	663	1,683	220	1,904
127	495	636	25%	159	199	505	44	549
128	7	1	0%	-	-	-	71	71
129	247	113	10%	11	14	36	57	93
130	117	0	0%	-	-	-	293	293
131	7	0	0%	-	-	-	-	-
132	18	19	10%	2	2	6	-	6
133	277	177	10%	18	22	56	519	576
134	112	3	10%	0	0	1	455	456
135	15	0	10%	-	-	-	30	30
136	19	0	0%	-	-	-	60	60
137	17	0	0%	-	-	-	80	80
138	5	0	0%	-	-	-	-	-
139	7	0	0%	-	-	-	8	8
140	9	0	0%	-	-	-	51	51
141	12	0	0%	-	-	-	72	72
142	16	0	0%	-	-	-	88	88
143	34	0	0%	-	-	-	-	-
144	439	221	10%	22	28	70	283	354
145	162	118	10%	12	15	37	575	612
146	17	0	25%	-	-	-	-	-
147	167	374	0%	-	-	-	97	97
148	36	22	0%	-	-	-	30	30
149	47	36	0%	-	-	-	406	406
150	228	102	40%	41	51	129	408	538
151	8	0	0%	-	-	-	-	-
152	39	0	0%	-	-	-	154	154
153	15	0	0%	-	-	-	4	4
154	78	0	0%	-	-	-	418	418
155	48	0	0%	-	-	-	20	20
156	6	0	0%	-	-	-	38	38
157	23	39	0%	-	-	-	9	9
158	64	27	0%	-	-	-	93	93
159	20	0	0%	-	-	-	-	-

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
160	25	0	0%	-	-	-	180	180
161	9	0	0%	-	-	-	42	42
162	4	0	0%	-	-	-	15	15
163	10	0	0%	-	-	-	-	-
164	49	0	0%	-	-	-	-	-
165	65	0	0%	-	-	-	-	-
166	174	0	0%	-	-	-	21	21
167	258	0	0%	-	-	-	2	2
168	40	219	0%	-	-	-	8	8
169	38	131	0%	-	-	-	13	13
170	18	293	0%	-	-	-	1	1
171	229	317	10%	32	40	100	59	159
172	296	311	10%	31	39	99	118	217
173	14	0	10%	-	-	-	11	11
174	605	1138	10%	114	142	361	138	499
175	436	912	10%	91	114	290	164	453
176	198	363	10%	36	45	115	129	244
177	97	0	10%	-	-	-	-	-
178	265	0	10%	-	-	-	18	18
179	363	0	10%	-	-	-	78	78
180	32	0	0%	-	-	-	201	201
181	83	0	10%	-	-	-	12	12
182	167	0	10%	-	-	-	67	67
183	66	0	10%	-	-	-	95	95
184	180	0	0%	-	-	-	-	-
185	126	0	10%	-	-	-	-	-
186	129	0	0%	-	-	-	-	-
187	47	0	0%	-	-	-	4	4
188	68	0	10%	-	-	-	50	50
189	12	0	0%	-	-	-	115	115
190	18	0	10%	-	-	-	46	46
191	48	0	10%	-	-	-	37	37
192	21	0	0%	-	-	-	103	103
193	45	6	10%	1	1	2	397	399
194	39	7	10%	1	1	2	426	428
195	39	0	0%	-	-	-	30	30
196	28	0	0%	-	-	-	48	48
197	16	0	0%	-	-	-	139	139
198	6	0	0%	-	-	-	2	2
199	9	0	0%	-	-	-	1	1
200	14	0	0%	-	-	-	125	125
201	11	0	0%	-	-	-	66	66
202	10	0	0%	-	-	-	43	43

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
203	21	0	0%	-	-	-	-	-
204	58	0	0%	-	-	-	-	-
205	24	0	0%	-	-	-	35	35
206	19	0	0%	-	-	-	143	143
207	29	0	0%	-	-	-	230	230
208	38	0	0%	-	-	-	47	47
209	38	0	0%	-	-	-	17	17
210	63	0	0%	-	-	-	259	259
211	10	0	0%	-	-	-	-	-
212	182	162	10%	16	20	51	463	515
213	54	65	25%	16	20	51	103	154
214	98	0	0%	-	-	-	699	699
215	35	0	0%	-	-	-	95	95
216	31	0	0%	-	-	-	89	89
217	15	0	0%	-	-	-	58	58
218	3	0	0%	-	-	-	23	23
219	3	0	0%	-	-	-	-	-
220	7	0	0%	-	-	-	21	21
221	1	0	0%	-	-	-	-	-
222	49	0	0%	-	-	-	197	197
223	38	0	0%	-	-	-	352	352
224	29	0	0%	-	-	-	138	138
225	59	24	25%	6	7	19	267	286
226	33	0	0%	-	-	-	136	136
227	23	0	0%	-	-	-	66	66
228	92	64	10%	6	8	20	64	84
229	28	1	10%	0	0	0	95	95
230	90	0	0%	-	-	-	39	39
231	15	22	10%	2	3	7	132	139
232	36	12	10%	1	1	4	212	215
233	47	0	0%	-	-	-	202	202
234	61	0	0%	-	-	-	297	297
235	79	4	10%	0	0	1	3	4
236	41	0	0%	-	-	-	101	101
237	15	0	0%	-	-	-	22	22
238	41	0	0%	-	-	-	76	76
239	5	0	0%	-	-	-	45	45
240	47	10	10%	1	1	3	28	31
241	30	0	10%	-	-	-	92	92
242	66	11	10%	1	1	3	177	181
243	5	0	0%	-	-	-	5	5
244	22	0	0%	-	-	-	-	-
245	3	0	0%	-	-	-	57	57

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
246	13	0	0%	-	-	-	58	58
247	41	0	0%	-	-	-	371	371
248	85	0	0%	-	-	-	699	699
249	14	0	0%	-	-	-	87	87
250	4	0	0%	-	-	-	36	36
251	86	1	10%	0	0	0	459	459
252	35	0	0%	-	-	-	-	-
253	4	30	40%	12	15	38	-	38
254	37	9	25%	2	3	7	132	139
255	3	0	0%	-	-	-	-	-
256	5	0	0%	-	-	-	6	6
257	10	0	0%	-	-	-	105	105
258	67	0	0%	-	-	-	-	-
259	4	0	0%	-	-	-	17	17
260	4	0	0%	-	-	-	2	2
261	6	0	0%	-	-	-	32	32
262	5	0	0%	-	-	-	62	62
263	14	0	0%	-	-	-	60	60
264	9	0	0%	-	-	-	-	-
265	7	0	0%	-	-	-	53	53
266	41	0	0%	-	-	-	340	340
267	70	0	0%	-	-	-	549	549
268	31	0	0%	-	-	-	168	168
269	23	0	0%	-	-	-	158	158
270	26	0	0%	-	-	-	46	46
271	35	0	0%	-	-	-	74	74
272	26	0	0%	-	-	-	153	153
273	77	0	0%	-	-	-	490	490
274	3	0	0%	-	-	-	-	-
275	13	0	0%	-	-	-	91	91
276	28	0	0%	-	-	-	-	-
277	95	0	0%	-	-	-	760	760
278	29	0	0%	-	-	-	149	149
279	9	0	0%	-	-	-	22	22
280	2	0	0%	-	-	-	-	-
281	10	0	0%	-	-	-	86	86
282	19	0	0%	-	-	-	131	131
283	11	0	0%	-	-	-	40	40
284	32	0	0%	-	-	-	132	132
285	14	0	0%	-	-	-	101	101
286	23	0	0%	-	-	-	103	103
287	44	0	0%	-	-	-	278	278
288	6	0	0%	-	-	-	2	2

TAZ	Developed	Res. AV	Rate	Land Used	New DU	New Pop	1999 Pop	2025 Pop
289	54	0	0%	-	-	-	361	361
290	100	19	25%	5	6	15	444	459
291	131	18	10%	2	2	6	115	120
292	167	9	10%	1	1	3	860	863
293	60	0	0%	-	-	-	365	365
294	25	0	0%	-	-	-	9	9
295	57	0	0%	-	-	-	22	22
296	19	0	0%	-	-	-	65	65
297	67	0	0%	-	-	-	193	193
298	16	0	0%	-	-	-	-	-
299	64	0	0%	-	-	-	361	361
300	17	0	0%	-	-	-	6	6
301	38	0	0%	-	-	-	166	166
302	6	0	0%	-	-	-	9	9
303	25	0	0%	-	-	-	24	24
304	21	0	0%	-	-	-	60	60
305	82	0	0%	-	-	-	464	464
306	30	0	0%	-	-	-	140	140
307	14	0	0%	-	-	-	11	11
308	122	0	0%	-	-	-	783	783
309	8	0	0%	-	-	-	18	18
310	79	0	0%	-	-	-	354	354
311	44	0	0%	-	-	-	59	59
312	12	0	0%	-	-	-	38	38
313	67	0	0%	-	-	-	374	374
314	23	0	0%	-	-	-	115	115
315	30	0	0%	-	-	-	143	143
316	78	0	0%	-	-	-	197	197
317	26	0	0%	-	-	-	191	191
Total:	29,326	28,618		5,102	6,378	16,199	40,259	56,458
				18%				40%

dupa 1999 dwelling units per acre is calculated by total dwelling units / residential land used, or 15,836/12,682.

pphh 1999 persons per household is calculated by total persons/households; or 40,259/15,836.

TABLE 4: 1999 Existing Employment

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
1			8				8
2							-
3							-
4			7				7
5							-
6							-
7							-
8						2	2
9					2		2
10	15		10				25
11		9					9
12	861						861
13						7	7
14							-
15							-
16	70						70
17					34	19	53
18							-
19							-
20			9				9
21			22				22
22		44				2	46
23		6	26			1	33
24							-
25							-
26	2						2
27		7			4	9	20
28	13	43	41				97
29		32					32
30							-
31		11					11
32							-
33			9				9
34						3	3
35						6	6
36							-
37		13				2	15
38			3		320		323
39						351	351
40							-
41							-
42							-
43							-
44		5					5
45					4		4
46							-
47							-
48						20	20

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
49		13					13
50		9					9
51				4	3	199	206
52	5	1					6
53		1					1
54				2	11	17	30
55		45	3		9		57
56							-
57							-
58		4					4
59							-
60					30		30
61					15		15
62						13	13
63							-
64							-
65		7	20		21		48
66					2		2
67							-
68			286		52		338
69					7		7
70							-
71							-
72		7				1	8
73							-
74		3					3
75							-
76							-
77			18		25		43
78							-
79		1					1
80		5					5
81							-
82							-
83			6	1		7	14
84							-
85			10				10
86							-
87							-
88	4	6			1		11
89							-
90							-
91		5					5
92							-
93							-
94		1					1
95					3		3
96		1				39	40

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
97							-
98							-
99		4					4
100							-
101		6	15			3	24
102		6	9	3			18
103							-
104					8		8
105						3	3
106					3		3
107							-
108		1					1
109	11	3	18				32
110		3	18		12		33
111	14	1					15
112							-
113		3	3		2		8
114							-
115		6	4		3		13
116							-
117		8					8
118							-
119							-
120							-
121							-
122							-
123							-
124					3		3
125					547		547
126			4				4
127						9	9
128							-
129						2	2
130		7			15		22
131							-
132							-
133	2				5		7
134		12	2				14
135	51				2		53
136					50	18	68
137						126	126
138		121					121
139			19				19
140	10		58		77		145
141							-
142							-
143	606		9		28		643
144	81					187	268

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
145							-
146							-
147							-
148			6				6
149	18				7	154	179
150						30	30
151							-
152							-
153					25	50	75
154			1				1
155							-
156							-
157							-
158		4					4
159							-
160					3		3
161			23		12		35
162	12		8		11	21	52
163					71		71
164	75						75
165							-
166	835						835
167							-
168							-
169							-
170							-
171			7				7
172			10				10
173		4					4
174					6	3	9
175		1				5	6
176					2		2
177						10	10
178	80						80
179							-
180							-
181							-
182						3	3
183					1		1
184							-
185	172	38				58	268
186				12			12
187	24				28	879	931
188						2	2
189							-
190		84	23		4	4	115
191			24				24
192			18		8		26

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
193		1			45		46
194		4			39		43
195			4		1		5
196		9					9
197							-
198							-
199							-
200			4				4
201			17		9		26
202			30				30
203	38	9	47		16		110
204	3,639						3,639
205			2			123	125
206					1		1
207			13		63	12	88
208						62	62
209		14	125		7	6	152
210			8		73	76	157
211		69	17		83	72	241
212		23	45		20		88
213		2	7				9
214							-
215						58	58
216					32		32
217							-
218					9		9
219			5		47		52
220							-
221							-
222							-
223							-
224		5					5
225			17				17
226						26	26
227						10	10
228						87	87
229							-
230					150		150
231							-
232							-
233		3	5				8
234							-
235						3	3
236						19	19
237	81			9	4		94
238	27			38	58		123
239							-
240							-

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
241					3		3
242		30	2		20		52
243							-
244							-
245							-
246				30			30
247				12			12
248		18	25				43
249		6	70	1	4		81
250			15				15
251		1					1
252						48	48
253							-
254					8		8
255	11		3		59	34	107
256			9		5	385	399
257							-
258			11		152		163
259			56	3	30		89
260		2			25		27
261			23				23
262							-
263		4				59	63
264					35		35
265			25	1	8	16	50
266		2	3		19		24
267		16			16		32
268			10				10
269			7				7
270							-
271						67	67
272					19		19
273		105	55		15		175
274						30	30
275					34		34
276					89	92	181
277			22		103	59	184
278							-
279							-
280							-
281							-
282					159		159
283						39	39
284					21		21
285					3	3	6
286		57			52		109
287			6		27	21	54
288						16	16

Table 4:
South Wood County Urban Area
1999 Existing Employment

TAZ	Manufacturing	Trades	Commercial	Wholesale	Service	Other	Totals
289					9		9
290		13	8		3		24
291			7		4		11
292					71	54	125
293		17	39		80		136
294		3	374		39		416
295			121		55	5	181
296							-
297	14				24	14	52
298					5	11	16
299					8		8
300						51	51
301			35				35
302			17		17		34
303	5	9	59		73	63	209
304					20		20
305					3		3
306						15	15
307			47		21		68
308					26		26
309							-
310					2		2
311		3			59	84	146
312	7		25		27		59
313		5	29				34
314							-
315							-
316			77		55		132
317					5		5
Totals:	6,783	1,021	2,283	116	3,645	3,985	17,833

TABLE 5: Summary of Employment Projections

Table 5:
South Wood County Urban Area
Summary of Employment Projections

			epa	used	e added
			6.58	2528	16637

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
1	8	0	-	-	8
2	0	0	-	-	-
3	0	0	-	-	-
4	7	0	-	-	7
5	0	0	-	-	-
6	0	0	-	-	-
7	0	0	-	-	-
8	2	0	-	-	2
9	2	0	-	-	2
10	25	0	-	-	25
11	9	0	-	-	9
12	861	0	-	-	861
13	7	0	-	-	7
14	0	0	-	-	-
15	0	0	-	-	-
16	70	0	-	-	70
17	53	0	-	-	53
18	0	0	-	-	-
19	0	0	-	-	-
20	9	0	-	-	9
21	22	0	-	-	22
22	46	96	53	351	397
23	33	53	30	195	228
24	0	0	-	-	-
25	0	0	-	-	-
26	2	0	-	-	2
27	20	31	17	115	135
28	97	42	24	155	252
29	32	6	3	21	53
30	0	0	-	-	-
31	11	60	33	220	231
32	0	0	-	-	-
33	9	63	35	230	239
34	3	299	167	1,097	1,100
35	6	0	-	-	6

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
36	0	74	41	271	271
37	15	0	-	-	15
38	323	95	53	350	673
39	351	0	0	0	351
40	0	0	-	-	-
41	0	333	186	1,221	1,221
42	0	0	-	-	-
43	0	0	-	-	-
44	5	5	3	19	24
45	4	0	0	0	4
46	0	0	-	-	-
47	0	0	-	-	-
48	20	0	-	-	20
49	13	0	-	-	13
50	9	116	65	426	435
51	206	0	-	-	206
52	6	0	-	-	6
53	1	0	-	-	1
54	30	0	-	-	30
55	57	19	11	71	128
56	0	0	-	-	-
57	0	0	-	-	-
58	4	1	1	5	9
59	0	0	-	-	-
60	30	0	-	-	30
61	15	0	-	-	15
62	13	0	-	-	13
63	0	0	-	-	-
64	0	0	-	-	-
65	48	0	0	0	48
66	2	0	-	-	2
67	0	0	-	-	-
68	338	37	21	137	475
69	7	0	-	-	7
70	0	0	-	-	-
71	0	0	-	-	-
72	8	11	6	39	47
73	0	0	-	-	-
74	3	0	-	-	3
75	0	0	-	-	-
76	0	0	-	-	-
77	43	4	2	15	58
78	0	0	-	-	-

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
79	1	0	-	-	1
80	5	0	-	-	5
81	0	0	-	-	-
82	0	0	-	-	-
83	14	0	-	-	14
84	0	27	15	101	101
85	10	0	0	0	10
86	0	0	0	1	1
87	0	0	-	-	-
88	11	0	-	-	11
89	0	0	-	-	-
90	0	0	-	-	-
91	5	0	-	-	5
92	0	0	-	-	-
93	0	0	-	-	-
94	1	0	-	-	1
95	3	0	-	-	3
96	40	0	-	-	40
97	0	0	-	-	-
98	0	0	-	-	-
99	4	261	146	958	962
100	0	0	-	-	-
101	24	152	85	558	582
102	18	70	39	258	276
103	0	0	-	-	-
104	8	0	-	-	8
105	3	0	-	-	3
106	3	0	-	-	3
107	0	95	53	347	347
108	1	34	19	126	127
109	32	141	79	517	549
110	33	414	230	1,516	1,549
111	15	0	-	-	15
112	0	48	27	175	175
113	8	25	14	91	99
114	0	53	30	194	194
115	13	129	72	472	485
116	0	0	-	-	-
117	8	0	-	-	8
118	0	0	-	-	-
119	0	0	-	-	-
120	0	55	31	202	202
121	0	5	3	18	18

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
122	0	0	-	-	-
123	0	0	-	-	-
124	3	0	-	-	3
125	547	0	-	-	547
126	4	0	-	-	4
127	9	71	39	259	268
128	0	0	-	-	-
129	2	13	7	46	48
130	22	0	-	-	22
131	0	0	-	-	-
132	0	0	-	-	-
133	7	20	11	72	79
134	14	0	0	1	15
135	53	7	4	25	78
136	68	0	-	-	68
137	126	0	-	-	126
138	121	0	-	-	121
139	19	0	-	-	19
140	145	0	-	-	145
141	0	0	-	-	-
142	0	0	-	-	-
143	643	0	-	-	643
144	268	25	14	90	358
145	0	0	-	-	-
146	0	0	0	0	0
147	0	0	-	-	-
148	6	50	28	185	191
149	179	0	-	-	179
150	30	0	-	-	30
151	0	0	-	-	-
152	0	0	-	-	-
153	75	0	-	-	75
154	1	0	-	-	1
155	0	0	-	-	-
156	0	0	-	-	-
157	0	0	-	-	-
158	4	0	-	-	4
159	0	0	-	-	-
160	3	0	-	-	3
161	35	0	-	-	35
162	52	0	-	-	52
163	71	0	-	-	71
164	75	71	39	259	334

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
165	0	30	17	111	111
166	835	154	86	564	1,399
167	0	172	96	629	629
168	0	55	30	201	201
169	0	0	-	-	-
170	0	0	-	-	-
171	7	0	-	-	7
172	10	0	-	-	10
173	4	9	5	34	38
174	9	0	-	-	9
175	6	0	-	-	6
176	2	0	-	-	2
177	10	94	53	346	356
178	80	134	75	492	572
179	0	240	134	880	880
180	0	0	0	0	0
181	0	26	14	93	93
182	3	94	52	345	348
183	1	68	38	251	252
184	0	1	0	3	3
185	268	125	70	458	726
186	12	0	0	0	12
187	931	40	22	145	1,076
188	2	66	37	242	244
189	0	0	-	-	-
190	115	4	2	13	128
191	24	5	3	17	41
192	26	0	-	-	26
193	46	0	-	-	46
194	43	0	-	-	43
195	5	0	-	-	5
196	9	0	-	-	9
197	0	0	-	-	-
198	0	0	-	-	-
199	0	0	-	-	-
200	4	0	-	-	4
201	26	0	-	-	26
202	30	0	-	-	30
203	110	0	-	-	110
204	3639	0	-	-	3,639
205	125	0	-	-	125
206	1	0	-	-	1
207	88	0	-	-	88

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
208	62	0	-	-	62
209	152	0	-	-	152
210	157	0	0	0	157
211	241	0	-	-	241
212	88	0	-	-	88
213	9	0	-	-	9
214	0	0	-	-	-
215	58	0	-	-	58
216	32	0	-	-	32
217	0	0	-	-	-
218	9	0	-	-	9
219	52	0	-	-	52
220	0	0	-	-	-
221	0	0	-	-	-
222	0	0	-	-	-
223	0	0	-	-	-
224	5	0	-	-	5
225	17	0	-	-	17
226	26	0	-	-	26
227	10	0	-	-	10
228	87	64	36	235	322
229	0	22	12	81	81
230	150	0	-	-	150
231	0	0	-	-	-
232	0	0	-	-	-
233	8	0	-	-	8
234	0	0	-	-	-
235	3	0	-	-	3
236	19	0	-	-	19
237	94	0	-	-	94
238	123	1	1	5	128
239	0	0	-	-	-
240	0	0	-	-	-
241	3	11	6	39	42
242	52	0	-	-	52
243	0	0	-	-	-
244	0	0	0	0	0
245	0	0	-	-	-
246	30	0	-	-	30
247	12	0	-	-	12
248	43	0	-	-	43
249	81	0	-	-	81
250	15	0	-	-	15

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
251	1	0	-	-	1
252	48	0	-	-	48
253	0	0	-	-	-
254	8	0	-	-	8
255	107	0	-	-	107
256	399	0	-	-	399
257	0	0	-	-	-
258	163	0	0	0	163
259	89	0	-	-	89
260	27	0	-	-	27
261	23	0	-	-	23
262	0	0	-	-	-
263	63	0	-	-	63
264	35	0	-	-	35
265	50	0	-	-	50
266	24	0	-	-	24
267	32	0	-	-	32
268	10	0	-	-	10
269	7	0	-	-	7
270	0	0	-	-	-
271	67	0	-	-	67
272	19	0	-	-	19
273	175	0	-	-	175
274	30	0	-	-	30
275	34	0	-	-	34
276	181	0	-	-	181
277	184	0	-	-	184
278	0	0	0	1	1
279	0	0	-	-	-
280	0	0	-	-	-
281	0	0	-	-	-
282	159	5	3	17	176
283	39	0	-	-	39
284	21	0	-	-	21
285	6	0	-	-	6
286	109	0	-	-	109
287	54	0	-	-	54
288	16	0	-	-	16
289	9	0	-	-	9
290	24	6	4	23	47
291	11	0	-	-	11
292	125	0	-	-	125
293	136	0	-	-	136

TAZ	1999 EMP	NR AV	Land Used	New EMP	2025 EMP
294	416	0	-	-	416
295	181	0	-	-	181
296	0	0	-	-	-
297	52	0	-	-	52
298	16	0	-	-	16
299	8	0	-	-	8
300	51	0	-	-	51
301	35	0	-	-	35
302	34	0	-	-	34
303	209	0	-	-	209
304	20	0	-	-	20
305	3	0	-	-	3
306	15	0	-	-	15
307	68	0	-	-	68
308	26	0	-	-	26
309	0	0	-	-	-
310	2	0	-	-	2
311	146	0	-	-	146
312	59	0	-	-	59
313	34	0	-	-	34
314	0	0	-	-	-
315	0	0	-	-	-
316	132	0	-	-	132
317	5	0	-	-	5
Totals:	17833	4540	2,528	16,634	34,467
			56%	16,634	93%

SYNOPSES: Community Meeting Summaries

August 11, 2000

Wisconsin Rapid Area Long Range Transportation Study
Municipal Meeting Schedule

Wednesday	August 2	Town of Rudolph	7:00 PM
Tuesday	August 8	Village of Port Edwards	7:00 PM
Wednesday	August 9	Town of Port Edwards	1:00 PM
Monday	August 14	Town of Saratoga	6:30 PM
Monday	August 21	City of Wis. Rapids Planning Commission	3:45 PM
Tuesday	August 22	Town of Grand Rapids	6:00 PM
Wednesday	September 6	Town of Seneca	7:00 PM
Monday	September 11	Village of Biron	6:30 PM
Tuesday	September 12	City of Nekoosa	7:00 PM

8/2/00

Town of Rudolph Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to members of the Town Board for the Town of Rudolph. Town of Rudolph officials present included Chairperson Jim Joosten, Supervisors Mike Pagals and Jim Bushmaker, Clerk Barb Raabe and Treasurer Sally Joosten. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Town's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the Town Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Town. In reviewing the table and the generalized existing land use map, the Town Board agreed that they appeared to be a reasonable representation of the population for the area. The second table showed employment by sector and TAZ. The Board reviewed the table and made some correction in numbers of employee in the TAZs. No major employers were indicated for the area with the largest business consisting of five (5) employees. The third table demonstrated the types of generalized 1999 existing land uses in each TAZ. Again with review of the table, along with the maps, the board indicated no need for corrections.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Town would anticipate within the study area for the next two decades. Board Chairperson, Jim Joosten, indicated the Town did not expect much growth to take place in this part of the Town due to the soil types in the area, which are mostly unsuitable for private septic treatment systems. The Board members pointed to the fact that substantial portions of the undeveloped lands are indicated as wetland areas. Referring to the 14 building permits in the area between 1990 and 1999, Mr. Landeau requested input on if the Board felt it would be reasonable to expect that level of growth to continue for the next two decades. Board members indicated that it would probably be less and agreeing that it would most likely be a low growth area. When questioned about the potential for commercial growth in this area, the Board indicated very little commercial growth was anticipated and indicated that most of the commercial growth would probably occur in the northern portion of the Town, outside the study area.

Mr. Landeau asked if the Board had any questions about the information or the study. Supervisor Pagals asked how the study area boundaries were determined and who made the decisions on study area boundaries? Mr. Landeau answered with a short explanation of factors involved in creating the study area and that the Wis DOT made the final determination with input from a local technical group and DOT traffic information. Other comments included a desire by board not to see any development of four-lane road expansions within the Town. Questions from

the audience included inquire on possible improvements of specific highways such as Hwy 34 or County P. Mr. Landeau explained that the study would help the DOT in their decisions on area road improvements, however, on specific highways he would prefer not to speak for the DOT. Mr. Landeau pointed out that the DOT often looks at several options in dealing with potential road improvements. One audience member requested that information on the study's progress be given to the media so local citizens could follow in the study's development.

Mr. Landeau concluded by thanking the Town Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

8/8/00

Village of Port Edwards Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long-Range Transportation Study update presentation to members of the Village Board for the Village of Port Edwards. Village Board members were in attendance with the exception of the Village President. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Village's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the Village Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for each of the TAZs in the Village. In reviewing the table and the generalized existing land use map the Village Board affirmed that the quality and placement of the 1990-99 permit information appeared to be in line with actual residential growth. However, there was some discussion why the study data population totals for 1999 indicated a total Village population of 2,100 when the Wisconsin DOA 1999 population estimates were in the range of 1,800 persons. No immediate resolution was found and Mr. Landeau indicated that NCWRPC staff would take a closer look to assure that study data was representative of the 1999 population in the Village. One Village Board member indicated that the population of 17 persons in TAZ 148 appeared low due to the fact that there are twelve (12) apartment units along with twelve (12) elderly units located within the TAZ.

The second table showed employment by sector and TAZ. In reviewing the employment data, questions were raised about figures in four TAZs. The figure of 1,440 employees in TAZ 166 was questioned because the only two employers in that TAZ were thought to employee around a combined 835. Further investigation of data was suggested in the other three TAZs, which included TAZs 148, 149, and 164. The Village Board members gave helpful information about each TAZ in question, which NCWRPC staff will make attempts to clarify and/or verify.

The third table demonstrated the types of generalized 1999 existing land uses in each TAZ. Some reclassifications of parcels were made and a few smaller commercial locations were added to the land use mapping.

Mr. Landeau informed the board members that corrections on the tables and mapping would be made and updated information maybe sent for review either by the Village Administrator or at a planned second round of meetings, which would also include projected growth information.
Mr. Landeau then explained that the second reason for the presentation was to receive input in where future growth in Village may occur over the next twenty year period, which will help in the next stage was of the before mentioned growth projections. The Village Administrator indicated no real increase in growth over the level experienced in the last decade was anticipated. Some residential growth was expected to continue in and around the most active TAZ (150). No

future development or service extension for commercial or industrial growth were planned or anticipated. Board members indicated the desire to maintain present employers and businesses. The Village Administrator did add that there is a planned annexation on the SW corner of Hwy 54 and Hwy 73 to provide services to a gas station/convenient store. A planned expansion by a company in TAZ 166 was also mentioned and was anticipated to increase the numbers of employees at that location.

Mr. Landeau inquired if the Board members had any question or comment on the study or the information reviewed in the presentation. Several Board members inquired if this study would help in their desire for a bridge to be constructed across the Wisconsin River within the Village. Pointing to the problem of response times for calls on the other side of the river, police and fire officials echoed the Boards desire for a bridge. Mr. Landeau indicated that the study would look at future transportation needs but he could not speak for the DOT on specific outcomes. He reassured the audience that their comments would be forwarded to the DOT.

Mr. Landeau concluded by thanking the Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

8/9/00

Town of Port Edwards Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to the Town of Port Edward's Town Board. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Town's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the Town Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Town. In reviewing the table and the generalized existing land use map, the Town Board agreed that the data appeared to be a reasonable representation of the population for the area. The second table showed employment by sector and TAZ. The Board reviewed the employment table. The Board added a few smaller commercial land uses to the mapping with the corresponding employment figures for that TAZ. The third table demonstrated the types of generalized 1999 existing land uses in each TAZ. The Town Board suggested no additional changes besides the added commercial uses.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Town would anticipate within the study area for the next two decades. There was some discussion of new commercial development north of the casino, which would be just outside the study area. The Town Chair mentioned that Nekoosa was planning annexation in the near future. Besides those changes the Board felt that growth would be low to moderate with some mention that wetlands was a limiting factor. The Town has a 2 acre residential lot size minimum.

Mr. Landeau asked if the Board had any further questions about the information or the study? Mr. Landeau concluded by thanking the Town Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

8/14/00

Town of Saratoga Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long-Range Transportation Study update presentation to members of the Town Board for the Town of Saratoga. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Town's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables along with preliminary land use mapping were discussed with the Town Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Town. The second table showed employment by sector and TAZ. The Board reviewed the table and the commercial areas on the land use map made a number of corrections to the land use mapping. These corrections were primarily additions of commercial uses not shown on the map. There were enough commercial additions along Highway 73 & 13 to indicate a need to review and possibly edit the number of employees in several TAZs. The third table demonstrated the types of generalized 1999 existing land uses in each TAZ. These totals will have to be revised to reflect the land use corrections.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Town would anticipate within the study area for the next two decades. The Board members indicated that they anticipated high growth rates of commercial development to continue along and around the two major state highways in the town. The Town Chair felt that road expansion along with slower speeds were needed on Hwy 73 due to commercial growth and increase traffic to and from the Casino. As for residential growth, the Board members believed that there would be more housing starts in the next twenty years compared to the last twenty years. They felt that increased housing pressure would move to the south from the Town of Grand Rapids area as that Town's housing concentration increased. The Town has a 1 acre minimum lot size.

Mr. Landeau asked if the Board had any questions about the information or the study. Mr. Landeau indicated that revisions would be made and updated information be sent for their further comment. Mr. Landeau concluded by thanking the Town Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

8/28/00

City of Wisconsin Rapids Planning Commission Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long-Range Transportation Study update presentation to members of the Planning Commission for the City of Wisconsin Rapids. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that there were two main purposes for the presentation. The first was to explain what study data has been collected to this point and to receive comment on the data from the commission. Mr. Landeau presented each of the three data tables prepared, explaining what each table showed and how the data were derived. Being that there were four to five of data per table Mr. Landeau asked the commission if they would review the information at later date and provide NCWRPC with their input. The planning commissioners agreed and inquired on the date NCWRPC would need this input by. A mid September target was given.

The second reason for the presentation was to receive input on how much and where the commissioners anticipated future growth to take place. There was some discussion of how much room was left in the two industrial parks. Dale Hexon thought there was approximately 40 to 80 acres available in west industrial park and 200 acres available in the east industrial park. Someone added that the 40 to 80 acres in the west park included some smaller parcels, which would limit use by larger employers. The commission explained that grow of the west industrial park was the landfill located north of the park. The commission mentioned that some added business growth was expected in TAZ 38 next to Advance Learning Center and annexation efforts in that area were presently taking place. As for residential growth, the commissioners felt that the main growth area has been and would continue to the west of the city. Some storm sewer was done to the East of Wal-Mart, which has increased residential development in that area.

The commissioners indicated that they would review the information and provide some feedback. Mr. Landeau thanked the commission for their time and reminded them to call or contact NCWRPC if they had any questions or needed additional information.

8/22/00

Town of Grand Rapids Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to members of the Town Board for the Town of Grand Rapids. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Town's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables along with preliminary land use mapping were discussed with the Town Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Town. Members of the Board felt that the persons per household number was conservative and would thereby under estimate future populations for the Town, as shown by the RPC's low 1999 population estimate. The Town had a population estimate from the state of 7,881, however, this number was actually for 2000 and not the 1999 base year for the study as shown in the tables. The second table showed employment by sector and TAZ. The Board reviewed the table and the commercial areas on the land use map made a number of corrections to the land use mapping. These corrections were primarily additions of commercial uses not shown on the map. The majority of changes were made in areas along STH 54 and adjacent to Wisconsin Rapids. The volume of edits led the group to conclude that the NCWRPC should review its data with the help of a Town Zoning Map provided by the Town Chair. The third table demonstrated the types of generalized 1999 existing land uses in each TAZ. These totals will have to be revised to reflect the land use corrections.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Town would anticipate within the study area for the next two decades. Board members indicated that they anticipated high growth rates of commercial development to continue along Hwy 54. Beside this corridor, lands in the northern portion of the Town would require utilities or larger lots (5 acres) in order to be developed. Lot sizes in the Town range from 30,000 to 40,000 sq. ft. with 3/4 acre being a standard size. Another area of growth would be further development to the south and east, particularly continued residential growth. TAZ 72 was identified as very likely to experience subdivision development. Factors that will negatively impact future Town growth are annexation by Wisconsin Rapids and Village of Biron. There has been discussion of annexation of large tract of land in the northern part of town and subsequent development of an industrial park by the Village.

Mr. Landeau asked if the Board had any questions about the information or the study. Mr. Landeau indicated that revisions would be made and updated information be sent for their further comment. Mr. Landeau concluded by thanking the Town Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

9/6/00

Town of Seneca Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to the Town Board of the Town of Seneca. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Town's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the Town Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Town. In reviewing the table and the generalized existing land use map, the Town Board agreed that the data appeared to be a reasonable representation of the population for the area with the exception of just a few small corrections. The second table showed employment by sector and TAZ. The Board reviewed the employment table. The Board revised a few smaller commercial land uses to the mapping with the corresponding employment figures for that TAZ.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Town would anticipate within the study area for the next two decades. The Town Board indicated that residential and commercial growth in the study area within the Town would most like to remain at a low rate of development due to soil types. Minimum residential lot sizes in the Town are 2 acres or 5 acres depending on type of zoning area. When asked about commercial growth prospects along Highway 13/73, the Board felt that development would be low because of the lower traffic counts compared to other sections of Highway 13 to the south of Wisconsin Rapids.

Mr. Landeau asked if the Board had any further questions about the information or the study? Mr. Landeau concluded by thanking the Town Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

9/11/00

Village of Biron Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to the Village Board of the Village of Biron. Mr. Landeau began the presentation with a brief overview and purpose of the study.

Mr. Landeau explained that one of the reasons for his presentation was to receive the Village's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the Village Board members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Village. The second table showed employment by sector and TAZ. The Board reviewed the employment table. The Board revised a number of smaller commercial land uses to the mapping with the corresponding employment figures for that TAZ, mostly along the STH 54 corridor.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the Village would anticipate within the study area for the next twenty-five years. Village officials did mention that they were exploring the possibility of TIF districts in TAZ 22 and 31. Also, the Fleet Farm Corp. has owned a parcel of property for several years and may someday develop it for their commercial use.

Mr. Landeau asked if the Board had any further questions about the information or the study? Mr. Landeau concluded by thanking the Village Board for their time. Mr. Landeau also reminded the Board that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

9/12/00

City of Nekoosa Meeting Minutes

Mr. Darryl Landeau, NCWRPC Transportation Planner, led a South Wood County Long- Range Transportation Study update presentation to the City Council of the City of Nekoosa. Mr. Landeau began the presentation with a brief overview and purpose of the study.

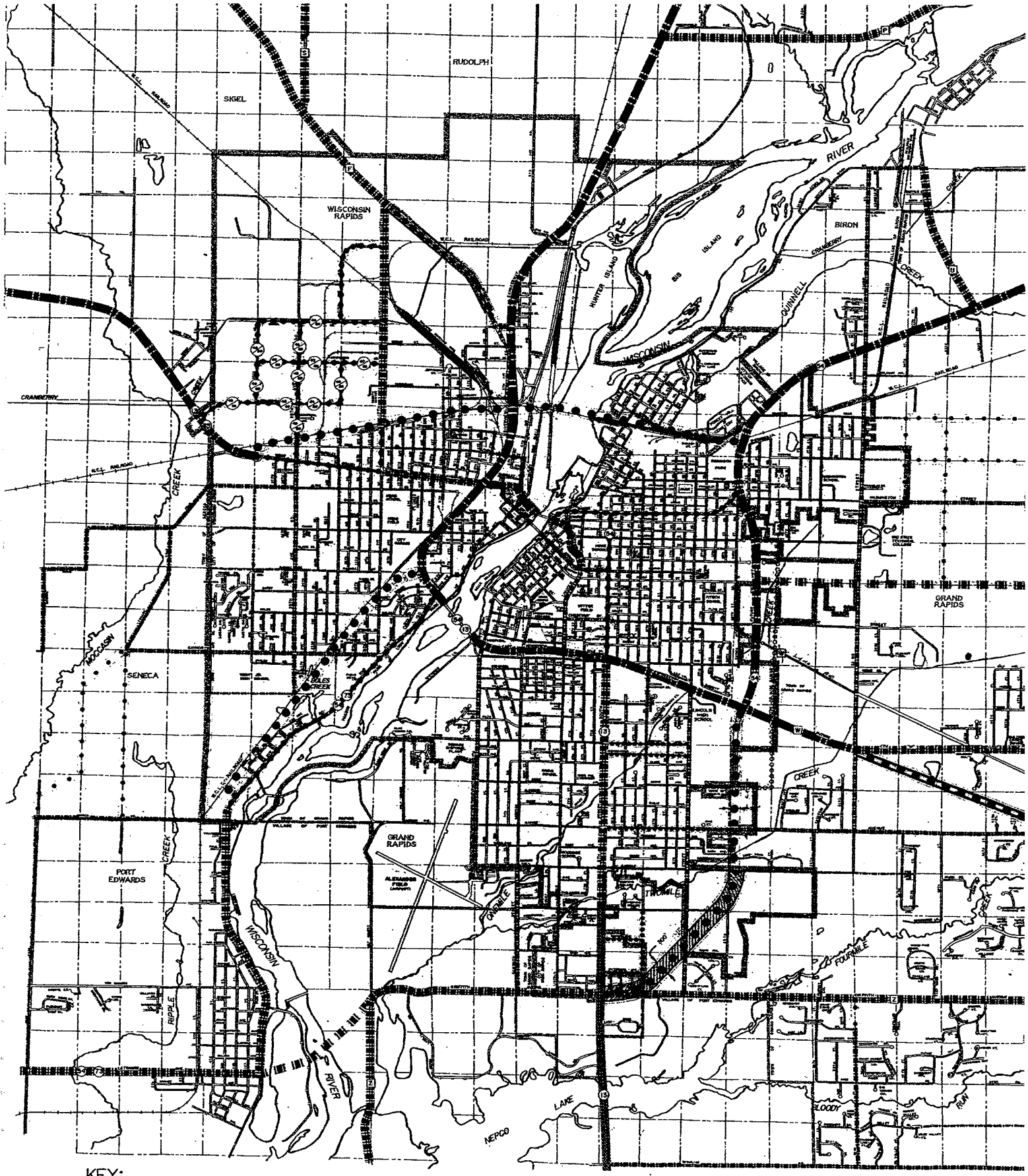
Mr. Landeau explained that one of the reasons for his presentation was to receive the City's reaction to study data that has been gathered for the 1999 base year. It was explained that the base year data would act as the existing data in a future transportation modeling process.

Data from three tables were discussed with the council members. The first table dealt with population and dwelling unit adjustments from 1990 Census to the 1999 base year. Mr. Landeau explained that 1990 Census figures were updated by using local building permit information between 1990 and 1999 for the TAZs in the Village. The second table showed employment by sector and TAZ. The council reviewed the employment table and land use mapping. Finding that there was a need for some corrections of the employment data, Joseph M. Rusch, the City Clerk, offered to review the information during the next week and send the updated information to NCWRPC. The third table of land use acreage would be adjusted based on changes submitted.

Mr. Landeau explained that the second reason for the presentation was to request input on what type and amount of growth the City would anticipate within the study area for the next twenty-five years. City officials felt that their growth was somewhat limited unless developers would request annexation of lands outside the City.

Mr. Landeau asked if the council members had any further questions about the information or the study? Mr. Landeau concluded by thanking them their time. Mr. Landeau also reminded the council that their input is always welcome and that if they have any future information or questions, they should feel free to contact NCWRPC at any time.

APPENDIX C
CITY OF WISCONSIN RAPIDS OFFICIAL MAP



KEY:

		EXISTING	PROPOSED
132' R.O.W.	EXP		
125' R.O.W.	PA		
100' R.O.W.	PA		
80' R.O.W.	SA		
80' R.O.W.	MA		
70' R.O.W.	MAC		
66' R.O.W.	MIC		
EXPRESSWAY CORRIDOR			
RURAL SECTION WITH DITCHES			

WIDTH AS SHOWN

* TRUCKS ARE ALLOWED BETWEEN ** FOR DELIVERIES

WIDTH AS SHOWN

MAP OF
CITY OF WISCONSIN RAPIDS, WISCONSIN
OFFICIAL STREET MAP
WOOD COUNTY, WISCONSIN

N

SCALE: 1" = 1000'

APPROVED BY
CITY PLANNING COMMISSION
FEBRUARY 9, 1995

ORDINANCE ADOPTED BY THE COMMON COUNCIL OF THE CITY OF WISCONSIN RAPIDS, WISCONSIN BY ORDINANCE NUMBER 692 ON THE 14TH DAY OF MARCH 1995

ATTESTED

BY [signature] MAYOR

BY [signature] CITY CLERK

BY [signature] CITY ENGINEER

* SEE DRAWING # 2 SHEET 2 FOR A STREET CLASSIFICATION SCHEDULE WHICH IS HEREBY INCORPORATED INTO AND MADE PART OF THE OFFICIAL STREET MAP.

* USERS OF THIS MAP ARE ENCOURAGED TO ADVISE THE CITY ENGINEERING DEPT. OF ANY CORRECTIONS, ADDITIONS OR DELETIONS THAT MAY BE OBSERVED.

DRAWING NO: E-2

APPENDIX D
WISDOT WISCONSIN RAPIDS URBAN AREA ROAD ANALYSIS

The following pages contain intervals of state highways within the Wisconsin Rapids Urban Area. Some information that is not given in the reports:

STH 13 from STH 34 to STH 54 East, STH 54 from STH 13 to CTH U, and STH 34 are designated as part of the National Highway System (NHS)

STH 13 from STH 34 to STH 54 East and STH 54 from STH 13 to CTH U are classified as Corridor 2020 Multilane Connectors

STH 34 is classified as a Corridor 2020 Two-lane Connector

The following segments are principal and minor arterials or major collectors that are not associated with the Corridor 2020 program:

STH 13/73 -	0.15 miles west of Manor Lane to STH 34
STH 54 -	CTH G to STH 13
STH 73 -	Evergreen Avenue to STH 13 junction in Wisconsin Rapids
STH 13 -	Evergreen Avenue to STH 54 East
STH 173 -	North CTH G to STH 73

STH 13 runs concurrent with STH 54 & STH 73; information is found under STH 13. STH 54 runs concurrent with STH 73; information is found under STH 54

The difference in rural and urban cross-sections is that urban cross-sections typically have curb and gutter; rural generally have shoulders

ADT statistics are based on the 1999 edition of Wisconsin Highway Traffic Volume Data

The number of through lanes and pavement width reflect travelling lanes only; auxiliary lanes are not taken into consideration in this data

Records that have projected construction are dependent upon federal and state finances that will be allocated for construction projects in the future

Crash rates are for the years 1994 -1999 and exclude deer crashes. Crash rates are compiled by a formula that includes the total number of crashes, fatal crashes, and NFI (Non- Fatal Injury) crashes; the ADT of the interval, the interval length, and the time interval crashes are accounted for

Total Crash Rate is the total number of crashes *per 100 million vehicle miles*

Fatal Crash Rate is the total number of fatal crashes *per 100 million vehicle miles*

NFI Crash Rate is the total of Non-Fatal Injuries *per 100 million vehicle miles*

State Average Crash Rates are for the year 1998

PDI and IRI are based upon year 2000 projections

PDI stands for Pavement Distress Index. PDI indicates cracking, patching, rutting, and faulting in the pavement surface. The number ranges from one to one hundred - one being the best and one hundred the worst. The accompanying pavement distress report goes into further detail of the factors in computing PDI

IRI stands for International Roughness Index. The larger the number, the more rough the road rides, the worse it is. IRI is measured in inches per mile. The accompanying graph shows typical ranges for IRI with certain surfaces

Wisconsin Rapids Urban Area Road Analysis

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Evergreen Avenue	0.14 mi north of Hasa Lane	0.58	Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1988

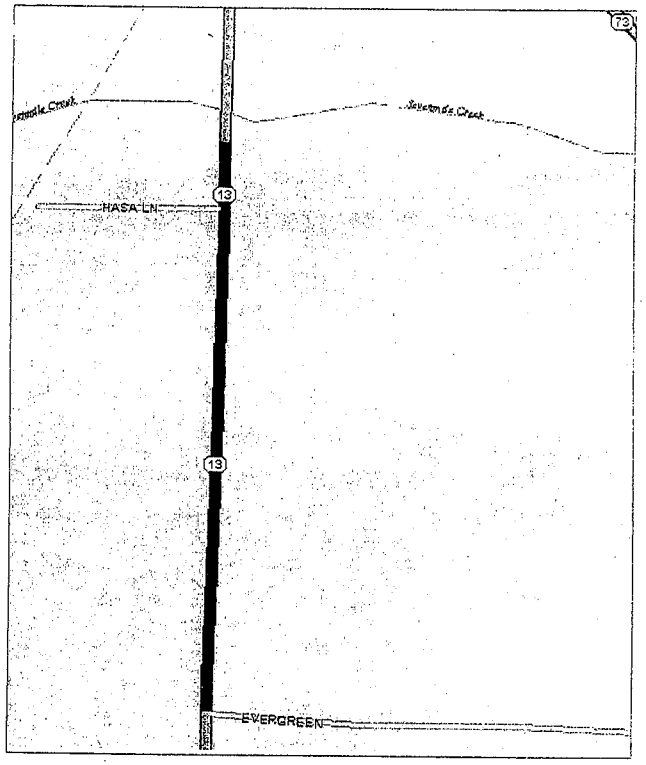
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
5,400	9,180	0.22	0.37	36	98.018	87	0	29

Projected Construction N/A Resurface

Scheduled Construction 2009 RESURFACE

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
0.14 mi north of Hasa Lane	0.11 mi north of Whitrock Avenue	4.13	Urban Principal Arterial/Rural Minor Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	D	No	Asphaltic concrete & JPCP without dowels	1988

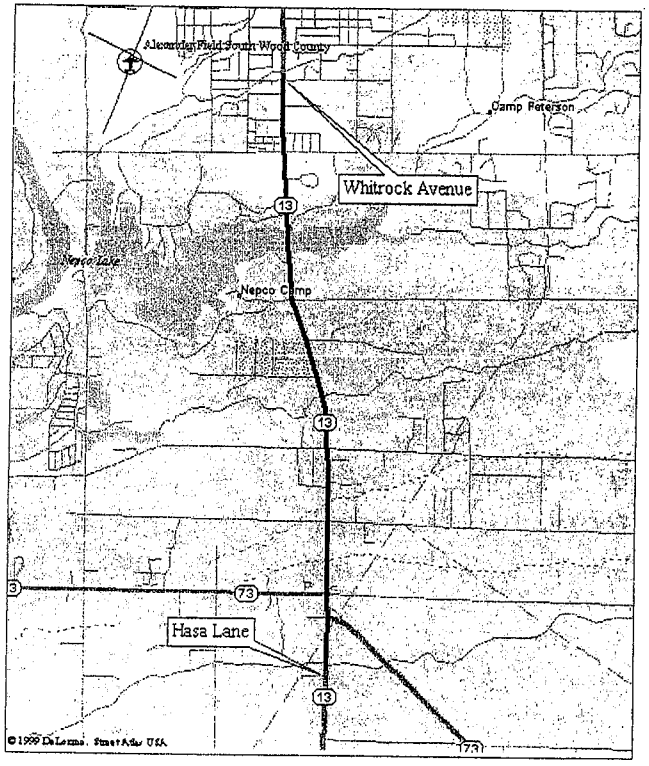
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
14,775	25,360	0.38	0.65	5	100.426	153	0	51

Projected Construction Resurface

Scheduled Construction Intersection improvements @ the south junction with STH 73 to improve safety in 2009

Comments Sidewalk was retrofitted from CTH Z to Whitrock Avenue in 2000. Connecting Highway was extended South

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
0.11 miles north of Whitrock Avenue	0.11 mi north of Wood Avenue	1.25	Urban Principal Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	D	Yes	Jointed Reinforced Concrete Pavement	1970

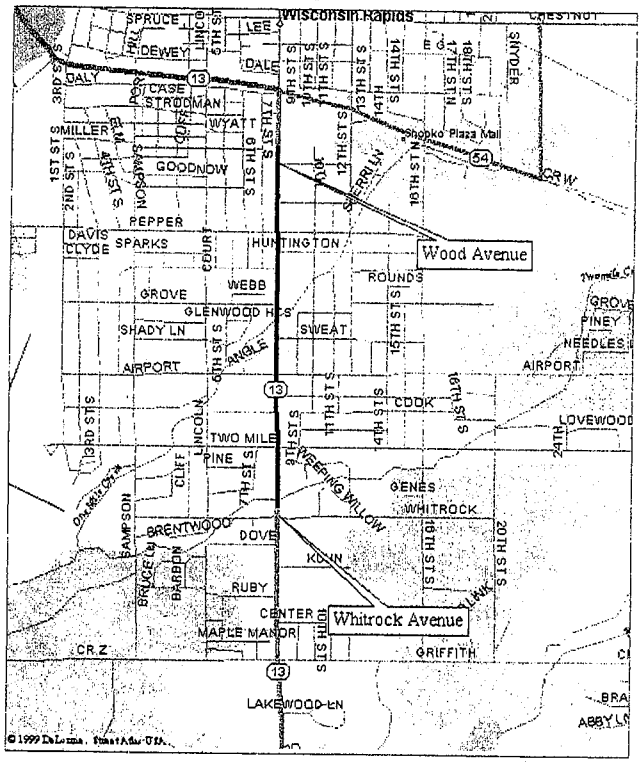
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
21,700	31,938	0.62	0.92	45	183.110	564	0	178

Projected Construction Pavement Preservation

Scheduled Construction N/A

Comments Signal modification was done in 2000 at Pepper Avenue

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
0.11 mi north of Wood Avenue	0.13 mi west of STH 54	0.31	Urban Principal Arterial	4	48-54

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	D	Yes	JRCP & JPCP with dowels	1996

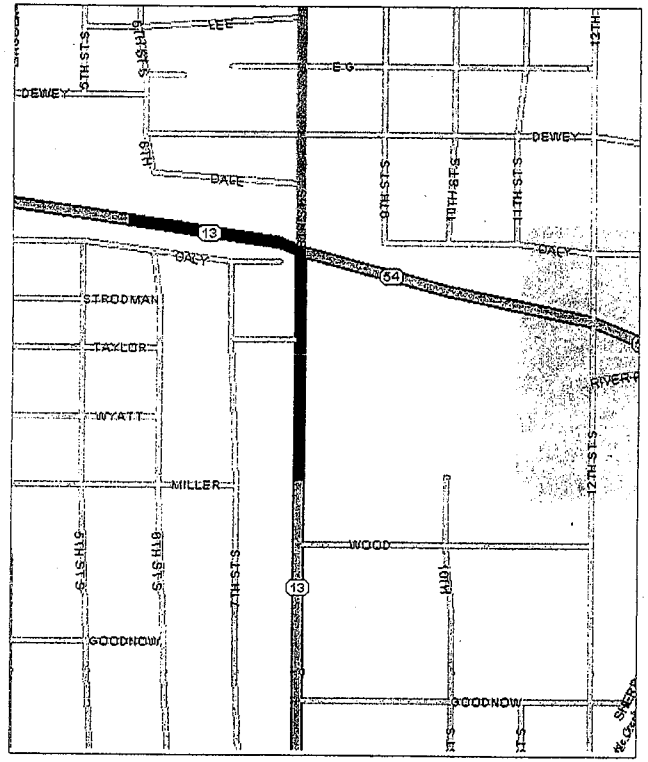
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
21,067	28,800	0.61	0.83	45	183.427	1,356	0	329

Projected Construction Pavement Preservation

Scheduled Construction N/A

Comments Crash rates may not reflect roadway due to reconstruction

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
0.13 mi west of STH 54	STH 34	1.82	Urban Principal Arterial	4	54

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	D	Yes	JPCP with & without dowels	1979 & 1980

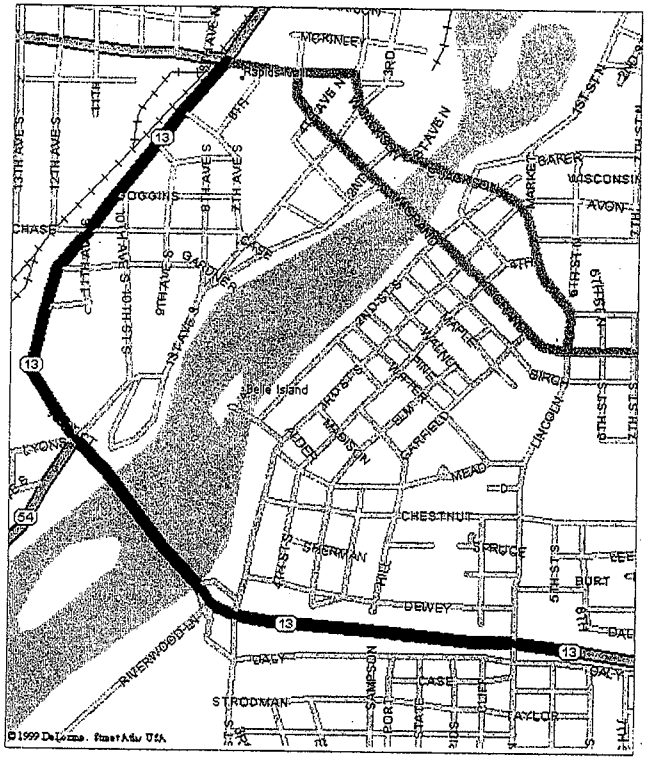
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
13,900	22,770	0.40	0.65	49	209.215	919	0	325

Projected Construction Pavement Preservation

Scheduled Construction 2003 Multi-Use path with barrier wall on expressway bridge; 2005 Grand Ave Intersect

Comments Intersection improvements @ 1st & 3rd and Lincoln (turning lanes and signal upgrades) in 2000. Interconnect

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 34 (Riverview Expressway)	25th Avenue	1.11	Urban Principal Arterial	4	44-51

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	Yes	Asphaltic concrete & JPCP with dowels	1966 & 1995

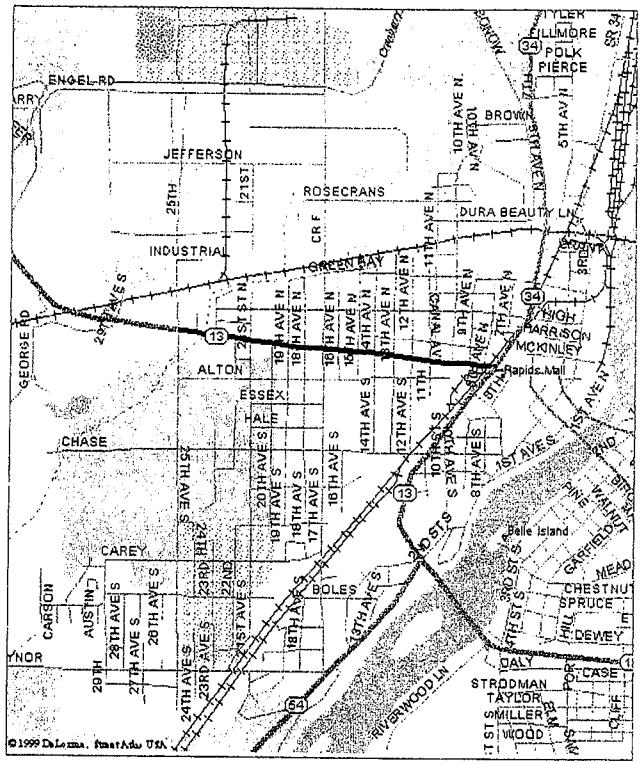
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
13,700	17,392	0.35	0.45	56	237.410	684	3	205

Projected Construction N/A

Scheduled Construction 2005 RECONSTRUCT

Comments Reconstruction with outside lane expansion to accommodate bicycles will provide four 12-foot driving lanes.

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
25th Avenue	Seneca Street	0.57	Urban Principal Arterial	4	52

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	Yes	Jointed Plain Concrete with dowels	1992

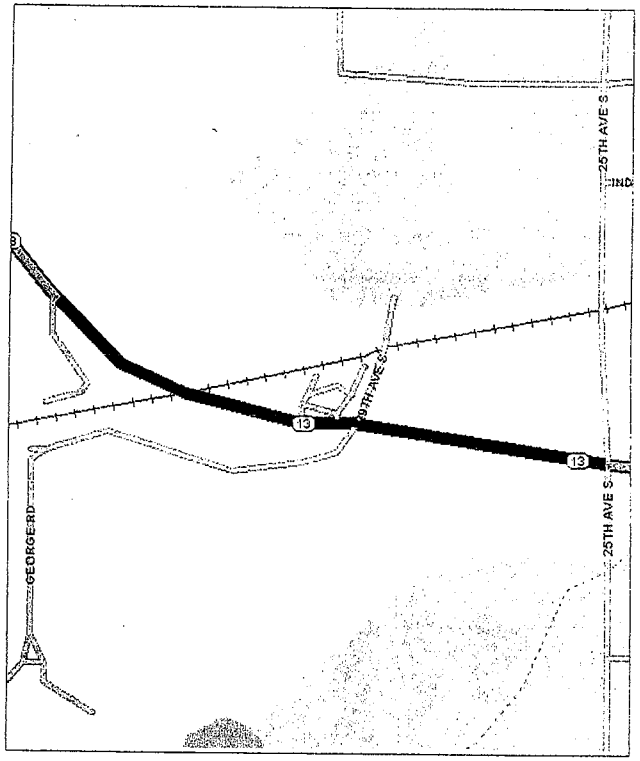
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
9,000	12,040	0.21	0.29	4	137.555	151	0	27

Projected Construction Pavement Preservation

Scheduled Construction None

Comments Traffic Signals located at the intersection with 25th Avenue in 2001.

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 13 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Seneca Street	0.15 mi east of Manor Lane	2.84	Urban Principal Arterial/Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	2000

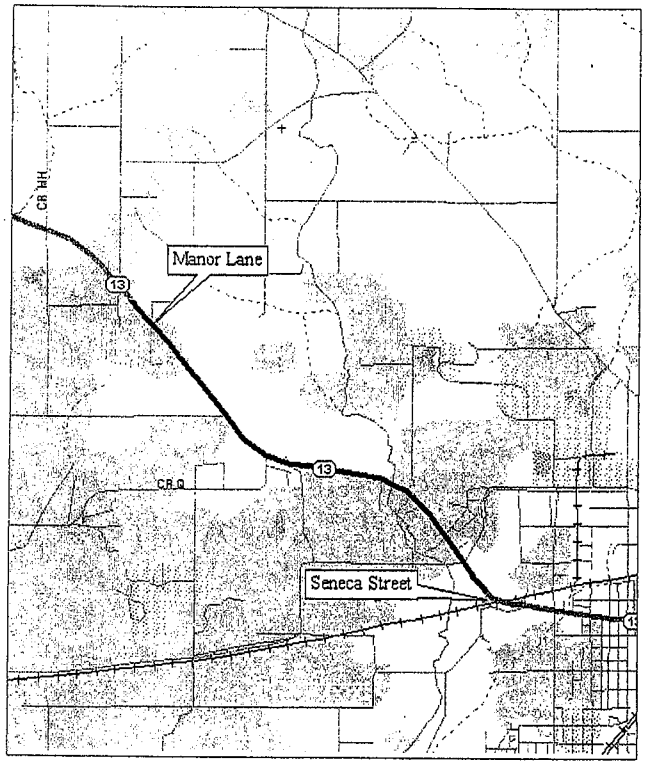
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
6,000	8,540	0.25	0.35	0	0.000	110	0	51

Projected Construction Pavement Preservation (2015-2020)

Scheduled Construction None

Comments Crash rates may not reflect roadway due to reconstruction

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 34 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 13/73 (Grand Avenue)	Edgewood Place	2.09	Urban Principal Arterial	4	48-56

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	D	Yes	Jointed Plain Concrete with dowels	1994

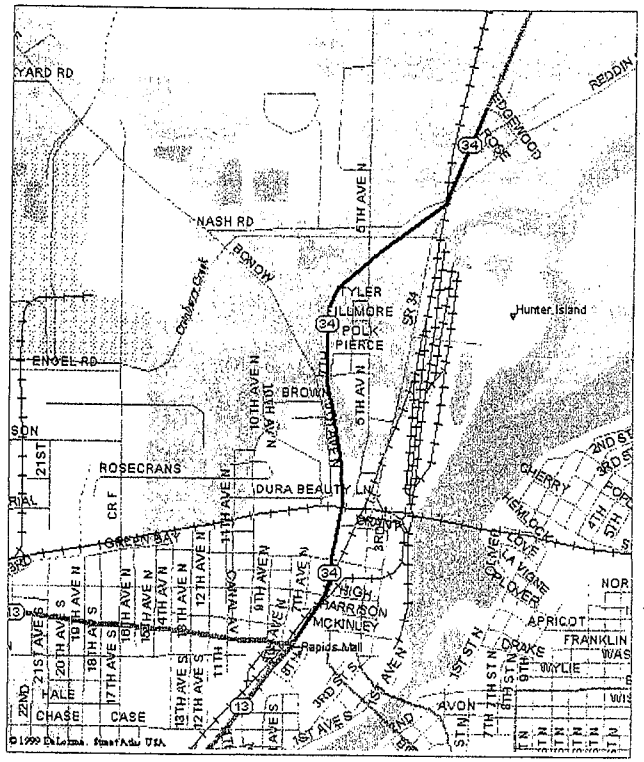
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
8,833	13,627	0.25	0.38	4	107.712	151	0	48

Projected Construction Pavement Preservation

Scheduled Construction None

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 34 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Edgewood Place	0.19 mi north of CTH P	1.09	Urban Principal Arterial/Rural Principal Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1994

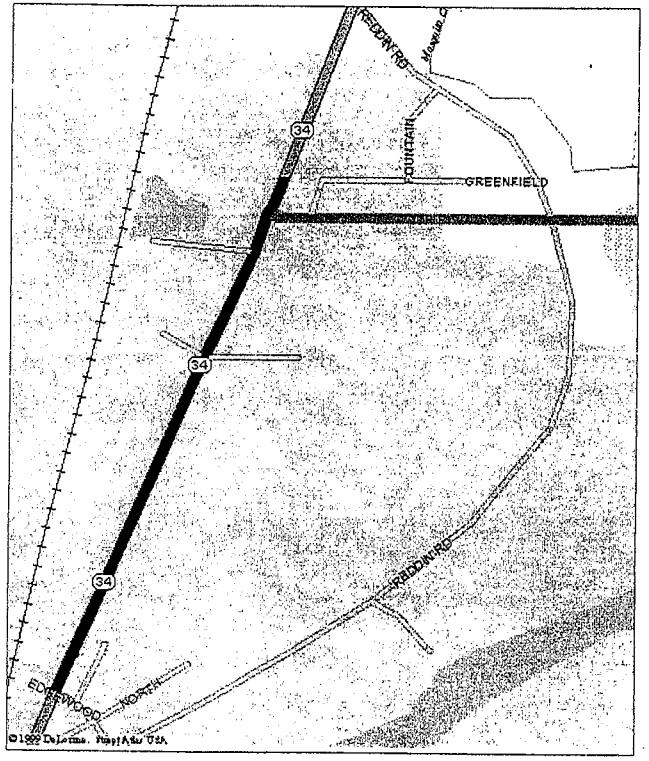
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
7,200	10,690	0.29	0.43	50	140.786	91	0	39

Projected Construction 2010-2015 Pavement Preservation

Scheduled Construction None

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 34 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
0.19 mi north of CTH P	Oak Road	1.09	Rural Principal Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1986

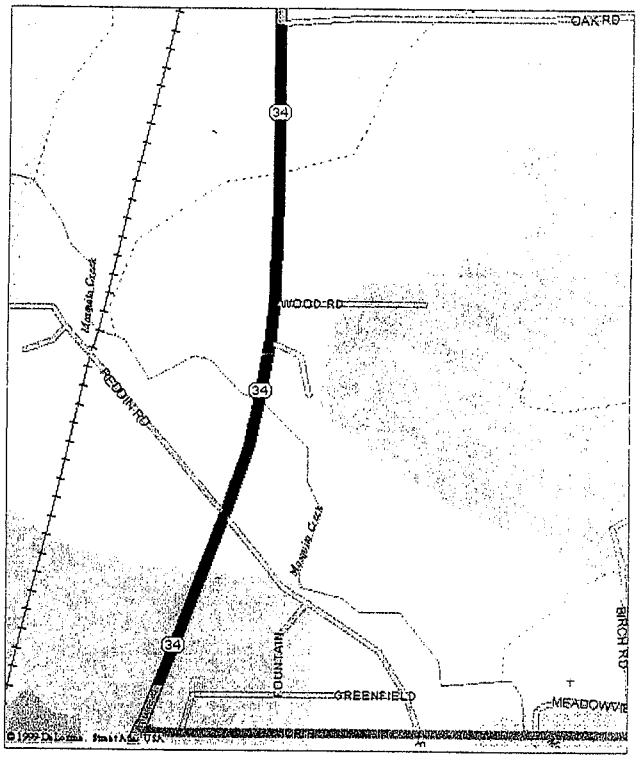
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
2,900	4,030	0.13	0.17	60	174.050	231	0	144

Projected Construction N/A

Scheduled Construction 2003 RECONSTRUCT

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
CTH G	Swanson Road	1.09	Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1998

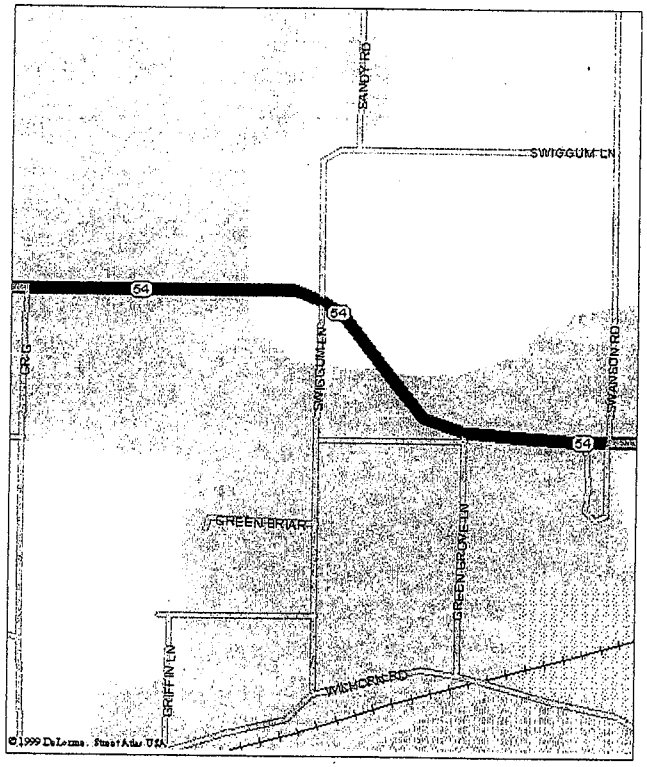
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
2,200	5,210	0.10	0.23	42	129.064	190	19	57

Projected Construction 2015-2020 Pavement Preservation

Scheduled Construction None

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

*** Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999**

Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Swanson Road	STH 73	1.01	Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1989

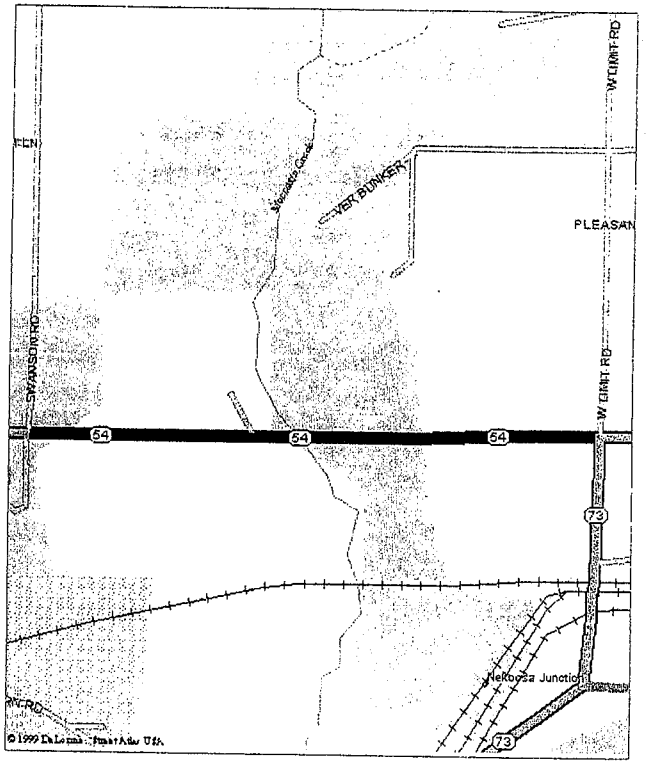
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
4,600	5,520	0.23	0.28	11	88.451	108	0	79

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 RECONDITION

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 73	Wisconsin River Drive	1.37	Urban Principal Arterial	2	24-36

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
7th Street; west-R	U	No	Asphaltic concrete	1985

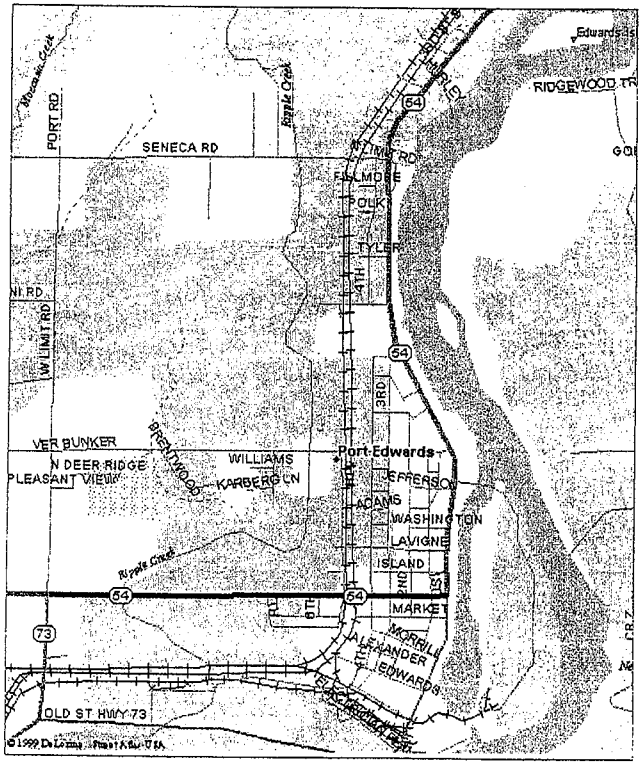
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
4,500	8,963	0.22	0.44	32	145.728	292	22	124

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 RECONSTRUCT

Comments

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Urban Streets: 289 Total; 0.5 Fatal; 103 NFI

* Crash Rates are crasher per one hundred million (100,000,000) vehicle miles traveled Crash rates are from years 1994 -1999

Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Letendre Drive	Seneca Road	1.58	Urban Principal Arterial	3-4	36-52

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	No	Asphaltic concrete	1985

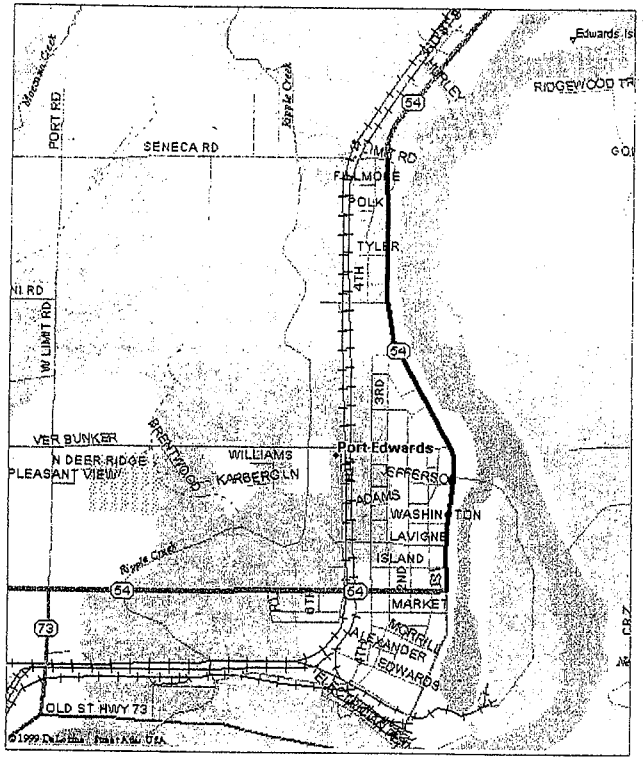
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
6,450	8,645	0.15	0.21	29	149.086	196	0	76

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 RECONDITION

Comments

Wisconsin Rapids Urban Area



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Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Seneca Road	STH 13 (Riverview Expressway)	1.84	Urban Principal Arterial	2	27-44

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	Yes	Asphaltic concrete	1987

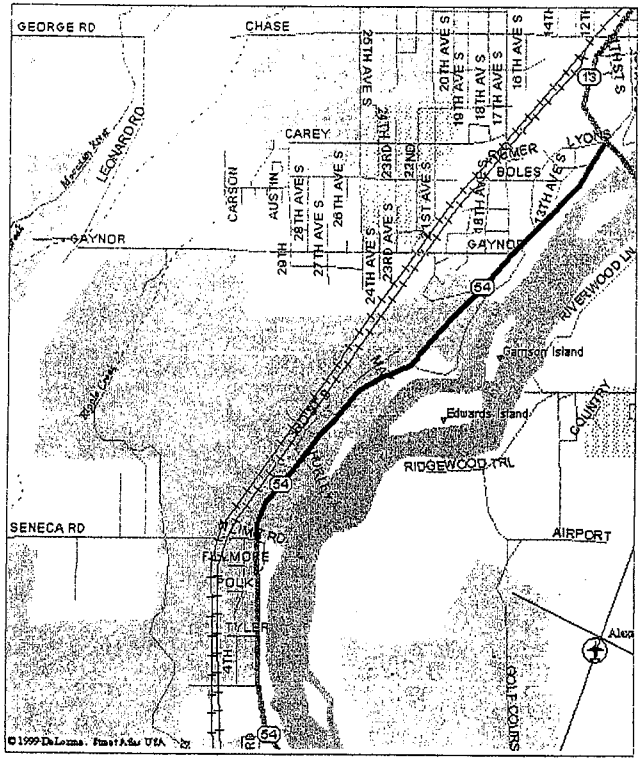
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
11,800	16,220	0.38	0.53	28	179.119	123	2	35

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2004 RECONDITION

Comments Recondition includes intersection improvements at the intersections of Seneca Road and Gaynor/17th Street

Wisconsin Rapids Urban Area



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Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 13 (8th Street)	16th Street	0.54	Urban Principal Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	Yes	Jointed Plain Concrete with dowels	1982

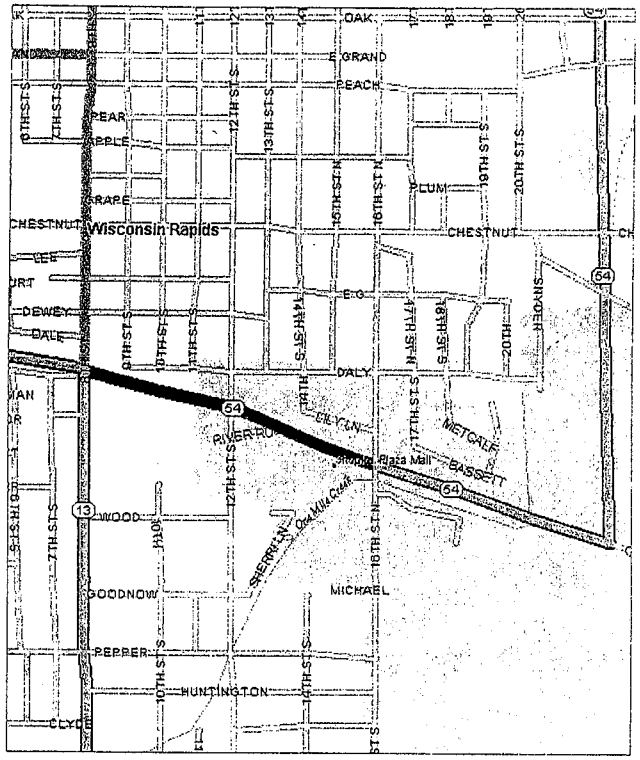
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
14,300	25,405	0.41	0.73					

Projected Construction Pavement Replacement 2015-2020

Scheduled Construction None

Comments Crash rates not given due to inadequate information from relocation of roadway; no IRI or PDI given

Wisconsin Rapids Urban Area



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Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
16th Street	Apricot Street	1.74	Urban Principal Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	Yes	Jointed Plain Concrete with dowels	1996, 1997, 1999

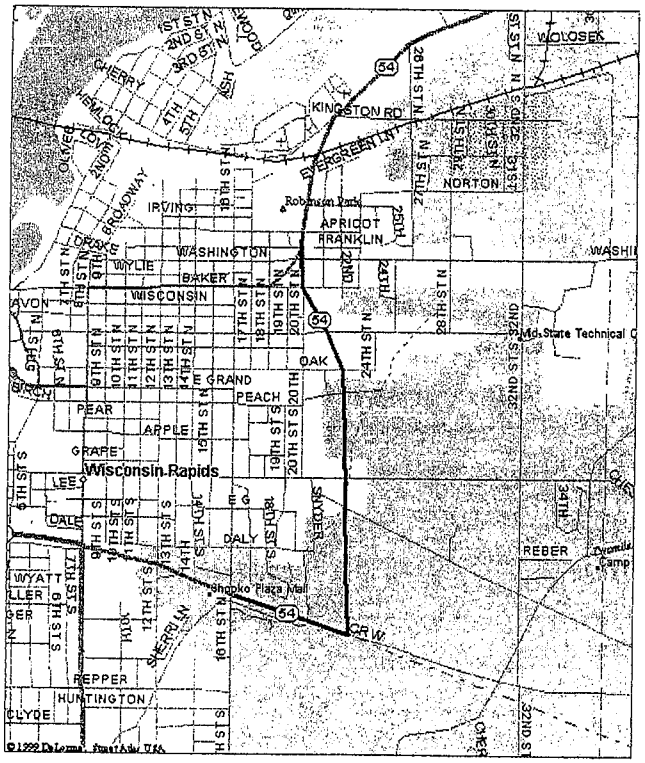
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
9,967	13,397	0.26	0.35	8	0.000			

Projected Construction Pavement Preservation

Scheduled Construction None

Comments Crash rates not given due to inadequate information from relocation of roadway

Wisconsin Rapids Urban Area



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Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Apricot Street	64th Street	3.37	Urban Principal Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	No	Jointed Plain Concrete with dowels	1996, 1997, 1999

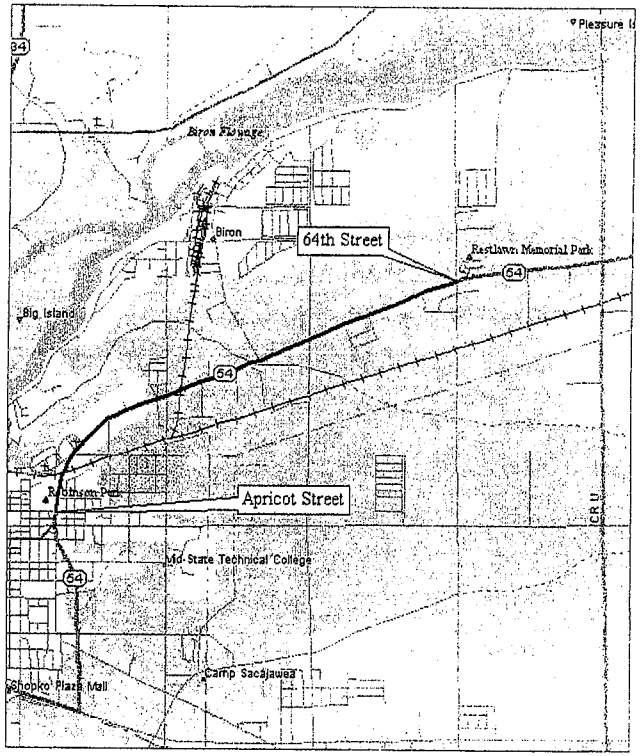
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
12,500	18,390	0.30	0.44	1	74.860			

Projected Construction Pavement Preservation

Scheduled Construction None

Comments Crash rates not given due to inadequate information from relocation of roadway. Sidewalk retrofit done in 200

Wisconsin Rapids Urban Area



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Highway and Direction 54 EB&WB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
64th Street	CTH U	1.02	Rural Principal Arterial	4	48

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	No	Jointed Plain Concrete with dowels	1994 & 1996

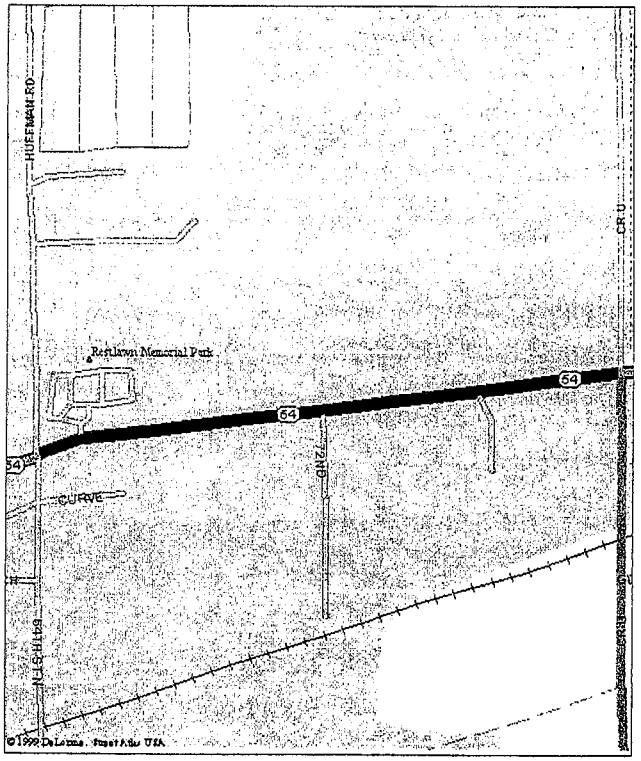
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
9,900	17,770	0.25	0.46	1	82.685			

Projected Construction Pavement Preservation

Scheduled Construction None

Comments Crash rates not given due to inadequate information from relocation of roadway

Wisconsin Rapids Urban Area



1999 State Average Crash Rate For Rural State Highways: 114 Total; 1.7 Fatal; 47 NFI

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Highway and Direction 73 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
Evergreen Avenue	STH 13	1.36	Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1986

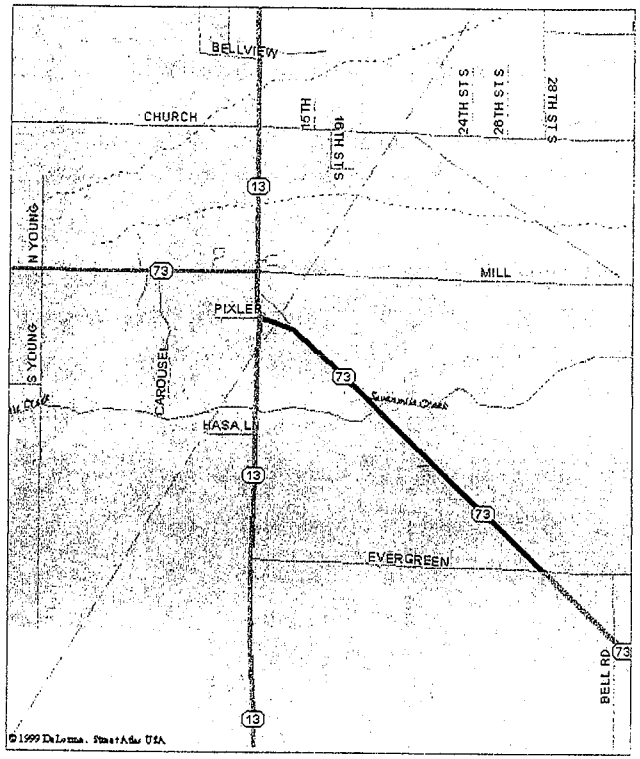
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
3,600	4,790	0.15	0.21	35	117.026	65	0	19

Projected Construction 2010-2015 Resurface

Scheduled Construction None

Comments Intersection improvements at the southern intersection with STH 13 in 2009 to improve safety

Wisconsin Rapids Urban Area



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Highway and Direction 73 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 13	STH 173 (Market Street)	4.16	Rural Minor Arterial	2	24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete & JRCP	1963 & 1985

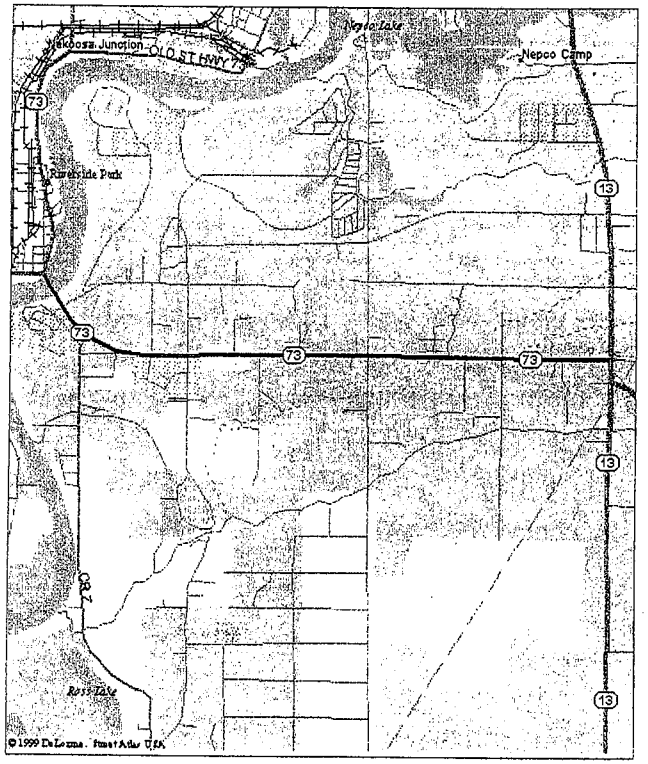
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
8,000	11,697	0.31	0.46	57	140.216	128	0	64

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2001 NEKOOSA BRIDGE REHABILITATION; 2004 RECONDITION

Comments

Wisconsin Rapids Urban Area



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Highway and Direction 73 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
STH 173 (Market Street)	STH 54 (Letendre Avenue)	2.09	Urban Principal Arterial	2-3	24-40

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
B-71-28; south-U	U	No	Asphaltic concrete	1985

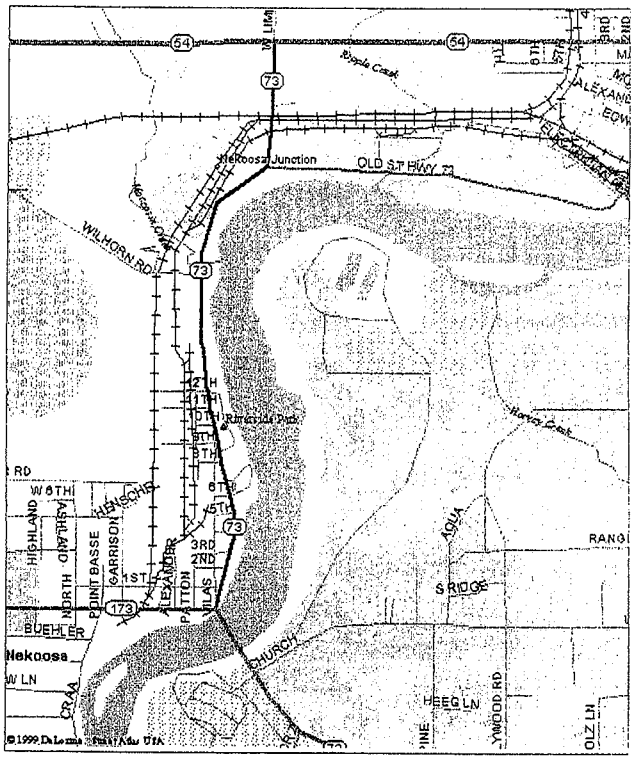
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
5,350	8,758	0.27	0.44	49	158.463	209	0	78

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 PAVEMENT REPLACEMENT

Comments

Wisconsin Rapids Urban Area



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Highway and Direction 173 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
North CTH G	South CTH G	0.62	Rural Major Collector	2	22-24

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
R	U	No	Asphaltic concrete	1970 & 1991

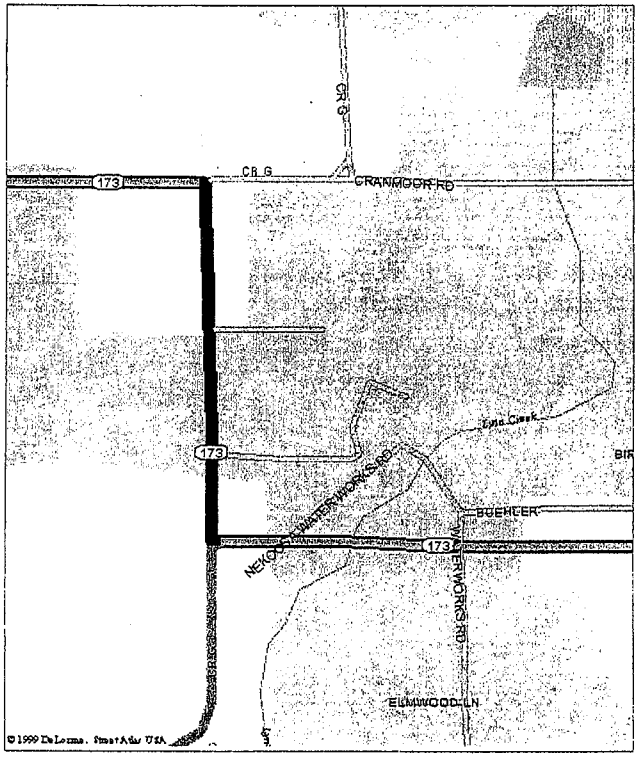
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
1,500	2,930	0.06	0.13	52	139.012	393	0	196

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 Resurface

Comments

Wisconsin Rapids Urban Area



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Highway and Direction 173 NB&SB

Feature From	Feature To	Distance (miles)	Functional Class	Number of Through Lanes	Pavement Width
South CTH G	STH 73 (Prospect Avenue)	2.18	Rural Minor Collector/Rural Minor Arterial	2	24-36

Rural/Urban Cross Section	Div/Undiv/1 Way	Connecting Highway	Surface Type	Surface Year
U	U	No	Asphaltic concrete	1977,1980,1983,1993

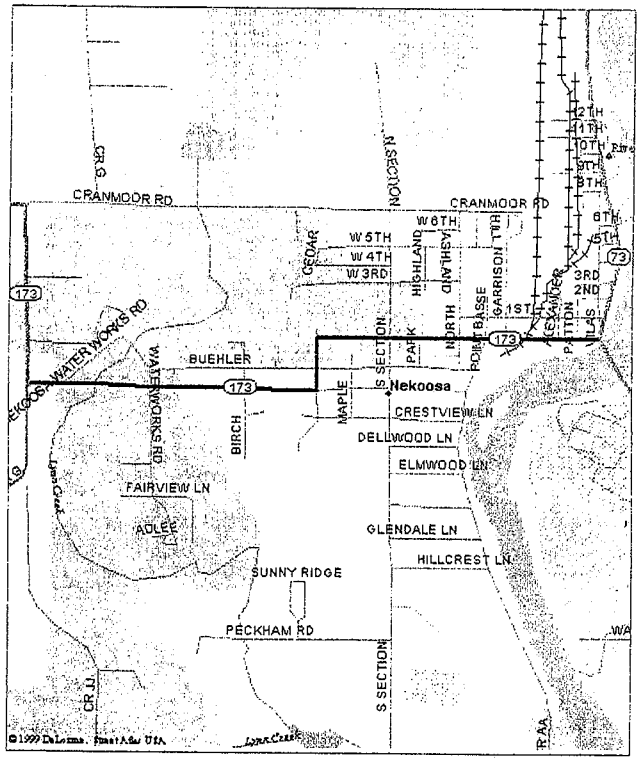
1999 ADT	2025 ADT	1999 V/C Ratio:	2025 V/C Ratio	PDI Rating	IRI Rating	Crash Rate*	Fatal Rate*	NFI Rate*
5,200	8,402	0.26	0.41	22	187.102	368	4	87

Projected Construction 2020-2025 Pavement Preservation

Scheduled Construction 2005 RESURFACE

Comments

Wisconsin Rapids Urban Area



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