Long-Range

TRANSPORTATION / LAND USE PLAN

Oshkosh Urban Area

JANUARY 1997

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Prepared by the

EAST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION

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ABSTRACT

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This report was prepared to meet the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 for a long-range transportation/land use plan and is consistent with the U.S. Department of Transportation, Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) Code of federal Regulations, Section 450.316, 49 CFR, Part 613, Metropolitan Planning Rule, effective November 29, 1993. This update effort is concurrent with the five-year update of the sewer service area plans for the Oshkosh urban area, which comprises the regional land use plan.

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

INTRODUCTION

This report has been prepared to meet the requirements of the Intermodal Transportation Efficiency Act of 1991 (ISTEA) for long-range transportation and land use in metropolitan areas. As the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, the East Central Wisconsin Regional Planning Commission (ECWRPC) is responsible for carrying out the urban transportation planning process.

The primary purpose for the plan is to insure coordination between land use and transportation planning within the Oshkosh Metropolitan Planning Area. The need for integrated multimodal transportation planning and the development of a continuing process of consideration for alternative modes of travel is also discussed. A major focus of the study is a reestablishment of the long-range transportation modelling process, which is a valuable tool in decision-making on transportation issues in the Oshkosh area.

This executive summary is arranged with headings corresponding to the full plan document chapters to ease any needed search for detailed information.

ADOPTED GOALS, OBJECTIVES, AND POLICIES

East Central first developed goals, objectives, and policies for transportation/land use planning in the mid 1970s, and updated those policies and objectives in the early 1980s. Passage of ISTEA in 1991 required all Metropolitan Planning Organizations (MPOs) to update and adopt long-range transportation plans which conformed to ISTEA's metropolitan planning requirements. ISTEA's requirements emphasized multimodal transportation, a strong transportation/land use interrelationship and an expanded public involvement process. This process meshed well with East Central's long-established planning process.

An extensive issues identification process involving representatives of governmental agencies, area officials, environmental groups, developers, business groups, civic organizations, minority advocates, and interested citizens, took place late in 1993. Participants in the issues session, and those unable to attend, were invited to join East Central's on-going Technical Advisory Committee (TAC) in the review and development of goals objectives and policies, paying particular attention to issues raised in the previous session. The goals, objectives, and policies and accompanying definitions developed by TAC were published in the document **Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Goals, Objectives, and Policies**, and adopted by the East Central Commission in January of 1995.

Several key policy issues regarding growth management and urban service delivery were left unresolved by the TAC. TAC members who wished to continue working on these policies were asked to participate on a new committee, the Land Use Advisory Committee (LUAC). LUAC was organized to address unresolved issues and provide community input to the land use portion of the Long Range Transportation/Land Use Plan and also the urban sewer service area update. Using LUAC's urban goals, policies, and objectives as a guideline, East Central staff also developed community comprehensive plan guidelines, an open space recommendation and a rural development recommendation. The product of LUAC and staff efforts is the **Long-Range Transportation/Land Use**

Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Addendum. The recommendations were adopted by the Commission in April of 1996. Discussion focused on the urban planning area, which includes the cities, towns, and villages of the Fox Cities, Fond du Lac and Oshkosh urban areas.

The goals and objectives pertinent to the long range planning process are as follows:

Transportation
The overall goal for the regional transportation program is to achieve a safe, efficient and environmentally sound transportation system that provides personal mobility for all segments of the population and supports the economy of the region.

To attain this goal, the following objectives have been defined:

- ***Integrated planning.**
- ***Maximum system effectiveness for all residents.**
- ***An efficient street and highway system.**
- ***Safety.**
- ***Minimum environmental disruption.**
- ***Compatibility with land use patterns.**
- ***Conservation of energy.**
- ***Multimodal interaction.**

Land Use
The policies assembled pertaining to land use intend to encourage efficient, orderly, and planned land use development patterns consistent with sound environmental management practices. The land use element provides direction and integrates four sub-element functional plans which have direct impacts on future land use. These functional areas are Growth Management, Urban Service Delivery, Environmental Resources, and Open Space.

Like the transportation policies, the primary intent of the land use policies is to guide land use decisions, particularly in terms of sewer service area actions. A secondary use of the policies falls within the planning process, itself. These adopted transportation and land use policies are used to comparatively analyze the land use scenarios, to be discussed later.

Growth Management
GOAL: To encourage an orderly and planned pattern of community growth and development.

To attain this goal, the following objectives have been defined:

- ***Allocated growth.**
- ***Planned urban communities.**
- ***Environmentally sound development.**
- ***Efficient development.**
- ***Community character preservation.**
- ***Rural land development.**

Urban Service Delivery

GOAL: To promote the provision of government services in an efficient, environmentally sound and socially responsible manner.

To attain this goal, the following objectives have been defined:

***Economical public facilities.**
***Cooperative provision of services.**
***Equitable service delivery.**
***Effective sewerage systems.**

Environmental Resources

GOAL: To protect the environment and manage natural resources in an ecologically sound manner.

To attain this goal, the following objectives have been defined:

***Water quality protection.**
***Air quality maintenance.**
***Environmentally sensitive area protection.**
***Wildlife habitat management.**
***Food and fiber production.**
***Solid waste management.**

Open Space

GOAL: To provide sufficient public open space to meet the recreational needs of all residents and protect and preserve natural and cultural resources.

To attain this goal, the following objectives have been defined:

***Recreational opportunity.**
***Preservation areas.**
***Urban recreation needs.**
***Cost-effective recreation.**
***Attractive communities.**

A set of detailed policies was developed to address the actions needed to meet the listed goals and objectives. The policies were, in turn, used in the analysis of three land use scenarios: Uncontrolled Growth, Concentrated Development, and Current Plans. The analysis will be summarized later.

EXISTING CONDITIONS

The Oshkosh area has experienced a general process of slow, steady growth, with the exception of the 1970s which saw a slight population decline. While the urban core, an area of contiguous urban development, has expanded, the 1960s began a 20 year period of significant scattered urban uses throughout the planning area. Between 1960 and 1970 over half of the urban development occurred in a scattered fashion, away from the urban core. During the 1970s various state and local land use and environmental regulations affected these development trends and more compact development began to occur. This trend continued with less than ten percent of 1990s development occurring in a scattered manner.

Overall, the study area, including the City of Oshkosh, towns of Algoma, Black Wolf, Nekimi, Oshkosh, and a portion of the Town of Vinland, increased from 55,497 persons in 1960 to 72,555 in 1995, or just over 30 percent in 35 years. The number of households, on the other hand, increased by just under 70 percent in the same time period, as household sizes decreased and as baby boomers reached the household formation stage.

The transportation model was calibrated using the network and data for the base year, 1994. Very few deficiencies were shown in the highway network, which implies that improvements have quite effectively kept pace with urban growth and increased trip making. Segments of Jackson, Wisconsin and Main streets show some deficiency. Also, a few USH 41 interchanges at 9th Avenue, STH 21 and STH 110 were highlighted as deficient in the base year. The most severe deficiency, and a difficult one to address is the Wisconsin Street bridge in downtown Oshkosh, the only two lane bridge in downtown Oshkosh.

Oshkosh Transit Service (OTS) is a very stable and efficient service in the core area. Routes were recently consolidated from eleven to nine in response to poor ridership and declining federal funds. Specific operating statistics can be found on page 50. Shared-ride taxi service and lift-equipped van service is in place, exceeding the requirements of the Americans with Disabilities Act. Also, significant coordination efforts have been recently undertaken to provide service to the elderly and disabled, both in the City and in outlying areas, in a manner which has been financially beneficial to both the City and to Winnebago County. The continuation of federal funding for the operation of transit systems has been in question for the past several years, however, the latest word from the Federal Transit Administration (FTA) is that there is currently no proposal for the elimination of federal operating funds.

Other modes are also addressed in the plan. A bicycle and pedestrian element exist under a separate cover. During early advisory committee deliberations, freight-oriented users indicated that existing accessibility is good in the Oshkosh urban area. In terms of rail transportation, consolidations have resulted in the abandonment of significant linage in the Oshkosh area. The removal of one Wisconsin Central line through the downtown has allowed for the elimination of over 40 grade crossings. The consolidation plans for minor rail yards is still somewhat in question. Air transportation in the area is served by Whitman Field, the home of the Experimental Aircraft Association (EAA). EAA's annual convention has a major economic impact on the community. The airport has the service on one scheduled passenger carrier, air cargo, and charter service. The airport also provides an educational setting for Fox Valley Technical College aviation programs.

LAND USE PLAN

The land use plan for the Oshkosh area is based upon and integrated with the sewer service area planning process. *The Oshkosh Sewer Service Area Plan* was adopted by the East Central Wisconsin Regional Planning Commission on October 25, 1996. For the purposes of the long-range transportation/land use plan, three land use scenarios were developed: Uncontrolled Growth, Concentrated Development, and Current Plans scenarios. The first two are created from hypothetical situations of how development could have occurred in the Oshkosh area from 1960 to the present and projected to the year 2020. From 1960 to 1970, 66 percent of the population growth occurred in noncontiguous development, while the other 34 percent occurred in, or contiguous to, the urban core. The Uncontrolled Growth Scenario continued that trend on from 1970 to 2020. The Concentrated Development contained all growth, from 1960 to 2020, in a compact area within and contiguous to the urban core. The Current Plans Scenario utilized actual growth data to present day, and projected future development based on sewer service planning and local adopted plans.

The purpose for the scenario approach was to create an arena in which the effects of different land use policies could be measured. The relatively small numbers involved in growth projections from present to 2020, are themselves a poor illustrative example. A longer time frame is needed to show the actual effects. For the purposes of analysis, the three scenarios were represented by different disaggregations of the socioeconomic projections. Detailed data sets are included in Appendix B.

ALTERNATIVE ANALYSIS

Two types of analysis were executed in this study. First, the three scenarios were measured against the adopted policies. Not surprisingly, the Concentrated Development was ranked more favorably against the bulk of the policies, many of which pertain to efficiency, cost effectiveness, and preservation. The Current Plans Scenario ranked fairly well as much of the planning on which it is based takes the policies into consideration. Because it reflects actual land use development activity from 1960 to the present, however, it cannot rank as highly as the Concentrated Development Scenario. The Uncontrolled Growth Scenario, based on development that is inefficient and wasteful, did not rank well at all in the analysis. A matrix showing the individual rankings is shown on Exhibit 21.

The other form of analysis in this planning process used the transportation model to consider alternatives for addressing the existing and projected highway network deficiencies. Deficiencies are determined by dividing the existing or projected traffic volumes by the design capacity of a street or highway. The vehicle to capacity (V/C) ratio can be expressed as level of service (LOS) A, B, C, D, E, or F and reflect various levels of traffic congestion. For the Oshkosh area, any facility operating at 80 percent of capacity (LOS D) or greater is considered deficient. Deficiencies on Ninth Avenue, the Wisconsin Street bridge, Oakwood Road, STH 110, and Jackson Street were all tested with one or more improvement options.

Ninth Avenue was modeled both as a four lane facility and as a one-way pair with Eighth Avenue. Both alternatives function well, but both could have significant neighborhood impacts and should be further analyzed in the context of a corridor study.

Jackson Street is currently programmed for widening to four lanes in WisDOT's six year program. Despite a number of different alternatives generally aimed at diverting traffic to parallel facilities, the four-laning alternative remains the best option in terms of the projected volumes of over 16,000 vehicles per day.

The Wisconsin Street bridge, currently a two lane facility operating over capacity, was modelled as a four lane bridge. In the year 2020, four lanes improved the bridge's operational condition from a volume to capacity ratio of 1.7 to 1.1, still over capacity. The improved LOS F condition persists, in part because of the proximity to the central business district, the limited number of river crossings, and the short distances between signalized intersections. In the case of bridge replacement, capacity is seldom a determining factor in a project receiving funds. Structural deterioration consumes the vast majority of available dollars. However, the structure is included in WisDOT's longer range planning process and it is possible that bridge replacement funds could be made available within the plan horizon. Another consideration is safety in terms of bicycles and pedestrians on the facility.

USH 41 and STH 110 are addressed together because the project programmed by WisDOT for the widening of STH 110 west of USH 41, combined with the proposed widening of STH 110 east of USH 41 to Murdock Avenue, offers some relief to the Lake Butte des Morts bridge. According to

projections, the Butte des Mort bridge will be at LOS F in the year 2020 with no improvements. The project to 4-lane STH 110 removes some local traffic from the bridge, improving it to LOS D. The widening of USH 41 to a six lane facility would address other problems along the corridor, in addition to the bridge. However, since it is an access controlled facility and the project length is in excess of a mile, a Major Investment Study (MIS) is needed prior to project programming. An MIS considers all possible alternatives to capacity expansion, including relief through alternative modes. The MIS for USH 41 would be under the primary direction of WisDOT.

Clairville Road is an example of a new facility that was modeled in this process. The extension of Clairville, from Witzel to STH 21, would serve growth in the Town of Algoma and relieve some of the traffic on Oakwood Road, the next arterial to the east, as well as a small portion of STH 21 just west of USH 41. It is recommended that the Clairville Road extension be official mapped to preserve the corridor for construction as warranted by development.

RECOMMENDATIONS

Much of the analysis in this report was intended to measure the validity of previously made recommendations. Three largely hypothetical land use scenarios were measured against the adopted goals, objectives, and policies to provide a clear differentiation in each scenario's effect on urban development and associated costs. The reestablishment of the long range transportation model for the Oshkosh area was used to measure a number of previously proposed projects, as well as to measure the existing and future adequacy of the entire highway system. The following is a summary of recommendations including land use, highway projects, transit system and other modal recommendations, as well as recommendations for additional study.

Land Use

Land use recommendations include the implementation of adopted land use policies, as published in *Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Goals, Objectives and Policies*, (adopted January, 1995) and *Long-Range Transportation/Land use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Addendum*, (adopted February, 1996). The recommendation for the Current Plans Scenario allowed for analysis to occur in a realistic and fairly quantitative arena in conjunction with the sewer service area planning process. A major vehicle for the implementation of the adopted policies rests in the sewer service area planning and amendment process. While the hypothetical land use scenario analysis makes a case for the benefits of the policies over time, the next update of this plan will include land use alternatives which represent potential development patterns for the future.

Transportation

The recommendation for the implementation of adopted policies also applies to the transportation policies. Specific modal recommendations follow:

Recommended Major Highway Projects

Street or Highway	From	To	Project
AIRPORT ROAD	Hughes Ave	20th Ave	Study to coordinate with R/R and airport
ALGOMA BLVD	Murdock Ave	USH 41	Construct to 4-lanes
BOWEN ST	Ceape Ave	Murdock Ave	Reconstruct & widen
CTH A	Bowen St	CTH Y	Construct to 4-lanes

Street or Highway	From	To	Project
CTH A	CTH Y	MPAB	Further Study
CTH Y	CTH A	USH 45	Reconstruct & widen
FERNAU AVE	Snell Rd	USH 45	Construct new facility, new R.O.W.
FISK AVE	USH 41	CTH I	Study for access control & capacity needs
IRVING AVE	Wisconsin St	Hazel St	Construct to 4 lanes
JACKSON ST	Algoma Blvd	Murdock Ave	Construct to 4 lanes
KOELLER ST	Witzel Ave	STH 21	Construct to 4 lanes
MAIN ST	Algoma Blvd	Murdock Ave	Further study needed
MARION RD	STH 44	Jackson St	Construct & widen (Relocation Study)
NEW YORK AVE	High Ave	Hazel St	Reconstruct
OAKWOOD RD	20th Ave	STH 21	Construct to 4-lanes
OHIO ST	Witzel Ave	South Park Ave	Reconstruct to 4 lanes
OREGON ST	Fisk Ave	Ripple Ave	Construct to 4 lanes
PEARL AVE	Jackson St	Main St	Reconstruct, 5 lanes
STH 44	4-Lane/Lift	Bridge	Construct Lift Bridge (Fox River)
STH 110	USH 41	MPAB	Construct to 4 lanes (Expressway)
USH 41	USH 45	USH 44	Major Investment Study
USH 45	Waukau Ave	Ripple Ave	Construct to 4 lanes
VINLAND RD	Smith St	Snell Rd	Reconstruct and widen (Bike/Ped)
WASHBURN ST	Witzel Ave	STH 21	Construct to 4 lanes
WASHBURN ST	20th Ave	Dickinson Ave	Construct to 4 lanes
WITZEL AVE	Oakwood Rd	USH 41	Reconstruct and widen (Bike/Ped)
WESTFIELD ST	9TH AVE	Witzel Ave	Construct
WESTHAVEN DR	>Abbey Ave	Witzel Ave	Construct
WESTHAVEN DR	Witzel Ave	STH 21	Construct (new ROW)
9TH AVE	Oakwood Rd	Linden Oaks Dr	Add Accommodations (Bike/Ped)
20TH AVE	Oakwood Rd	Oregon St	Add Accommodations (Bike/Ped)
20TH AVE	Oregon St	USH 45	Construct (new ROW)

Recommendations for corridor preservation include 20th Avenue and Fernau Avenue (officially mapped), Fisk Avenue, and Clairville Road west of USH 41.

Transit recommendations include continued operation of fixed route transit in urban core area, continued coordination efforts with other area transit providers, coordination with major employers as opportunities arise, and feasibility study of service between Neenah and Oshkosh.

The intercity transit recommendation proposes a study to reconsider the location of the intercity bus terminal relative to the USH 41 corridor and linkages with the fixed route system, other providers and modal choices.

It is recommended that bicycle and pedestrian travel be considered in the preliminary planning, scoping and design stages of all projects. Accommodations should be appropriate to traffic volumes, parking and other physical conditions, and safety for the bicyclists, pedestrians, and auto drivers. Details on the recommendations for bicycle and pedestrian travel can be found in the *Long Range*

Land Use and Transportation Plan for the Oshkosh Area - Bicycle and Pedestrian Plan and some recommended guidelines can be found in the recommendations section of this report.

ENVIRONMENTAL ANALYSIS

This planning effort, as required by the Intermodal Surface Transportation Efficiency Act (ISTEA), includes an analysis of the overall environmental, social, and economic effects of the metropolitan transportation plan. The environmental assessment scoping process was initiated concurrently with the issue identification phase of the planning process. The issues were established through special committees and were subject to public review. Multimodal transportation, the connectivity of transportation and land use, and the potential environmental effects of these planning goals and objectives were addressed to meet the requirements established by the ISTEA.

The environmental analysis chapter in this report evaluates the potential environmental impact of goals, objectives, and recommendations contained in the long range land use/transportation plan. The assessment of potential environmental effects addresses economic, social, and natural resource impacts.

FINANCIAL ANALYSIS

The financial analysis, also required by ISTEA, is intended to show that funding is reasonably available to implement the recommendations of the plan. The Financial Plan section of this document includes a compilation of state and federal highway funds which are currently available to the Oshkosh area jurisdictions. Local funding level projections are based on historic spending levels. The anticipated needs are estimated based on WisDOT's Urban Corridors Study, a pavement inventory and output from ROADWARE (pavement management software), and proposed project needs from previous studies. Over the life of the plan, needs are projected at $387.2 million, while anticipated funding is estimated at $387.4 million over the 20 year plan horizon. While not enough to complete additional major projects, the difference allows, fiscally constrained, flexibility to add smaller projects or studies as part of future updates and the overall long range planning process.

INTRODUCTION

INTRODUCTION

PURPOSE

This report has been prepared to meet the requirements of the Intermodal Transportation Efficiency Act of 1991 (ISTEA) for long-range transportation and land use in metropolitan areas. As the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, the East Central Wisconsin Regional Planning Commission (ECWRPC) is responsible for carrying out the urban transportation planning process.

The larger purpose for the plan is to insure coordination between land use and transportation planning within the Oshkosh Metropolitan Planning Area. ISTEA also stresses the need for integrated multimodal transportation planning and the development of a continuing process of consideration for alternative modes of travel.

ISTEA PLANNING FACTORS

As part of the planning process and pursuant to ISTEA, MPOs developing transportation plans and programs are required, at a minimum, to consider 16 factors identified within that legislation. The list of the factors below are integral to and embedded within the goals and objectives that provide direction through the long range planning process. Each mandated planning consideration is followed by selected examples of the text relating to the specific factor and their location in the document.

ISTEA requires the long range plan consider:

1) **Preservation of existing transportation facilities and, where practical, ways to meet transportation needs by using existing transportation facilities more efficiently.**

   The overall goal of the plan is to develop a more efficient transportation system, while the objective of "An efficient street and highway system"(p. 15), includes the policy, "Adequate financial resources for upkeep and renewal of existing highways to prevent accelerated deterioration should be a high priority in the budgetary process" (p. 16, #6).

   The plan includes computer based pavement management systems to estimate preservation and maintenance cost over the life of the plan.

2) **The consistency of transportation planning with applicable federal, state and local energy conservation programs, goals, and objectives.**

   The overall goal of the plan includes an environmentally sound transportation system, while the objective "Conservation of energy" (p. 19), includes the policy, "Local governments should develop transportation policies to conserve transportation energy..." (p. 19, #1).

   The objective "Integrated planning" (p. 15), includes the policy, "Compatibility should be promoted among local, regional and state transportation policies and plans" (p. 15, #5).

3) **The need to relieve congestion and prevent congestion from occurring where it does not yet occur.**

The long range street and highway network planning is based on relieving and preventing congestion on the system in terms of deficiencies. The plan identifies a deficiency as 80 percent or greater of capacity, Exhibit 10. Potential future congestion or deficiencies are shown on Exhibit 25, with congestion management actions inherent within the recommendations of the plan.

4) **The likely effect of transportation policy decisions on land use and development and the consistency of transportation plans and programs with the provision of all applicable short and long term land use and development plans.**

The objective "Compatibility with land use patterns" (p. 18), includes a statement "To develop a transportation system compatible with existing and future land use patterns."

The objective "Planned urban communities" (p. 23), includes a policy that states, "Community development plans should be coordinated in multijurisdictional urban areas" (p. 23, #6).

The objective "Integrated planning" (p. 15), includes the policy, "Compatibility should be promoted among local, regional and state transportation policies and plans" (p. 15, #5).

5) **The programming and expenditure on transportation enhancement activities as required in section 133.**

Potential enhancement projects include plans for a USH 41 Pedestrian/Bikeway crossing (p. 93, #28), previously submitted to WisDOT as an enhancement project by the City of Oshkosh. Other activities include a proposal with significant multimodal potential (p. 86, #1). Currently the state's enhancement program in limbo, but existing and potential projects will continue to be identified.

6) **The effects of all transportation projects to be undertaken within the metropolitan area, without regard to whether such projects are publicly funded.**

The objective "Integrated planning" (p. 15), includes the policy, "All proposals and changes considered in the comprehensive planning program should be constructively reviewed in terms of their impact on the transportation system" (p. 15, #3).

The objective "An efficient street and highway system" (p. 15), includes the policy, "Community development regulations allowing private streets should require right-of-way and design standards consistent with WisDOT's Design Manual for local streets" (p. 16, #5).

7) **International border crossings and access to ports, airports, intermodal transportation facilities, major freight distribution routes, national parks, recreation areas, monuments and historic sites, and military installations.**

The objective "Multimodal interaction" (p. 19), includes a statement "To provide an integrated transportation system that enables best use of the capabilities of individual modes and modal combinations, including rail and trucking facilities, public transportation, bicycle and pedestrian travel and air transportation".

The objective "Preservation areas" (p. 30), includes a statement "To preserve areas of unique natural, historical, and cultural significance or unusual beauty for public use and enjoyment".

8) **The need for the connectivity of roads within the metropolitan area with roads outside the metropolitan area.**

The objective "An efficient street and highway system" (p. 15), includes a statement "To provide a street and highway system which, together with other transportation facilities, will meet the short and long-range needs, interest and objectives of the region's citizens in a cost effective manner".

The objective "Integrated planning" (p. 15), includes the policy, "Compatibility should be promoted among local, regional and state transportation policies and plans" (p. 15, #5).

9) **The transportation needs identified through the use of the management systems required by section 303.**

Much of the analysis and several recommendations are based on management systems, including congestion and pavement, that identify deficiencies on the system. While management systems are no longer required within ISTEA, the plan incorporates management systems and modal choices to provide a more efficient transportation system.

10) **Preservation of rights-of-way for construction of future transportation projects, including identification of unused rights-of-way which may be needed for future transportation corridors and identification of those corridors for which action is most needed to prevent destruction or loss.**

The objective "An efficient street and highway system" (p. 15), includes a policy that states "A community's development plan should incorporate all proposed future principal and minor arterial within their existing and extraterritorial powers jurisdictions" (p. 16, #3).

Under the same objective, a policy states "Appropriate access control measures should be established for existing and future routes.." (p. 16, #9).

The objective "Compatibility with land use patterns" includes the policy, "Right-of-ways for proposed transportation facilities should be reserved to minimize disruption of future development" (p. 18, #9). Within the recommendation portion of the plan, the section "Corridor Preservation" (p. 97) identifies specific identified corridors.

11) Methods to enhance the efficient movement of freight.

Under the objective of "Multimodal Interaction" (p. 19), the "Freight Transportation" policies are written "To ensure that appropriate types and levels of freight transportation service are provided to the entire region."

Most of the policies developed for freight transportation are themselves methods to enhance the efficient movement of freight.

12) The use of life-cycle costs in the design and engineering of bridges, tunnels, or pavement.

Under the objective "Maximum system effectiveness for all residents" a policy states "Methodologies should be employed capable of comparing the effectiveness of investments in alternative networks and modes" (p. 15, #2).

The objective "An efficient street and highway system" (p. 15), includes a policy that states "Street and highway design standards should be based on functional class criteria set forth in WisDOT's Design Manual" (p. 16, #4).

13) The overall social, economic, energy, and environmental effects of transportation decisions.

Under the objective "Minimum environmental disruption", a policy states, "Required federal and state environmental impact statements and assessments for transportation facilities should be carefully reviewed on the local and regional level" (p. 17, #1).

Under the objective "Integrated planning" (p. 15), a policy states, "Local citizens should be formally involved in the transportation planning process" (p. 15, #4).

14) Methods to expand and enhance transit services and to increase the use of such services.

Under the objective of "Public Transportation" (p. 20), the policies are written "To develop public transportation into a viable alternative mode of transportation."

Most of the policies developed for public transportation are themselves methods to enhance transit services and to increase the use of such services.

15) Capital investments that would result in increased security in transit system.

While transit security in Oshkosh may not require the degree of consideration than it does in larger urban areas, it is inherent within the plan. Under the objective of "Public Transportation", a policy states that "Public transportation should provide a level of service that is safe, convenient, comfortable and affordable" (p. 20, #6).

16) The relationship of the transportation to tourism and recreation.

The open space goal is "To provide sufficient public open space to meet the recreational needs of all residents and protect and preserve natural and cultural resources" (p. 30).

Under the objective "Minimum environmental disruption", a policy states, "Care should be taken to protect historic or visually pleasing buildings and scenic, historic, scientific and cultural sites when constructing new or improving existing transportation facilities" (p. 17, #2).

Under the objective "Wildlife habitat Management", a policy states, "Adequate public access to hunting and fishing areas should be provided" (p. 28, #4).

Under the objective "Urban recreation needs" a policy states. "Opportunities should be identified for developing a network of recreational trails along highly attractive environmental corridors, natural waterways, and transportation rights-of-way to link major recreational facilities and residential areas" (p. 30, #2).

STUDY AREA

The Oshkosh study area map is shown in Exhibit 1. The study area contains the City of Oshkosh, towns of Algoma, Black Wolf, Nekimi, Oshkosh, and a small portion of the Town of Vinland. The study area encompasses approximately 88.5 square miles and includes those areas potentially influenced by the expansion of urban development over the long-term. Other areas are used for particular analyses throughout the report. The Transportation Analysis Zone (TAZ) area is used in transportation modeling. The Metropolitan Planning Area Boundary (MPAB) is used in the financial analysis as required by ISTEA. However, the study area shown in Exhibit 1 is the largest area discussed in this plan. Other areas are defined in their appropriate section.

BACKGROUND & PROCESS

The long-range transportation/land use plan currently being undertaken by East Central is an update of various transportation and sewer service area plans completed between 1976 and 1990. The updated plan will cover a 20-year planning horizon. The planning process was conducted in four phases. The four phases include:

Phase 1. Goals, Objectives and Policies. In this phase the goals and objectives of the Commission's comprehensive plan were reviewed as to their impact on land use and transportation. These goals and objectives were developed in the mid 1970's, updated for transportation purposes in 1982, updated and adopted in 1985.

Phase 2. Development of Alternatives. Following the update of the goals and objectives, staff, working with an open committee structure, developed alternative land use policies (scenarios) to guide land use development and corresponding transportation improvements. Each scenario also assessed the feasibility of alternative transportation modal choices.

Phase 3. Testing and Evaluation of Alternatives. Using the traffic simulation model and other appropriate qualitative techniques, the alternative land use/transportation scenarios were evaluated, assessing the degree to which they enhance or detract from the overall goals and objectives. These assessments were developed by staff and reviewed by the long range plan committee.

Phase 4. Plan Selection and Adoption. Using the findings of the evaluation phase, staff, working with the long range plan committee, selected a set of policies, or a composite of individual policies pulled from several scenarios, to structure the recommended single set of coordinated policies which comprise the plan and guide development of specific land use patterns and modal options. This recommended plan will be presented in public forums before the TAC to gain a final set of public reactions before consideration by the Commission's standing Transportation Committee, Regional Development Committee, and full Commission.

A major focus of this plan is the reestablishment of a transportation model in the Oshkosh area. The Oshkosh highway network plan was developed in the mid to late seventies with the report completed in January 1979. The vast majority of the 53 improvement projects identified in the plan did not involve capacity improvements. Seven projects involved land additions, one project called for a new arterial facility, another involved capacity expansion as part of a bridge replacement and one project called for a USH 41 grade separation with the Milwaukee RR tracks. The other 43 projects were essentially reconstruction or repaving of existing facilities.

The urbanized area's population declined during the seventies. After completion of the Congress Street bridge in 1981, it was mutually decided that a major update of the plan following the 1980 census would not be undertaken, but rather focus on short-range traffic operations evaluations. As part of this decision, it was also decided not to update the traffic simulation model developed for the Oshkosh area.

Extensive traffic operations analysis was completed in the latter part of the eighties with numerous recommendations made relative to parking removal, channelization, and signal coordination. Though not documented in a report, the City's public works and traffic departments proceeded to implement many of the recommended improvements. Also, as part of the analysis, it was noted that evolving traffic flow patterns in certain areas could not be addressed with traffic operations measures alone, at least not for the long term. Increased growth of the City to the west was leading to east-west traffic corridor congestion in a community that, until this time, had been oriented primarily north and south and developed its street network accordingly. Population declines of the seventies were neutralized in the early eighties and relatively strong growth had occurred in the late eighties. As a result, it was no longer possible to address all problem areas with traffic operations solutions, and the traffic simulation model for the Oshkosh area was reestablished as a testing and evaluation tool.

As part of a comprehensive plan update in the early nineties, the City involved the MPO and WisDOT District 3 staff in evaluating needed street network improvements. Many of these recommendations were made in light of the impending availability of the model to test capacity improvement alternatives as part of the long-range plan update by the MPO. As appropriate, recommendations from that plan are included in the recommendations section of this plan.

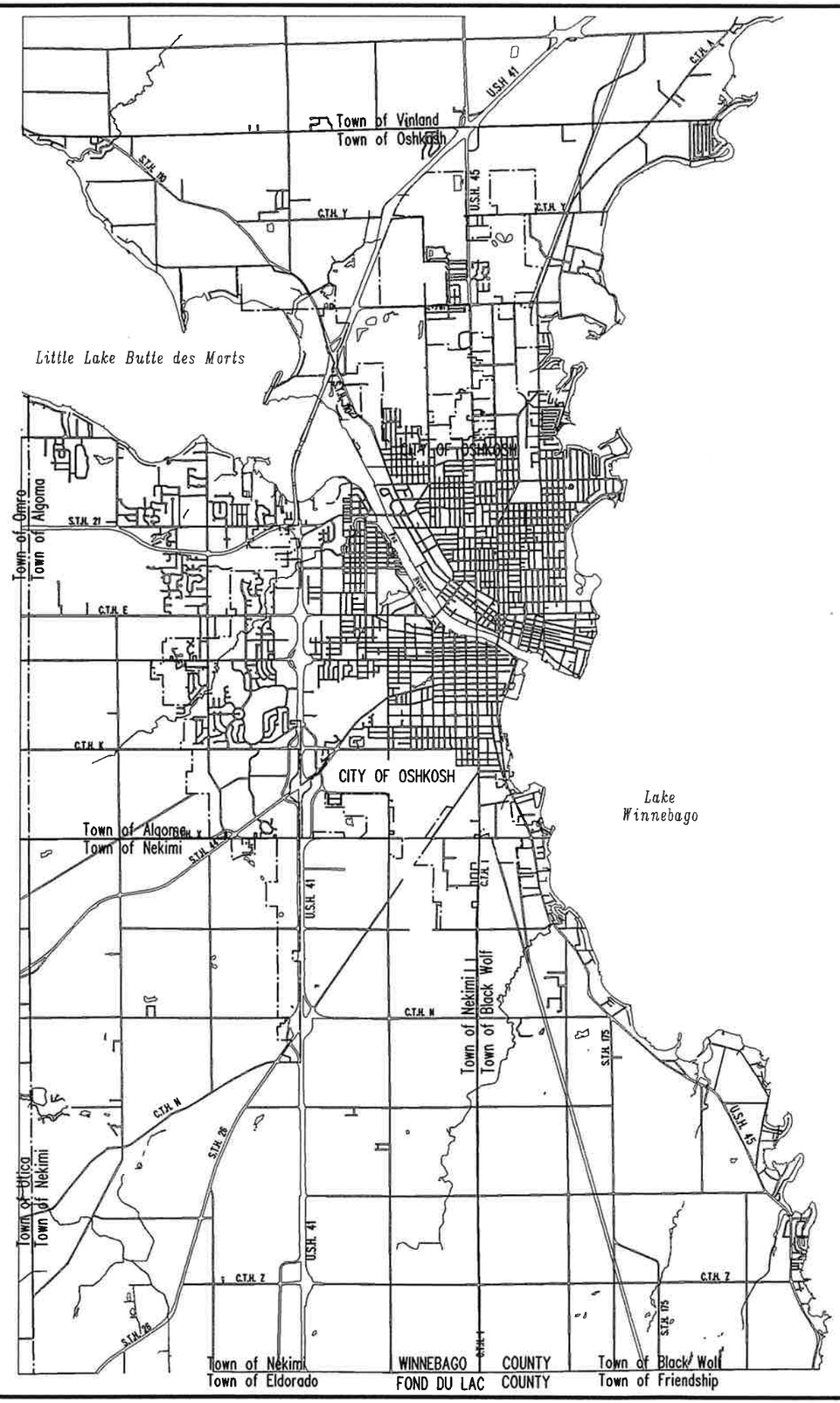

EXHIBIT 1
OSHKOSH AREA

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

NORTH

0 1 2

SCALE IN MILES

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

CURRENT LONG-RANGE PLANNING EFFORT

Progress in this planning effort thus far has resulted in the development and adoption of a number of documents, some intended as elements of the long-range planning process, and some developed to meet interim plan requirements of the ISTEA. Information is borrowed from these documents as appropriate to the analysis and recommendations in this document.

In some instances, concepts, information, or data are referenced from the previous documents. Descriptions of the previously adopted documents follow:

Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas - Issue Identification, June 1994: This document introduces the long range planning process and illuminates the major issues in the region. Much of the material contained in this publication was gathered at a well attended issues identification session on November 16, 1993. Approximately 80 representatives of governmental agencies, area officials, environmental groups, developers, business groups, civic organizations, minority advocates, and interested citizens participated. The issues that came out of the identification and prioritization process include: urban service delivery, growth management, environmental and open space issues, street and highway network, transit, pedestrian and bicycle facilities, and freight transportation. The issue identification process established the expanded public input policy, required by ISTEA, to be carried throughout the long-range planning process.

Subcommittees were pulled together to address each of the topical areas identified in the initial large session. The Issue Identification report includes the issue papers of each of the seven committees. Each issue paper contains background material, the status of current planning, pertinent discussion questions, and a list of existing goals and objectives.

A lengthy appendix to the report summarizes the identified issues from the November 16 meeting, summarizes pertinent portions of other documents, describes the public involvement procedures for the long-range planning process, and lists subcommittee members. The document is intended as a resource for committee members in the development of goals, objectives and policies.

Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Goals, Objectives and Policies, December 1994: This document presents the results of the first phase of the long-range planning process. The Technical Advisory Committee (TAC) reconsidered goals, objectives, and policies of the Commission's comprehensive plan in order to update those impacting land use and transportation. These goals and objectives were first developed in the mid 1970s and last updated for transportation and land use purposes in the early 1980s. In this updating process, East Central was strongly influenced by new ISTEA requirements which emphasize multimodal transportation, a strong transportation/land use interrelationship and an expanded public involvement process.

Throughout the third quarter of 1994, more than 150 area residents participated in the updating process. Each of seven subcommittees, consisting of 10 to 30 members, met several times to address the broad range of transportation and land use issues set forth in the issues document. The subcommittees recommended a set of updated goals, objectives, and policies to staff. Staff reviewed and refined the results for presentation to, and further refinement by the full TAC. The document was then adopted by the Commission as a component of the long-range plan.

The adopted goals are classified as to their relevance to land use or transportation. Growth Management, Urban Service Delivery, Environmental Resources, and Open Space related goals and objectives come under the land use category. While land use goals and objectives underwent some revision, mainly due to adjustments in state and federal programs, this review and reevaluation of transportation goals and objectives found them to be valid. The same single overall goal remains as the guiding principle for providing transportation services. The overall goal for the regional transportation program is to achieve a safe, efficient and environmentally sound transportation system that provides personal mobility for all segments of the population and supports the economy of the region. Policies stemming from this goal and the more prescriptive objectives are policies addressing freight transportation, public transportation, pedestrian and bicycle facilities, and efficient street and highway network.

Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Bicycle and Pedestrian Plan, December 1994: This document represents the first coordinated attempt to integrate the needs of the bicyclist and pedestrian into the transportation fabric of the Fox Cities, Oshkosh and Fond du Lac urban areas. By providing a comprehensive approach to bicycle and pedestrian facility planning, its purpose is to ensure that funding to provide accommodations for the bicyclist and pedestrian competes on an equal footing with funding for other transportation modes. The plan is also intended to service a common vehicle among the municipalities in each urban area for coordinating bicycle and pedestrian planning across jurisdictional boundaries.

The report presents bicycle use and accident data, confirming bicycling as a mode of transportation. In an effort to provide direction in developing a viable and safe network of bicycle routes and facilities and pedestrian accommodations, a number of objectives were established. The plan also makes recommendations in terms of facilities, maintenance, and education and enforcement. Long-range bike route networks are also presented.

Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Interim Status Report, December 1994: This report was prepared to meet the requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 for completion of a long-range transportation by December 18, 1994. When it became apparent that this deadline offered an inadequate timeframe for the completion of a full long-range plan with meeting the extensive new requirements, interim requirements were developed by Federal Transit Administration (FTA) and Federal Highway Administration (FHWA). WisDOT followed suit with the issuance of its guidance for the preparation of interim and long-range transportation plan updates consistent with the Act. This document follows this WisDOT guidance point-by-point, and constitutes a status report on the ongoing transportation/land use planning process as it is progressing toward completion of an update of the long-range plan. This document references the three previously discussed reports considered to be integral to the Interim Status Report.

Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Addendum, February 1996: This document refines and supplements the growth management and urban service delivery policies and definitions adopted by the Commission as part of the goals, objectives, and policies of the Long Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac urban areas. A product of the efforts of the Land Use Advisory Committee (LUAC), the addendum is intended to help resolve conflict surrounding growth management and urban service delivery policy issues. Also included in the report are a rural development policy and comprehensive plan guidelines. The rural development policy was developed by staff to aid East Central communities outside the urban areas which are experiencing

development pressures. The comprehensive plan guidelines were developed by staff at the request of the LUAC, to identify key elements of a good comprehensive plan, explain East Central's comprehensive plan review and approval process, and discuss the relationship between the comprehensive planning process and future sewer service updates within the urban sewer service areas.

Service level recommendations included in the Addendum are stratified by residential land use density: high (3 or more units per acre), medium (1.0 to 2.99 units per acre), and low (less than 1 unit per acre). The presented matrix of service level recommendations apply only to the urban planning area, however, rural development recommendations are directed toward development occurring outside the urban planning area to help minimize any unintended consequences resulting from the urban policy recommendations. An open space discussion is applicable to all communities within the East Central region.

Service Area Plans: The sewer service area plans for the Oshkosh and Fox Cities areas are currently being updated. The Oshkosh Sewer Service Area Plan was adopted by the Commission in October, 1996, with the Fox Cities Sewer Service Area Plan to follow in early 1997. These plans consider the land area needed to accommodate sewered development for each municipality within the urban areas to the year 2020, and delineate a growth area boundary for each urban area. These development area boundaries, as well as the population projections, are key to the long-range transportation/land use planning process.

ADOPTED GOALS, OBJECTIVES AND POLICIES

ADOPTED GOALS, OBJECTIVES AND POLICIES

BACKGROUND

East Central first developed goals, objectives, and policies for transportation/land use planning in the mid 1970s, and updated those policies and objectives in the early 1980s. Passage of ISTEA in 1991 required all Metropolitan Planning Organizations (MPOs) to update and adopt long-range transportation plans which conformed to ISTEA's metropolitan planning requirements. ISTEA's requirements emphasized multimodal transportation, a strong transportation/land use interrelationship and an expanded public involvement process. This process meshed well with East Central's long-established planning process.

An extensive issues identification process involving representatives of governmental agencies, area officials, environmental groups, developers, business groups, civic organizations, minority advocates, and interested citizens, took place late in 1993. Participants in the issues session, and those unable to attend, were invited to join East Central's on-going Technical Advisory Committee (TAC) in the review and development of goals objectives and policies, paying particular attention to issues raised in the previous session. The goals, objectives, and policies and accompanying definitions developed by TAC were published in the document **Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Goals, Objectives, and Policies**, and adopted by the East Central Commission in January of 1995.

Several key policy issues regarding growth management and urban service delivery were left unresolved by the TAC. TAC members who wished to continue working on these policies were asked to participate on a new committee, the Land Use Advisory Committee (LUAC). LUAC was organized to address unresolved issues and provide community input to the land use portion of the Long Range Transportation/Land Use Plan and also the urban sewer service area update. Discussion focused on the urban planning area, which includes the cities, towns, and villages of the Fox Cities, Fond du Lac and Oshkosh urban areas. Areas outside of the urban planning area need to address many of the same issues facing the urban areas of the east central region. However, since they differ in amount and density of development, policies need to correspondingly differ. Using LUAC's urban goals, policies, and objectives as a guideline, East Central staff also developed an open space recommendation and a rural development recommendation. The product of LUAC and staff efforts is the **Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Addendum.** The recommendations were adopted by the Commission in April of 1996. Land use/transportation alternatives presented in this plan will be measured against these goals, objectives and policies as adopted and amended by the Commission.

TRANSPORTATION

The original goals and objectives for the East Central region were developed in 1973, resulting from an extensive public participation process. Shortly thereafter, with designation of the Commission as the MPO for the Appleton and Oshkosh urbanized areas, the first set of transportation goals, objectives, and policies was established for the *Fox Valley Transportation Study.* Almost ten years later, in 1982, after more than 50 studies, the transportation goals, objectives, and policies were updated and expanded beyond the urbanized area to address regionwide issues.

Except for a few refinements pertaining to individual highway and transit studies, the 1982 goals, objectives, and policies have been guiding the transportation planning process for the last decade.

In the current review and reevaluation, most were found to be still valid. The same single overall goal remains as the guiding principle for providing transportation services. Likewise, all objectives have been retained.

TRANSPORTATION GOALS AND OBJECTIVES

The overall goal for the regional transportation program is to achieve a safe, efficient and environmentally sound transportation system that provides personal mobility for all segments of the population and supports the economy of the region.

To attain this goal, the following objectives have been defined:

- **Integrated planning.** To integrate the transportation program with other functional elements of comprehensive planning in recognition of the fact that the primary objective of a transportation system is to connect or relate activity locations.
- **Maximum system effectiveness for all residents.** To plan for the travel needs of the region's population through consideration of the capabilities and preferences of all population subgroups and in so doing determine the relative effectiveness of various system alternatives.
- **An efficient street and highway system.** To provide a street and highway system which, together with other transportation facilities, will meet short and long-range needs, interests and objectives of the region's citizens in a cost-effective manner.
- **Safety.** To reduce the potential for traffic accidents and provide for safe transportation throughout the region.
- **Minimum environmental disruption.** To encourage development of a transportation system that minimizes environmental disruption and strives to maintain a quality environment.
- **Compatibility with land use patterns.** To develop a transportation system compatible with existing and future land use patterns.
- **Conservation of energy.** To provide a transportation system that recognizes energy supply uncertainties and promotes the conservation of energy resources.
- **Multimodal interaction.** To provide an integrated transportation system that enables best use of the capabilities of individual modes and modal combinations, including rail and trucking facilities, public transportation, bicycle and pedestrian travel and air transportation.

OBJECTIVE: **Integrated Planning. To integrate the transportation program with other functional elements of comprehensive planning in recognition of the fact that the primary objective of a transportation system is to connect or relate activity locations.**

Policies

1. The existing transportation system should be continually evaluated, deficiencies identified and solutions proposed in keeping with comprehensive planning goals and objectives.

2. The transportation system should be planned in support of current land use and desired patterns of future development.

3. All proposals and changes considered in the comprehensive planning program should be constructively reviewed in terms of their impact on the transportation system.

4. Local citizens should be formally involved in the transportation planning process.

5. Compatibility should be promoted among local, regional and state transportation policies and plans.

6. Compatibility should be promoted between public and private transportation services.

OBJECTIVE: **Maximum System Effectiveness for all Residents. To plan for the travel needs of the region's population through consideration of the capabilities and preferences of all population subgroups and in so doing determine the relative effectiveness of various system alternatives.**

Policies

1. At least a minimum level of transportation should be provided to all persons residing in the region.

2. Methodologies should be employed capable of comparing the effectiveness of investments in alternative networks and modes.

3. Subsidy programs should be considered to meet the needs of the economically disadvantaged.

OBJECTIVE: **An efficient street and highway system. To provide a street and highway system which, together with other transportation facilities, will meet the short and long-range needs, interests and objectives of the region's citizens in a cost-effective manner.**

Policies

1. The highway system should be designed to adequately accommodate projected future highway travel growth and the potential modal choices necessary for the efficient movement of goods and people.

2. Development of new or expanded highway corridors should only be considered after a determination that alternative transportation modes cannot address the need to:
   a. Alleviate significant safety hazards
   b. Relieve communities of heavy through traffic burdens
   c. Alleviate traffic congestion
   d. Conserve energy in highway use
   e. Stimulate economic development
   f. Provide a framework for future planned land use

3. A community's development plan should incorporate all proposed future Principal and Minor Arterial streets within their existing and "extraterritorial powers" jurisdictions.

4. Street and highway design standards should be based on functional class criteria set forth in WisDOT's *Design Manual.*

5. Community development regulations allowing private streets should require right-of-way and design standards consistent with WisDOT's *Design Manual* for local streets.

6. Adequate financial resources for upkeep and renewal of existing highways to prevent accelerated deterioration should be a high priority in the budgetary process.

7. Low-cost improvements such as channelization, signalization, removal of parking, etc. should be the first measure considered to maintain an adequate level of service on highway facilities.

8. Regulations concerning the use of highways should be strictly enforced, including those which prevent the deterioration of structures and the highway surface.

9. Appropriate access control measures should be established for existing and future routes functionally classified or proposed as principal or minor arterials.

10. Traffic control signals within the urbanized area should be coordinated or timed to facilitate the efficient flow of traffic.

11. Through traffic in residential areas should be discouraged by incorporating such design concepts as cul-de-sacs and loop streets.

OBJECTIVE: **Safety. To reduce the potential for traffic accidents and provide for safe transportation throughout the region.**

Policies

1. The level of access control should be appropriate to the function of the highway.

2. Vehicle conflicts should be reduced through roadway and intersection design appropriate for the desired level of service.

3. Accident-producing facility deficiencies should be accorded a high priority for correction.

4. Design standards should be adequate for the legal speeds, sizes, and weights of vehicles.

5. Appropriate marking, signing, and protection devices should be installed where justified by design speed and accident exposure rate.

6. Safe speed limits and laws dealing with drunk driving should be strictly enforced and new strategies for dealing with these problems should be explored.

7. The strictest possible safety regulations should be employed near transportation-related construction sites.

8. Driver education programs should be designed not only to train new drivers but also to improve the techniques of present drivers.

9. Educational programs should be expanded to include pedestrian, motorcycle and bicycle safety and the safe use of public transportation.

10. Railway and highway grade crossings should be eliminated in high traffic areas and properly signalized in other areas.

11. Harbors and other navigable waters should be clearly marked and lighted where appropriate.

12. To ensure safe movement of hazardous material, infrastructure improvements should conform to guidelines set by local emergency services and state and federal regulations.

OBJECTIVE: **Minimum Environmental Disruption. To encourage development of a transportation system that minimizes environmental disruption and strives to maintain a quality environment.**

Policies

1. Required federal and state environmental impact statements and assessments for transportation facilities should be carefully reviewed on the local and regional levels.

2. Care should be taken to protect historic or visually pleasing buildings and scenic, historic, scientific and cultural sites when constructing new or improving existing transportation facilities.

3. The location of roadways through environmentally sensitive areas should be minimized.

4. Transportation facilities should be designed to be aesthetically pleasing and sensitive to the natural landscape, incorporating such amenities as boulevards, berms and attractive landscaping on major arterials in urban areas and minimizing unsightly views such as junkyards, billboards, and strip commercial development in more rural areas.

5. Natural vegetation should be encouraged along roadsides to protect wildlife, reduce the use of herbicides and cut maintenance costs.

6. Transportation facilities should be located and designed to minimized exposure of people to harmful and/or annoying air, water or noise pollution levels.

7. Air pollution should be minimized through efficient traffic control measures and through encouragement of transit, bicycle and pedestrian travel.

8. Air quality should be monitored to ensure that motor vehicles, including air and water craft, do not exceed the exhaust emission standards set by the Environmental Protection Agency.

9. All transport related sewerage and other facilities should be constructed and maintained so that their contribution to water pollution will be minimized and will meet appropriate water quality standards.

10. Natural water depths should be used to the maximum extent possible to avoid unnecessary dredging. Where dredging is necessary, disposal sites should be planned and located

consistent with state solid waste disposal regulations and/or disposed of in a nuisance-free and aesthetic manner.

11. National noise standards should be used to ensure that residential areas, schools, or other places with high concentrations of people are not exposed to harmful levels of noise from transportation facilities.

OBJECTIVE: **Compatibility with Land Use Patterns. To develop a transportation system compatible with existing and future land use patterns.**

Policies

1. The proper use of land for and adjacent to highways should be maximized by coordinating street and highway planning with land development.

2. The relative accessibility provided by the highway system should be adapted to comprehensive plans by providing a higher level of accessibility to areas where development is to be encouraged.

3. The total amount of land used for roadways should be minimized and multiple use of right-of-ways should be encouraged.

4. The disruption and dislocation of neighborhoods, households, businesses, industries and public and institutional buildings by construction of new or reconstruction of existing transportation facilities should be minimized.

5. Penetration of neighborhood units by arterial streets and highways should be avoided except where it can be demonstrated that the proposed location and design will improve the ability of the area to function effectively.

6. Location of new or relocation of existing transportation facilities in or through recreational facilities and historic, scenic or cultural sites should be avoided wherever possible.

7. When constructing or improving roadways, prime farmland should be preserved wherever possible.

8. Transportation facilities should be designed to promote compact development. New transportation facilities should not be extended for new subdivisions until existing subdivisions are fully developed.

9. Right-of-ways for proposed transportation facilities should be reserved to minimize disruption of future development.

OBJECTIVE: **Conservation of Energy. To provide a transportation system that recognizes energy supply uncertainties and promotes the conservation of energy resources.**

Policies

1. Local governments should develop transportation policies to conserve transportation energy and meet contingency situations in case of fuel shortfalls.

2. Development patterns that reduce the need to travel should be promoted.

3. Interruptions in traffic flow should be minimized.

4. Highway facilities should be routed to provide the shortest travel paths for the greatest number of trips.

5. Bypasses of urban areas should be constructed where serious traffic congestion can be alleviated.

6. Highway facilities should be designed and maintained to conserve energy. This includes providing smooth pavements and the elimination of steep grades and sharp curves.

7. The use of ride sharing and mass transportation should be encouraged.

8. The most energy efficient methods of construction and maintenance should be identified and applied.

9. Efforts to improve energy conservation through improved fuel efficiency of vehicles and through educational programs on better driving and travel habits should be pursued.

OBJECTIVE: **Multimodal Interaction. To provide an integrated transportation system that makes best use of the capabilities of individual modes and modal combinations, including rail and trucking facilities, public transportation, bicycle and pedestrian travel and air transportation.**

FREIGHT TRANSPORTATION: To ensure that appropriate types and levels of freight transportation service are provided to the entire region.

Policies

1. Common-carrier truck service should be provided to all areas of the region.

2. Efficient truck routing should be oriented to the freeway, expressway and high-level arterial network to facilitate truck traffic and to reduce conflicts with autos.

3. Joint terminals and common pick-up and delivery services should be encouraged where efficient and practical for the transport companies concerned.

4. The location of truck and rail terminals should be determined cooperatively by public and private interests.

5. Existing rail service should be maintained according to standards set forth in the Wisconsin Rail Plan.

6. Air freight service should be provided at all metropolitan and regional centers.

PUBLIC TRANSPORTATION: To develop public transportation into a viable alternative mode of transportation.

Policies

1. Local governments should recognize public transportation as a basic public service.

2. Public transportation should be provided in all urban areas using delivery systems appropriate to the density of development. Delivery systems include both fixed-route and demand-responsive services employing various sized buses, vans and taxis.

3. Local governments should promote land use patterns and site design standards which can be efficiently served by public transportation.

4. Public transportation should be related to travel patterns within an urban area.

5. At a minimum, public transportation should meet the mobility needs of the transit dependent.

6. Public transportation should provide a level of service that is safe, convenient, comfortable and affordable.

7. Funding and organizational mechanisms for public transportation should be based on principles of equity and reflect the interconnectivity of jurisdictions within an urban area.

8. Public transportation should strive to meet the service, performance, management and marketing standards determined for a given urban area.

9. Transportation services within an urban area should be coordinated to increase efficiency and avoid overlap and duplication of service. Coordination should encompass public and private transportation services and include such travel demand management programs as ride-sharing, employee van pools, subsidized transit passes, park and ride lots, etc.

10. Intercity public transportation should serve all populous areas of the region.

BICYCLE AND PEDESTRIAN TRAVEL: To create a physical and cultural environment which encourages travel by foot or bicycle by making these modes of transportation safe, convenient, and attractive alternatives to motorized travel through the provision of adequate accommodations, education and enforcement and more compact land use patterns.

Policies

1. A network of suitable on- and off-road routes should be developed which provide linkage between important origins and destinations and interconnect with other modes of transportation.

2. Conflicts between motor vehicles and bicycles and pedestrians should be minimized.

3. Bicycle and pedestrian-related improvements should be integrated into the planning, design, and construction of all appropriate highway and street improvement projects.

4. Facilities and amenities which make bicycling and walking more attractive alternatives to the motor vehicle should be provided at destinations.

5. Actions, activities and incentives which encourage increased walking and bicycling for transportation purposes should be promoted.

6. Efforts to increase community awareness of bicycle and pedestrian safety issues should be undertaken.

7. Enforcement of "rules of the road" which pertain to safe bicycling and walking should be increased.

8. Efforts to alert motorists to the presence of bicyclists and pedestrians on designated routes should be undertaken.

9. Compact and mixed land use should be encouraged to increase opportunities for bicycling and walking.

10. New development should be encouraged to integrate the bicycle and pedestrian modes of transportation.

11. Natural and man-made corridors should be utilized for bicycle/pedestrian trails.

AIR TRANSPORTATION: To provide and maintain a safe air transportation system to serve regional development patterns and to meet travel and freight service demands of the region.

Policies

1. An airport system should be maintained to provide an adequate level of service to existing and anticipated patterns of development, especially areas of population concentration and activities which generate significant travel demands throughout the region.

2. Each airport in the region should be designed to conform to the standards and provide the type of service indicated by its classification in the Wisconsin Airport Systems Plan.

3. Master plans should be prepared for all airports in the region included in the Wisconsin Airport System plan.

4. A zoning ordinance should be adopted for every airport in the region to ensure compatible uses adjacent to each airport.

5. Airports should cause minimal disruption of the environment and natural resource base.

6. Noise exposure forecast criteria should be considered when developing areas surrounding airports.

7. Priority should be given to maintaining existing airport facilities in a safe condition before constructing new facilities.

8. Land proposed for new airports or expansion of existing airports should be reserved as soon as possible.

9. The airport system should be integrated with other major transportation modes.

10. Adequate public transportation should be provided between the airport and the central city.

11. Adequate parking areas should be maintained at all airports in the region.

LAND USE

The policies assembled pertaining to land use intend to encourage efficient, orderly, and planned land use development patterns consistent with sound environmental management practices. The land use element provides direction and integrates four sub-element functional plans which have direct impacts on future land use. These functional areas are Growth Management, Urban Service Delivery, Environmental Resources, and Open Space.

Like the transportation policies, the primary intent of the land use policies is to guide land use decisions, particularly in terms of sewer service area actions. A secondary use of the policies falls within the planning process, itself. These adopted transportation and land use policies are used to comparatively analyze the land use scenarios, to be discussed later.

Growth Management

GOAL: TO ENCOURAGE AN ORDERLY AND PLANNED PATTERN OF COMMUNITY GROWTH AND DEVELOPMENT.

OBJECTIVE: **Allocated Growth. To promote a balanced allocation of land areas to accommodate current and future urban development needs.**

Policies

1. The supply of land allocated for urban development should approximate the current and future needs as determined from population, employment and land use projections which have been developed in conjunction with adopted comprehensive or urban service area plans.

2. New urban development patterns should incorporate planned areas of mixed use and density neighborhoods that are clustered and compatible with adjacent uses.

3. Work places, shopping centers, recreational facilities, and community facilities should be located to provide a mix of land uses for improved accessibility for residents.

4. Urban designs with higher density land use alternatives should be promoted.

OBJECTIVE: **Planned Urban Communities. To promote planned urban communities which contain centralized, compact, contiguous and compatible urban development patterns.**

Policies

1. Vacant developable lands within existing urban areas should first be infilled, then development staged outward from the existing development limits.

2. New subdivision development should be encouraged within existing urbanized areas or as an expansion of existing urban areas concurrent with the provision of necessary facilities and services.

3. The expansion of major commercial and industrial land use activities should be adjacent to existing areas or in areas designated for such development in adopted comprehensive plans.

4. Natural and man-made features, such as ridge lines, streams and major highways, should be considered in the expansion and staging of urban development.

5. Urban development should only take place in designated urban service areas.

6. Community development plans should be coordinated in multijurisdictional urban areas.

7. Urban sprawl in the form of unplanned development which is non-contiguous, low density, scattered and inefficiently served, should be discouraged.

OBJECTIVE: **Environmentally Sound Development. To promote urban development which is environmentally sound and compatible with the natural resource base.**

Policies:

1. Urban development should be directed to suitable land and discouraged on unsuitable land, such as floodplains, wetlands, prime agricultural soils, areas of high bedrock and groundwater, steep slopes, prime wildlife habitat, unique scientific areas and areas of historical or archeological significance.

2. The development of environmentally sensitive areas should be discouraged.

3. Adverse development impacts to surface water and groundwater should be mitigated.

4. Designs and plans for new development should preserve open spaces for public use, complement the existing landscape, and conserve energy and natural resources.

5. Land reclamation should be required following extractive operations or other uses which significantly alter the land surface.

6. Urban redevelopment activities should weigh environmental, health and safety factors against associated costs and benefits.

OBJECTIVE: **Efficient Development. To promote urban development in an efficient and economical manner.**

Policies

1. Urban development should be encouraged at densities adequate to sustain reasonable urban service costs.

2. Urban development should occur in areas served by adequate public facilities and services.

3. A variety of types, prices and locations of housing should be provided to promote convenience, choice and affordability.

4. Development patterns and site designs that support multimodal transportation should be encouraged.

5. Major commercial and industrial areas should be provided with readily accessible major transportation systems.

6. Community comprehensive plans should be adopted prior to the extension of urban services.

OBJECTIVE: **Community Character Preservation. To encourage urban development consistent with distinctive individual community character and identity.**

Policies:

1. A community's geographic amenities, physical development, architectural characteristics, cultural and historic attributes, and local desires in growth and development decisions should guide urban growth.

2. Desirable existing land uses should be preserved and protected and obsolete and deteriorating land uses should be renewed or removed.

3. Central business districts should be preserved and enhanced.

4. Greater attention should be focussed on the use and preservation of urban waterfronts.

OBJECTIVE: **Rural Land Development. To prevent intermingling of rural and urban land uses and promote rural development which meets the needs of residents and landowners in a compatible, cost-effective and environmentally sound manner.**

Policies:

1. Agricultural and open space characteristics of rural areas should be preserved.

2. Rural development should be limited to land with suitable physical characteristics and soils supporting conventional on-site sewage treatment systems.

3. Rural residential housing should be limited to dependent single lot use in agriculture and open space areas.

4. Rural subdivision development should be limited to areas which do not negatively impact agricultural or open space uses and the provision of public services.

5. Rural subdivision development should be restricted in urban planning areas until long-term urban services are provided.

Urban Service Delivery

GOAL: TO PROMOTE THE PROVISION OF GOVERNMENT SERVICES IN AN EFFICIENT, ENVIRONMENTALLY SOUND AND SOCIALLY RESPONSIBLE MANNER.

OBJECTIVE: **Economical Public Facilities. To provide efficient and economical public facilities and services to urban development.**

Policies:

1. The use of existing public facilities and services should be maximized in the allocation of future urban growth.

2. Designing of new and upgraded transportation and utility facilities with capacities sufficient to respond to existing demand levels and to the additional demand generated by planned development should be encouraged.

3. A full range of essential urban services and facilities should be provided to urban development areas.

4. The costs of providing urban services should be minimized through higher density development.

5. Major infrastructure extensions should be staged to coincide with community growth rates.

6. Utilities serving individual developments should be extended consistent with community water and wastewater system plans.

7. Provision of public facilities and services should be coordinated with the location and timing of new development.

OBJECTIVE: **Cooperative Provision of Services. To foster cooperation and coordination in the provision of services where efficiency, equity, and economies of scale can be obtained.**
Policies:

1. Overlapping urban service areas, facility and system capacities and service capabilities should be discouraged.

2. The proliferation of major public infrastructure facilities should be discouraged.

3. Intermunicipal agreements should be promoted for the provision of joint service.

4. More uniform facility design and service standards should be encouraged for multiple jurisdiction development areas.

OBJECTIVE: **Equitable Service Delivery. To promote economy and equity in the delivery of urban services.**

Policies:

1. The cost of extending infrastructure and services should be directed to those directly benefitting.

2. Cost recovery methods for local jurisdictions should be promoted to address growth and development expenditures.

3. Mechanisms for extracting fees for off site improvements necessitated by large scale developments should be adopted.

4. Less reliance on the property tax and increased use of alternative revenue systems should be encouraged to finance necessary services.

5. All rural and urban local units of government should be assured the opportunity to obtain technical information and assistance necessary to finance, evaluate, and provide public services more economically.

OBJECTIVE: **Effective Sewerage Systems. To promote sanitary sewerage systems which will effectively and economically serve urban development.**

Policies:

1. The number of wastewater treatment plants should be minimized to avoid duplication of facilities, institute economies of scale and lessen environmental degradation.

2. Reasonably-sized sewerage systems should be provided for urban development areas.

3. The sizing and construction of sanitary sewerage systems should be staged to encourage lower capital investment and greater flexibility.

4. Sanitary sewerage service to existing development should be provided whenever it is the most cost-effective alternative for addressing failing on-site disposal systems.

5. Gravity flow sanitary sewer and interceptor systems should be utilized whenever it is cost-effective for long-term development needs.

Environmental Resources

GOAL: TO PROTECT THE ENVIRONMENT AND MANAGE NATURAL RESOURCES IN AN ECOLOGICALLY SOUND MANNER.

OBJECTIVE: **Water Quality Protection. To improve and protect surface and groundwater quality.**

Policies:

1. The quality and supply of groundwater should be protected as the principal source of water supply and encourage water conservation programs.

2. The use of natural drainage patterns and measures should be promoted to enhance water quality.

3. Wetlands should be preserved as an essential component of the hydrologic system.

4. The risk of groundwater contamination should be reduced in aquifer recharge areas.

5. Lakeshore and streambank erosion should be minimized.

6. Construction site erosion should be controlled and urban stormwater runoff reduced.

7. Non-point source pollution abatement programs should be supported.

8. The adverse water quality impacts of agricultural runoff should be minimized.

OBJECTIVE: **Air Quality Maintenance. To improve or maintain high air quality throughout east central Wisconsin.**

Policies

1. Air pollution abatement programs and air quality regulations should be supported.

2. Geographically coordinated abatement strategies should be encouraged.

3. The public should be provided with information on air quality programs and specific air quality problems.

4. The increased use of transportation modes that are more efficient and environmentally sound than the private automobile should be encouraged.

5. Noise pollution should be reduced and noise sources isolated.

OBJECTIVE: **Environmentally Sensitive Area Protection. To preserve and protect environmentally sensitive areas and promote the linkage of these areas into environmental corridors.**

Policies

1. The natural environment should be recognized as an integrated system of interacting and finite land, water and air resources to protect the health and stability of this system.

2. Shoreland, floodplain and Wetland areas should be protected as essential components of the hydrologic system and their scenic and recreational value preserved.

3. The disturbance of environmentally sensitive areas by utilities and transportation facilities construction should be minimized.

4. Critical natural areas should be preserved and protected from development and other adverse impacts.

5. Adjacent land uses which adversely impact sensitive areas should be restricted or mitigated.

6. The interrelationship of adjacent landscape types should be recognized to avoid dividing the natural units or breaking important linkages.

OBJECTIVE: **Wildlife Habitat Management. To manage wildlife and wildlife habitat in a manner that maintains ecological stability and diversity and considers social and economic impacts.**

Policies

1. The diversity and population of plant and wildlife species should be maintained and increased.

2. Critical habitat areas for endangered and rare species should be preserved and enhanced.

3. Wildlife habitat such as fencerows, woodlots and natural areas should be protected and expanded.

4. Adequate public access to hunting and fishing areas should be provided.

5. Responsible public use of private land should be encouraged.

6. Wildlife and plant populations should be managed in ways that do not impose undue financial loss to individual property owners.

7. Plant and animal preserves used specifically for educational and observational purposes should be maintained and expanded.

OBJECTIVE: **Food and Fiber Production. To preserve land suitable for the production of food and fiber to meet present and future needs.**

Policies

1. Land best suited for agriculture or forestry should be preserved for these uses or in other uses which enable the land to be readily converted to agricultural or forestry production.

2. Ecologically sound and economically feasible farm and forestry management practices which preserve soil productivity and minimize soil loss should be encouraged.

3. Soil should be recognized as one of the basic and most important resources and programs to preserve and improve productivity and wise use consistent with soil capability should be developed and promoted.

OBJECTIVE: **Solid Waste Management. To employ a comprehensive management approach for solid and organic wastes.**

Policies

1. The amount of solid waste generated by households, business and industry should be reduced.

2. Solid waste should be recycled as an alternative raw material for construction, manufacturing, and energy production.

3. Organic wastes should be used as soil amendments.

4. Waste disposal operations and facilities should be centralized where economically feasible.

5. Cost-effective waste management systems should be provided that are consistent with development and water and air quality regulations.

6. On-site waste disposal systems should be managed to minimize adverse land use, environmental, and public health impacts.

7. Health threats from toxic substances in the environment should be reduced.

Open Space

GOAL: TO PROVIDE SUFFICIENT PUBLIC OPEN SPACE TO MEET THE RECREATIONAL NEEDS OF ALL RESIDENTS AND PROTECT AND PRESERVE NATURAL AND CULTURAL RESOURCES.

OBJECTIVE: **Recreational Opportunity. To provide all area residents an opportunity to partake in a wide range of active and passive recreational activities on a year-round basis.**

Policies

1. Recreational facilities should be provided to address the level of activity participation, facility deficiencies and aesthetic needs of the community.

2. Park sites to fully serve the local and areawide needs of the community should be located and developed.

3. Safe, convenient and adequate access to all parks and recreation areas should be provided.

OBJECTIVE: **Preservation Areas. To preserve areas of unique natural, historical, and cultural significance or unusual beauty for public use and enjoyment.**

Policies

1. All significance preservation areas should be identified and mapped.

2. Unique areas should be protected by minimizing the impact of individual development proposals.

3. Significant natural areas should be preserved as public open space.

4. Public access and use within environmental corridors and drainageways should be promoted.

OBJECTIVE: **Urban Recreation Needs. To comprehensively address and plan for the future open space and recreational needs of the urban area.**

Policies

1. All municipalities should be encouraged to participate in the development of comprehensive park and open space plans.

2. Opportunities should be identified for developing a network of recreational trails along highly attractive environmental corridors, natural waterways, and transportation rights-of-way to link major recreational facilities and residential areas.

3. Coordination between neighboring jurisdictions should be facilitated for development of parks and recreation facilities and linkages.

4. Future parks and open space areas should be preserved so that suitable and adequate land will be available to provide active and passive recreational opportunities as growth occurs.

OBJECTIVE: **Cost-Effective Recreation. To provide recreational opportunities in a cost-effective manner.**

Policies

1. Facilities should be developed which can provide multi-seasonal recreational opportunities.

2. The use of existing recreational facilities should be optimized.

4. Duplicative recreational facilities and programs should be avoided.

5. Grants and funding assistance should be maximized in the acquisition and development of recreational facilities.

6. Municipalities and school districts should be encouraged to cooperate in the development of community recreational and playground facilities.

7. The development of the county park system should be encouraged to complement recreational opportunities available in local parks.

8. Municipalities should be encouraged to establish capital funding and other parkland dedication methods to provide for future recreational needs.

OBJECTIVE: **Attractive Communities. To make individual communities and the region as a whole a more attractive place to live, work, and play.**

Policies

1. Scenic areas should be preserved and landscaping and other site development requirements strengthened to promote community beautification.

2. Additional billboard proliferation should be prevented, their placement controlled and a phaseout program promoted.

3. Community tree planting programs on street terraces and public areas should be promoted.

4. Waterfront areas should be preserved and redeveloped to promote greater public recreational use.

5. Scenic easements to protect important viewsheds should be acquired.

EXISTING CONDITIONS

LAND USE

An inventory of existing land use was completed in the fall of 1996. This inventory provided a foundation for both the sewer service area plan and this land use/transportation plan. The results of the inventory are depicted in Exhibit 2. The area used in this analysis is that shown earlier in this report as the study area in Exhibit 1.

Land Use and Development

Historical land use trends and existing land use characteristics are basic to determining future land use/transportation relationships. Since 1960, the Oshkosh study area has experienced significant changes in urban land use patterns as shown in Exhibit 3. While the urban core (contiguous urban development) has expanded, the 1960s began a 20 year period of significant scattered urban uses throughout the planning area. Between 1960 and 1970 over fifty percent of urban development occurring was scattered beyond the urban core. This trend was most evident in the Town of Algoma, however all towns experienced development pressures. During the 1970s various state and local land use and environmental regulations affected these land use trends and more compact and dense development began to occur. By the 1990s less than ten percent of the urban development occurring was scattered.

EXHIBIT 3

URBAN DEVELOPMENT DISTRIBUTION
(Urban Core vs. Scattered Development)

Year	Urban Core	Urban Scattered
1960	5,884 acres	1,415 acres
1970	6,756 acres	2,354 acres
1995	12,444 acres	3,112 acres

Source: ECWRPC, 1996

The changing density of development has also had an impact on land consumption. Since 1970, scattered single family residential development has averaged 1.9 units per acre and residential development in the urban core area averaged 3.13 units per acre. Over this 25 year period residential lot sizes have remained relatively constant. However, in the urban core area industrial and commercial land consumption has increased significantly with a trend toward less dense development. As an example, employment densities in the central city (mature development areas) averaged 35 employees per acre while in the USH 41 corridor area employees averaged eight per acre. Significant increases in parking areas for retail areas is another example of greater land consumption. A detailed land use inventory was completed for the Oshkosh study area in 1995. The land uses have been quantified as shown in Exhibit 4.

EXHIBIT 4

LAND USE CHARACTERISTICS
(Total Acres by Use Classification)

Land Use	City of Oshkosh	Town of Oshkosh	Town of Algoma	Town of Black Wolf	Town of Nekimi	Total
Single Family	3,560	1,017	1,189	111	982	6,859
Multi-Family	478	1	0	3	0	482
Commercial	1,226	87	125	33	94	1,565
Industrial	1,249	79	110	17	63	1,518
Public/Instit.	2,247	208	164	46	863	3,528
Parks/Rec.	116	42	38	250	113	559
Agricultural	493	4,289	3,778	6,739	14,497	29,796
Vacant	1,784	638	667	1,026	995	5,110
R-O-W	2,039	501	478	507	796	4,321
Water	97	22	14	28	35	196
Total	13,289	6,884	6,563	8,760	18,438	53,934

Source: ECWRPC, 1996

The City of Oshkosh covers an area of approximately 21 square miles, or 13,289 acres. There are approximately 4,038 acres of residential, 1,249 acres of industrial and 1,226 acres of commercial development within the City. Public and Institutional uses account for a total of 2,247 acres, a significant amount of land area. Development within the city is divided north and south by the Fox River and east and west by USH 41. Residential development is about equally split north and south of the river. Westhaven, a relatively new major subdivision area to the west of USH 41 on the Oshkosh southside, has absorbed most of the residential development within the city in recent years. The City of Oshkosh recently annexed the entire Stoney Beach Sanitary District, an older residential area on the southside of Oshkosh along Lake Winnebago.

Major commercial development in the City is within the central business district and along USH 41 south of the Fox River. The USH 41 corridor has seen most of the commercial development in the last ten years. The recent addition of "The Market Place", a wholesale outlet complex has made a significant impact south and west of USH 41. Redevelopment of the CBD has been progressing, with a new hotel-civic center complex completed in 1990.

Industrial development is located in four major areas, including the north industrial park, south industrial park, southwest industrial park and development near the Fox River in the central portion of the city. Recent industrial development has occurred in both the north and southwest industrial parks. Relocation of the industrial sites from the central city to the outlying industrial parks has gradually diminished the significance of this older industrial area.

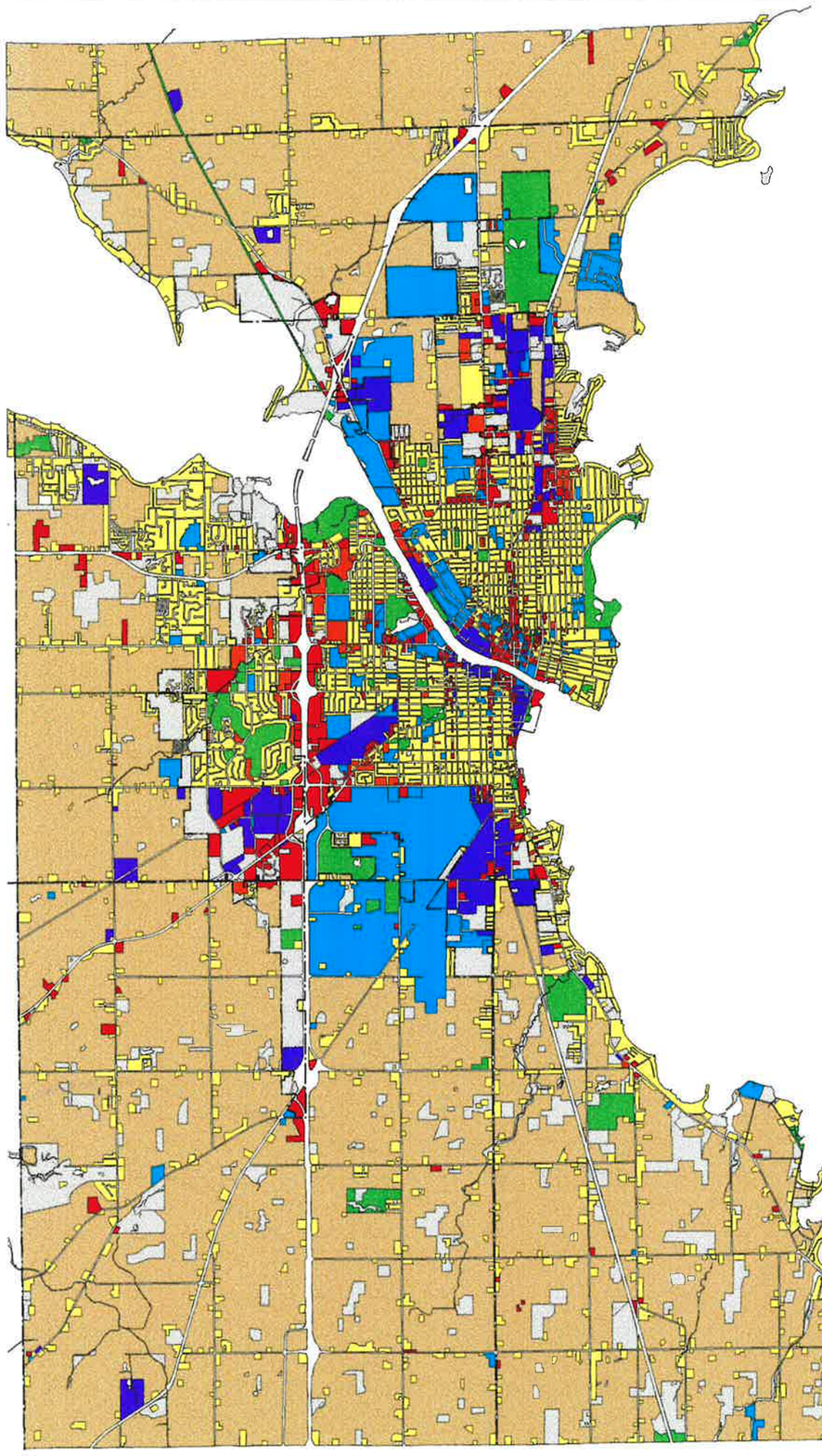

EXHIBIT 2
OSHKOSH AREA
EXISTING LAND USE

- SINGLE FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC / INSTITUTIONAL
- PARKS / RECREATIONAL / OPEN SPACE
- AGRICULTURAL LAND
- VACANT / UNDEVELOPED

NORTH

0 1 2

SCALE IN MILES

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

Within the central city area governmental and institutional land uses are prominent. An area of city and county government buildings is present at the Jackson and Algoma Street intersection. Just to the west along Algoma Street is a large area where the University of Wisconsin-Oshkosh is present.

Various governmental institutions are also located to the north of the City of Oshkosh. The Winnebago Mental Health Institute is a sprawling complex located along Lake Winnebago. Winnebago County also has mental health and government buildings as well as a large county park directly to the north of the city.

The site of a new state prison is also located north of the city on the east side of USH 41 with another major addition proposed. Directly south of the prison site is a large area serving as a countywide landfill. A buffer of undeveloped land separates most of these areas from the north edge of city development.

Wittman Field, a regional airport maintained by the county, is present at the south edge of the city. This aviation area has been classified as public/institutional and includes the Experimental Aircraft Association (EAA) which owns a large area of land south and adjacent to the airport. The EAA area is dedicated to aviation demonstration uses and includes special purpose buildings on the site.

The Town of Algoma borders the City of Oshkosh on the west side of USH 41 south of the Fox River. Most of the urban development in the Town of Algoma has occurred within the town sanitary district. The district is 1,915 acres in size and includes 500 acres of residential, eight acres of industrial, and 21 acres of commercial uses. The original development area within the district is located along the shore of Lake Butte des Morts; however, most recent development has been occurring to the south along Oakwood Road.

Within the Town of Black Wolf most urban development is within the Black Wolf Sanitary District which follows seven miles of shoreline of Lake Winnebago from the south limits of the City of Oshkosh to the Winnebago-Fond du Lac County line. The district is 2,293 acres in size, with 610 acres of residential development, 20 acres of commercial uses and 21 acres of industrial uses most of which are scattered, smaller business parcels. Development within the district is clustered, with separations principally because of the presence of undevelopable wetland areas. One such large area divides the district's northern and southern sections.

The Town of Oshkosh covers a broad area from Lake Winnebago to Lake Butte des Morts. The town has two sanitary districts where urban development is present. The Island View Sanitary District along Lake Winnebago is approximately 300 acres in size and contains 185 acres of residential development. The Sunset Point Sanitary District is approximately 150 acres in size and contains 40 acres of residential and 5 acres of commercial development.

A small southern portion of the Town of Vinland is included in the study area. This area is relatively undeveloped with the exception of a tier of residential land use along Lake Winnebago.

Demographics

Changes in population characteristics are the key factor in determining land use and transportation demands. Population growth or decline are obvious indicators of change however age of population, fertility rates and migration are factors which can have major impacts. Exhibit 5 shows the historic population changes of the governmental units within the Oshkosh Planning Area. The planning area has experienced steady growth between 1960 and 1995 with the exception of the 1970s where a decline in population occurred; principally within the City of Oshkosh. This decline was due to a combination of reduced a fertility rate and out-migration. The 1980s shows a major

reversal of this trend. During the 1980s, the city gained over 5000 in population. This gain was due, in-part, to an aggressive economic development policy promoted by the city.

EXHIBIT 5

POPULATION CHARACTERISTICS
(Total Population)

Jurisdiction	1960	1970	1980	1990	1995
City of Oshkosh	45,110	53,082	49,620	55,006	60,240
Town of Algoma	2,177	3,158	3,249	3,492	4,372
Town of Black Wolf	1,613	2,127	2,318	2,154	2,143
Town of Nekimi	1,073	1,193	1,516	1,475	1,466
Town of Oshkosh	4,321	4,943	4,420	4,655	3,790
Town of Vinland	1,203	1,472	1,632	1,688	1,716
Study Area Total	55,497	65,975	62,755	68,470	72,555

Source: U.S. Census Bureau, 1960-1990: DOA, 1995

Household formation rates provide a demand factor for new housing units. Household size provides a basis for estimating the number of residential units required. Exhibit 6 shows the historic number of households and household size for the jurisdictions in the planning area. Total households have expanded steadily through the 1960 to 1995 period, even during the period of population decline during the 1970s. This steady increase is due to a declining household size coupled with the high household formation rate during the 1970s.

EXHIBIT 6

HOUSEHOLD CHARACTERISTICS
(Number of Households)

Jurisdiction	1960	1970	1980	1990	1995
City of Oshkosh	13,784	16,126	18,286	20,957	23,002
Town of Algoma	623	917	1,055	1,208	1,535
Town of Black Wolf	469	625	818	820	828
Town of Nekimi	269	320	460	499	504
Town of Oshkosh	848	1,162	1,322	1,397	1,081
Town of Vinland	323	413	535	595	614
Study Area Total	16,316	19,563	22,476	25,476	27,564

Source: U.S. Census Bureau, 1960-1990: ECWRPC, 1996

Increased employment has been the primary factor for urban development within the Oshkosh area. Exhibit 7 shows employment by economic sector for the study area. As indicated, the service sector is a major component of employment, out-pacing other categories. This sector has more than doubled since 1980, while other categories experienced modest gains. While comparable historic information is unavailable for all employment sectors, total employment trends in the Oshkosh study area show an increase from 29,300 in 1969 to 30,100 in 1980 and 36,900 in 1995.

EXHIBIT 7

EMPLOYMENT CHARACTERISTICS
(Employees by Sector)

Year	Manufacturing	Trade	Service	Other	Total
1969	9,313	7,158	10,771	2,082	29,324
1980	9,409	7,685	10,802	2,171	30,067
1995	9,734	9,628	14,016	3,524	36,902

Source: ECWRPC, 1996

TRANSPORTATION NETWORK

This section assesses the existing conditions of the transportation system in the Oshkosh Metropolitan Area. Each mode of transportation is inventoried in this section to provide a starting point in the analysis, as well as an assessment of existing deficiencies. Highway movement of both passengers and freight, transit, rail, bicycle and pedestrian modes are addressed.

Highway

The existing highway network in the Oshkosh urban area has generally kept pace with a fairly slow and steady population growth rate. While the growth in population has been modest, traffic volumes have increased dramatically. In this sense Oshkosh reflects the national trend which is based on a number of factors. Vehicle ownership has increased from 1.21 vehicles per household in 1970 to 1.59 vehicles per household in 1990. This was largely a result of an increasing incidence of two career families. In addition to this necessitating two vehicles for work trips, it creates a residual need for teens to be responsible for much of their own trip making, frequently resulting in a third, or fourth vehicle in the household.

Another factor which has contributed to the increase in vehicle use is the dispersion of land uses. Unlike the compact, mixed use neighborhood development characteristic of pre-1960 development, residential development is now more commonly on larger lots in subdivisions which are solely residential in nature, and likely miles from employment centers and shopping. The lower density reduces the efficiency and effectiveness of public transit and produces trip lengths which are not conducive to bicycle or pedestrian modes. Many of these areas also do not have facilities to safely serve bicycle or pedestrian travel modes. The end result is more, longer trips, reflected in the increase in the statistic of vehicle miles traveled (VMT).

Travel Model

A transportation model has been developed for the Oshkosh urban area, and functions as a powerful tool in analysis of future scenarios, and to test proposed improvements. Another function of the

model is to examine the deficiencies in the existing system. The model uses demographic data, such as population, dwelling units, employment, and number of vehicles, to generate traffic volumes on the urban functionally classified system, all freeways, principal and minor arterials, and collector streets (Exhibit 8). Because the transportation modeling area extends outside of the urbanized area, rural functional classification is pertinent here as well (Exhibit 9). A comparison to actual traffic counts validates the model's accuracy. By running the model in this base year, or current condition, several outputs supply a picture of how the system is functioning and where deficiencies exist.

The base year (1994) run of the Oshkosh model, shows a generally well functioning network with only a few areas of deficiency. Exhibit 10 depicts those network segments which are deemed deficient in terms of level of service (LOS). LOS refers to the drivability of the highway based on the amount of traffic relative to the capacity of the highway. Under the condition of LOS A, a driver's speed and maneuverability is not constrained by other vehicles on the roadway. The ratings graduate downward to LOS F which is a condition with bumper-to-bumper traffic, severely impairing travel speeds to the point that the roadway is simply not functioning. LOS C is considered to be an acceptable level for a highway to function in the Oshkosh area. The deficiencies shown are all segments operating below LOS C. As you can see, most of the system presently meets or exceeds LOS C. A few locations show the designation of LOS D, including the north-south arterials of Wisconsin, Jackson, and Main streets, and several USH 41 ramps at 9th Avenue, STH 21, and STH 110. A couple of short segments in the downtown area display LOS E, and only one location shows an obvious problem with an LOS F rating, the Wisconsin Street Bridge, a two-lane arterial river crossing in downtown Oshkosh. Again, Exhibit 10 shows all segments which are currently operating at LOS D and below. These areas obviously require attention in the alternative analysis stage of this planning process to meet the goal of a safe and efficient flow of traffic.

Transit

Oshkosh Transit System (OTS) was exclusively a fixed route service provider between 1978 and 1992. Starting in 1992, OTS began diversifying to provide paratransit service for persons with disabilities and the elderly. CARS (now known as Cabulance) and Dial A Ride were added in 1992. Additional paratransit service, in response to new requirements of the Americans With Disabilities Act (ADA), was added in 1993. 1994 and 1995 saw significant coordination with a number of special transportation programs, including transportation for disabled adults (Work Adjustment) in 1994, and the major additions of Residential Care for the Developmentally Disabled, Advocap, Zion Eldercare, Rural Over 60 and Rural Under 60 transportation programs. Fixed Route service to Omro and Winneconne with the West Connection started in March of 1996. While coordination has helped run these programs more efficiently, increases in ridership and program costs, created upward cost pressures.

OTS provides fixed-route service within the City of Oshkosh Monday through Saturday from 6:15 a.m. to 6:15 p.m. on nine routes with 30-minute headways (Exhibit 11). OTS has reduced the number of fixed routes and reduced some maintenance overhead resulting in substantial savings in fixed route costs. Additional requests for specific services continue to be presented. The feasibility and funding potential of service between the City of Neenah, to the north, and the City of Oshkosh is currently being examined in response to repeated requests. OTS anticipates maintaining the current level of fixed route service through 2001.

OTS also provides ADA paratransit service and other service for the elderly and disabled through a contract with a private provider. Both shared-ride taxi service and lift-equipped van service is available. Overall, the current level of service is higher than required by ADA: same day service is provided 24 hours daily. A total of seven ADA and non-ADA paratransit services are provided, with

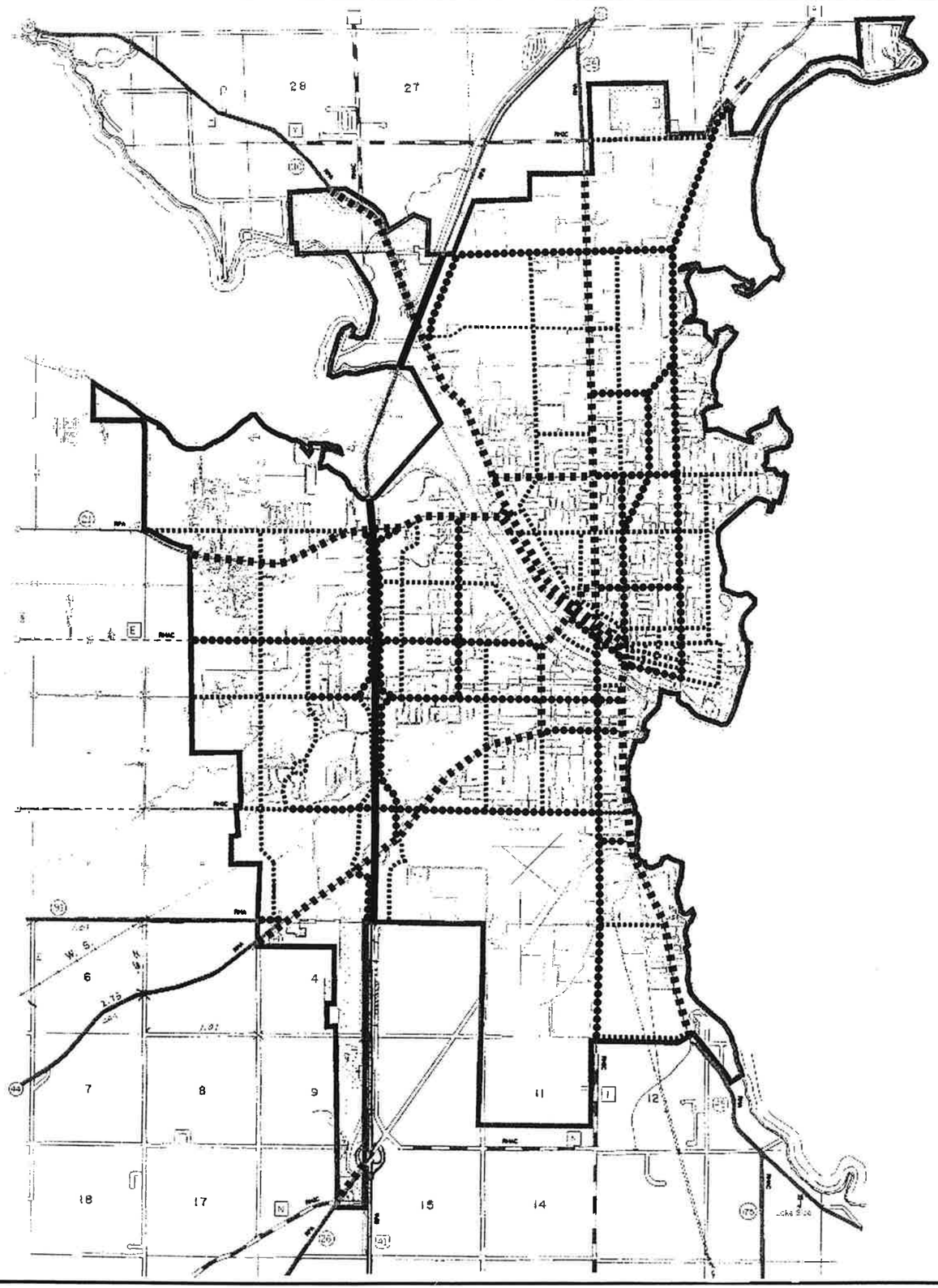

EXHIBIT 8
OSHKOSH URBANIZED AREA FUNCTIONAL CLASSIFICATION SYSTEM

PRINCIPAL ARTERIAL-INTERSTATE

PRINCIPAL ARTERIAL-OTHER FREEWAYS

PRINCIPAL ARTERIALS-OTHER

MINOR ARTERIAL

PLANNED MINOR ARTERIAL

COLLECTORS

PLANNED COLLECTORS

URBAN AREA BOUNDARY

RPA RURAL PRINCIPAL ARTERIAL
RMA RURAL MINOR ARTERIAL
RMAC RURAL MAJOR COLLECTOR
RMIC RURAL MINOR COLLECTOR

Source: WISDOT DECEMBER 1995

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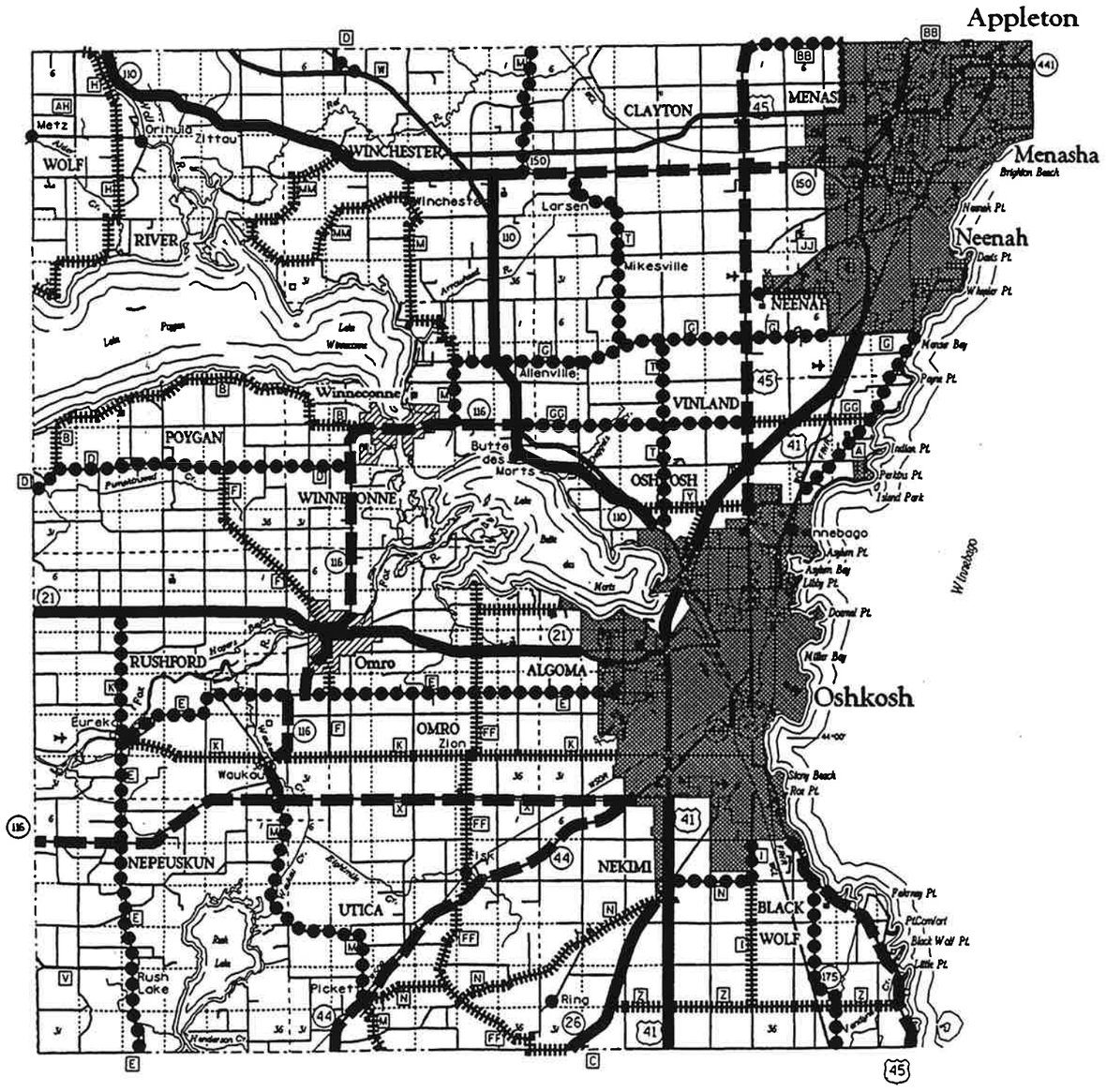

EXHIBIT 9
WINNEBAGO COUNTY
RURAL FUNCTIONAL
CLASSIFICATION SYSTEM

PRINCIPAL ARTERIALS
INTERSTATE
OTHER
MINOR ARTERIALS
MAJOR COLLECTORS
MINOR COLLECTORS

Source: WISDOT JANUARY 1987

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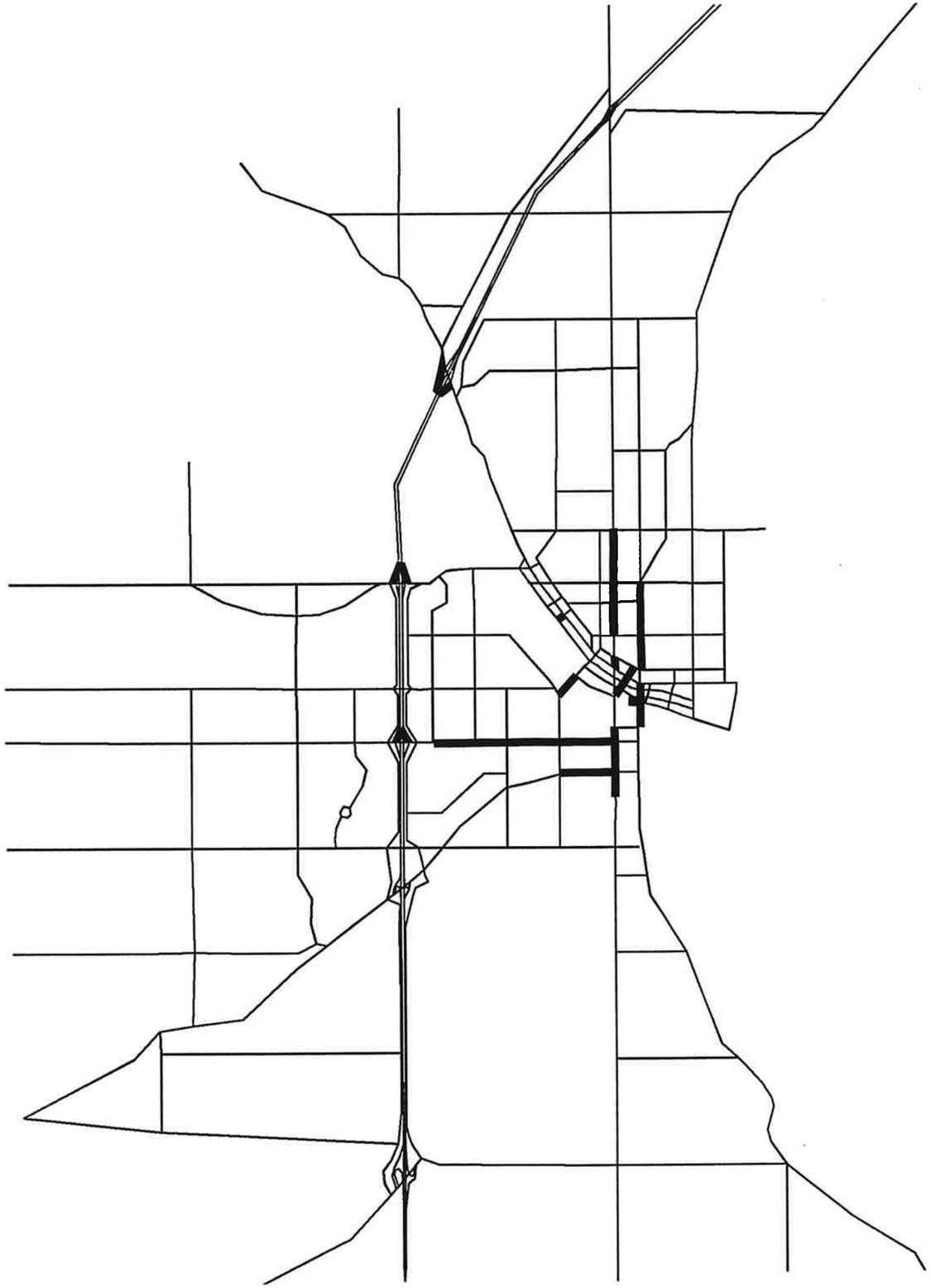

EXHIBIT 10
OSHKOSH AREA
DEFICIENCIES ON
EXISTING HIGHWAYS

DEFICIENT SEGMENT
functioning at 80%
or greater of capacity

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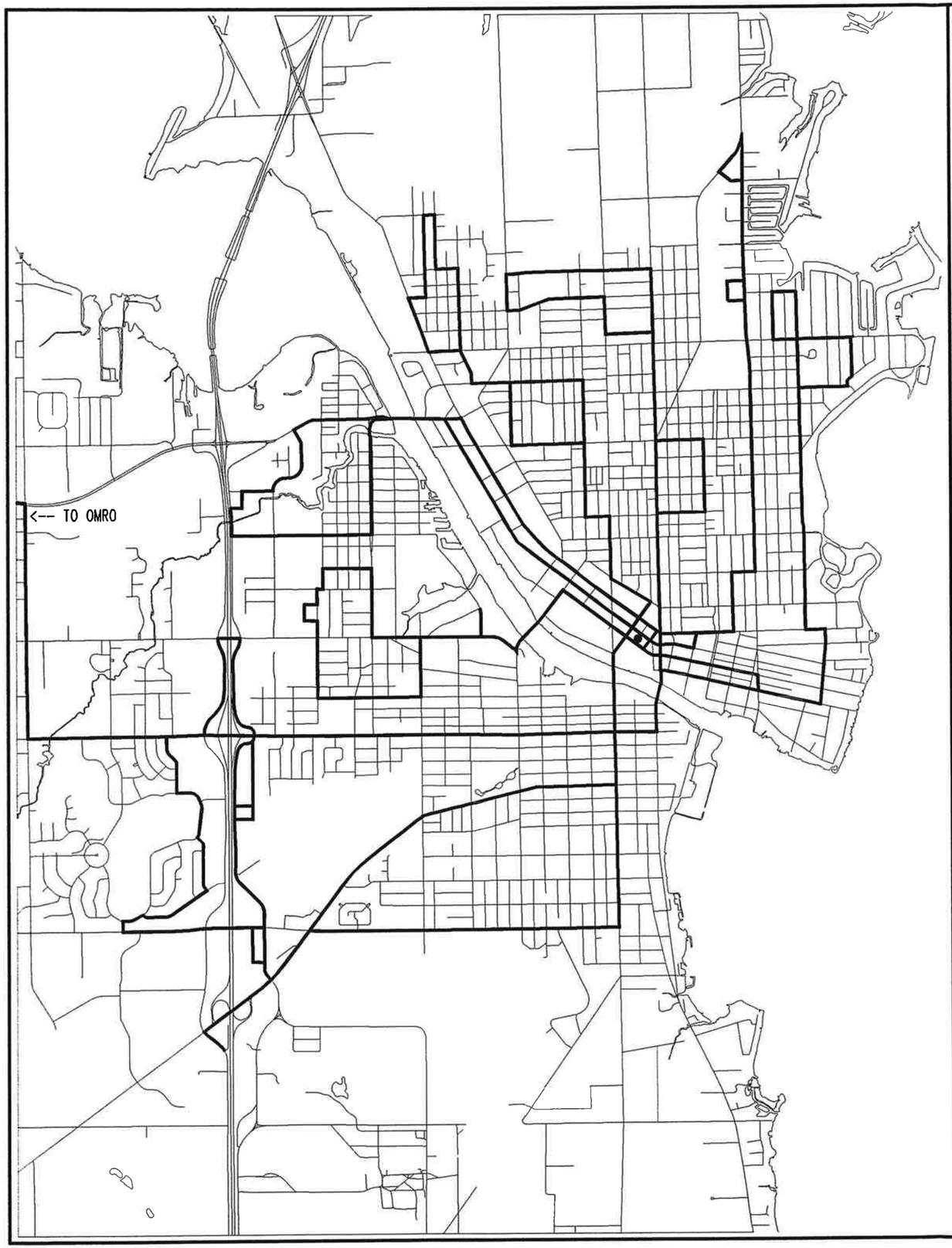

EXHIBIT 11
OSHKOSH AREA
OSHKOSH TRANSIT SYSTEM
FIXED ROUTES

— OTS FIXED ROUTES

● TRANSIT CENTER

Source: OSHKOSH TRANSIT SYSTEM

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NORTH

0 2000 4000

SCALE IN FEET

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the costs for these services shared by Winnebago County. Coordination between the city and the county has been taken to heart by OTS making the system more of a mobility management system than a bus operator.

Past Planning Efforts. Oshkosh Transit's last Transit Development Plan (TDP) update was adopted in 1992 and within the confines of funding realities, the recommendations of that plan have been adopted. New buses have been purchased, updating the fleet. Thirty minute headways have been retained by the system. The recommended eleven route system was implemented, but has since been pared back to only nine routes, in response to poor ridership and declining federal funds. Oshkosh has resisted the common trend to raise fares in response to diminishing funds, and now has the lowest fixed route fare in the state. OTS has been careful to not totally eliminate service in any given area, and has worked to combine routes to keep some level of service throughout the City, while increasing efficiency.

Costs and Revenues. Operating costs have increased on the average of 8.2 percent per year over the past five years. Much of that increase has been experienced in the paratransit budget with the implementation of the Americans With Disabilities Act (ADA). With fixed route cost increases of only 1.3 percent per year, paratransit's significantly smaller budget experienced an average annual growth of 273.5 percent. The increases in the paratransit expenses are expected to moderate to approximately 7.5 percent per year. OTS's fixed-route cost per mile, hour and passenger ratios continue to increase at a modest rate. These service performance measures are not applied to paratransit service which is provided on a contractual basis. For details of recent OTS costs, revenues and operating statistics see Exhibit 12.

Fixed route revenues remained stable until 1995, with slight ridership drops being offset by small fare structure adjustments. Paratransit revenues increased rapidly between 1992 and 1995 with the initiation of several coordination efforts, but are expected to be generally flat between 1996 and 2001. Increases in bus advertising and other revenues, including fixed route revenues, are anticipated to slightly improve the overall revenue picture. Revenue from service provided during the annual events at the Experimental Aviation Association (EAA) convention and airshow are expected to increase in 1997 and beyond. OTS believes that the long-term viability of the system requires fare increases to be small and used only as a last resort.

Ridership. Ridership declined from the mid-eighties through 1992. Beginning in 1993, ridership has been increasing due to the expansion of paratransit services, and a three to four percent annual growth of fixed-route ridership. There was a slight decline in ridership in 1995. Modest growth of one percent per year is expected to continue, with most of that growth in paratransit ridership. Exhibit 13 shows all the programs currently under the OTS coordination program and their most recent budgets.

Bus Fleet. OTS's bus fleet is kept up to date on a general 15 year replacement schedule. Ten new 30-foot lift-equipped buses were acquired with a federal grant in 1993, with six more included in the grant for 1996. The fleet roster and replacement schedule is shown in Exhibit 14. With the exception of the 1954 model, all vehicles are equipped with the required wheelchair lift and two tie-down stations. Within the planning period, it would be anticipated that the next round of replacements would need to occur, in approximately 2012. This matter will be addressed in the recommendations section of this report.

EXHIBIT 12

TRANSIT CHARACTERISTICS 1986-1996
Oshkosh Transit System

	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
OPERATING											
Operating Expensies ($000)	1,420	1,439	1,443	1,559	1,627	1,700	1,933	1,962	2,145	2,422	2,398
Fixed-Route	--	--	1,443	1,559	1,627	1,657	1,763	1,725	1,715	1,816	1,767
Paratransit	--	--	--	--	--	43	170	237	430	606	631
Farebox Revenue ($000)	349	318	319	296	290	307	350	371	398	430	468
Fixed-Route	--	--	319	296	275	289	251	262	270	265	309
Paratransit	--	--	--	--	15	18	99	109	128	165	159
Deficit ($000)	1,071	1,121	1,124	1,263	1,337	1,393	1,583	1,591	1,747	1,992	1,930
Federal	348	393	409	409	430	403	464	441	464	422	302
State	532	540	41	592	626	647	812	824	901	1,015	1,055
Other Local	--	--	--	--	--	--	--	22	66	214	181
Local - Municipal	191	188	174	262	281	343	307	304	316	341	392
CAPITAL											
Capital Expenses ($000)	10	10	975	165	30	0	558	1,530	44	840	829
Federal ($000)	8	8	780	132	24	0	419	1,224	35	672	663
Local ($000)	2	2	195	33	6	0	139	306	9	168	166
OPERATING STATISTICS: Fixed Route											
No. of Buses	26	26	26	26	26	24	23	19	19	19	19
No. of Employees	33	33	33	33	34	33	32	32	31	28	28
Revenue Hours (000)	47	47	46	46	45	45	44	42	55	60	46
Revenue Miles (000)	577	597	588	588	598	598	557	526	511	505	460
Revenue Passengers (000)	981	880	878	835	795	767	738	861	830	838	845
Average Fare	0.36	0.36	0.36	0.35	0.35	0.38	0.34	0.30	0.33	0.32	0.37
Operating Ratio (Rev/Exp)	0.25	0.22	0.22	0.19	0.17	0.17	0.14	0.15	0.16	0.15	0.17
Cost per Vehicle Mile	2.46	2.41	2.45	2.65	2.72	2.77	3.17	3.28	3.36	3.60	3.84
Cost per Passenger	1.45	1.64	1.64	1.87	2.05	2.16	2.39	2.00	2.07	2.17	2.09
Cost per Vehicle Hour	30.21	30.62	31.37	33.89	36.16	36.82	40.07	41.07	31.18	30.27	38.41
Passengers per Veh. Mile	1.70	1.47	1.49	1.42	1.33	1.28	1.32	1.64	1.62	1.66	1.84
Passengers per Veh. Hour	20.87	18.72	19.09	18.15	17.67	17.04	16.77	20.50	15.09	13.97	18.37

EXHIBIT 13

CONTRACTED PARATRANSIT SERVICE
Oshkosh Transit System
1997

	DAR	CABULANCE	WAS	OVER 60 RURAL	UNDER 60 RURAL	RCDD	ADVOCAP	ZION	WEST CONNECTION	TOTAL
Expenses	$219,000	$193,000	$115,560	$71,721	$7,820	$30,267	$13,050	$38,390	$30,000	$718,808
Revenues	101,791	31,020	-	9,600	1,104	-	-	12,381	1,700	157,596
State (45%)	$93,075	$82,025	$49,113	$30,481	$3,636	$12,864	$5,546	$16,316	$12,750	$305,806
Federal (12%)	27,375	24,125	14,445	8,965	978	3,783	1,631	4,799	3,750	89,851
County	29,058	25,200	83,781	38,397	4,409	21,944	9,461	2,452	20,050	234,752
Other	-	-	-	4,000	-	-	-	13,000		17,000
Funds Generated	N/A	N/A	$147,339	$91,443	$10,127	$38,591	$16,638	$48,948	$36,250	$391,336
City Savings	N/A	N/A	31,779	19,722	2,307	8,324	3,588	10,558	8,250	84,528
County Savings	N/A	N/A	31,779	19,724	2,307	8,323	3,589	10,557	8,250	84,529

EXHIBIT 14

OTS FLEET ROSTER

VEH. NUMBER	MODEL YEAR	MAKE	SEATING CAPACITY	ANTICIPATED REPLACEMENT	ADA COMPLIANT
406	1954	GMC	37		NO
1001	1980	GMC	35	1996	YES
1005	1980	GMC	35	1996	YES
1006	1980	GMC	35	1996	YES
1007	1980	GMC	35	1996	YES
1009	1980	GMC	35	1996	YES
1010	1980	GMC	35	1996	YES
1011	1980	GMC	35	1996	YES
1013	1980	GMC	35	1996	YES
9301	1993	FLXIBLE	28	2008	YES
9302	1994	FLXIBLE	28	2008	YES
9303	1993	FLXIBLE	28	2008	YES
9304	1993	FLXIBLE	28	2008	YES
9305	1993	FLXIBLE	28	2008	YES
9306	1993	FLXIBLE	28	2008	YES
9307	1993	FLXIBLE	28	2008	YES
9308	1993	FLXIBLE	28	2008	YES
9309	1993	FLXIBLE	28	2008	YES
9310	1993	FLXIBLE	28	2008	YES
9311	1993	FLXIBLE	28	2008	YES

Source: Oshkosh Transit Service, 1996.

Intercity Transit

Intercity transit is provided to the Oshkosh area by two over-the-road bus companies, Greyhound and Lamers Bus Lines. Ten busses per day make intermediate stops at the downtown bus station, enroute to Milwaukee, Madison, Wausau, Stevens Point, and Minocqua. According to management at the bus terminal, nearly half of the ridership is made up of elderly persons, and one quarter students. The location of the intercity bus station in the downtown area, while providing good access to area passengers, increases trip lengths of the buses needing to come into the city from the highway.

Bicycle and Pedestrian

Currently no designated urban bicycle routes exist in the Oshkosh area. The Wiowash Trail which

skirts the area, is primarily intended for recreational use. However, it could potentially serve some commuter trips. The *Oshkosh Area Long-Range Transportation/Land Use Plan - Bicycle and Pedestrian Element* appears under a separate cover. The final recommendations are included in the recommendations section of this report.

Freight Movement

Truck. Exhibit 15 depicts the designated truck routes and rail lines, and the existing truck terminals in Oshkosh. Note that the freight terminals are closely aligned with the truck routes and can conveniently access USH 41 in most instances. During the advisory committee deliberations, freight-oriented users indicated that existing accessibility is good in the Oshkosh urban area.

Rail. Railroads have undergone significant change over the last twenty years and are the primary private sector provider of transportation infrastructure. The Chicago Northwestern Railroad (CNW) abandoned line segments in Oshkosh. The anticipated interconnection between the Soo Line and Wisconsin Southern in Oshkosh was never implemented and eventually the entire portion of the Wisconsin southern line east of USH 41 was abandoned, precluding the need for a USH 41 overpass. The Soo Line sold its holdings north of Milwaukee, including one line into the Chicago market, to a newly formed company the Wisconsin Central Limited. Shortly afterward the CNW sold its holdings between Green Bay and Milwaukee to the newly formed Fox River Valley, an ITEL subsidiary, which also held the Green Bay & Western as a subsidiary. Finally, the Wisconsin Central Limited purchased the ITEL holdings in the Fox River Valley and Green Bay & Western, forming Fox Valley & Western as a subsidiary. This left Oshkosh with two carriers, though without any interconnection between them.

Wisconsin Central has moved to consolidate trackage were feasible and where not otherwise needed for operations. The primary impact is in Oshkosh where a line through the downtown area is being removed, eliminating over 40 grade crossings. A portion of this right-of-way has been acquired by the city and is being retained for transportation use. A portion between Eighth and Ninth Avenues comes into play in analysis of a possible one-way pairing of the two streets. The impact of the WCL investments in rail infrastructure has been a closer working relationship with local governments and the accomplishment of coordinated infrastructure improvements that did not happen earlier.

The rail lines depicted on the map excluded some existing lines have been abandoned as part of Wisconsin Central Limited's consolidation modifications following the purchase of the Fox River Valley and Green Bay and Western lines. Major switching yards are referenced on the map while minor yards are not. To date, yard facility improvements have been concentrated in the Neenah and North Fond du Lac yards, raising questions as to the future of the more minor Oshkosh yards. The Neenah yard has an intermodal facility that was developed after the first yard in Green Bay. WCL is now talking about adding intermodal train service from Stevens Point running through Neenah.

In terms of access, the Wisconsin Southern intermodal facility, while a bulk materials facility rather than a trailer-on-flatcar (TOFC) facility, is well-served by a principal arterial two miles west of a USH 41 interchange.

Airport. Whitman Field in Oshkosh is notably the home of the Experimental Aircraft Association and its annual convention which has a major economic impact on the community. While the airport presently has only one scheduled passenger carrier serving it, it also is home to Basler Flight Service which provides air cargo and charter service and also specializes in DC-3 conversions, and to the Fox Valley Technical College Aviation Center. The principal impacts on the public transportation infrastructure are the scale of the airport facility itself for the diverse needs of the EAA annual convention and on the highway network providing access to the facilities with its special peaking considerations during the convention.

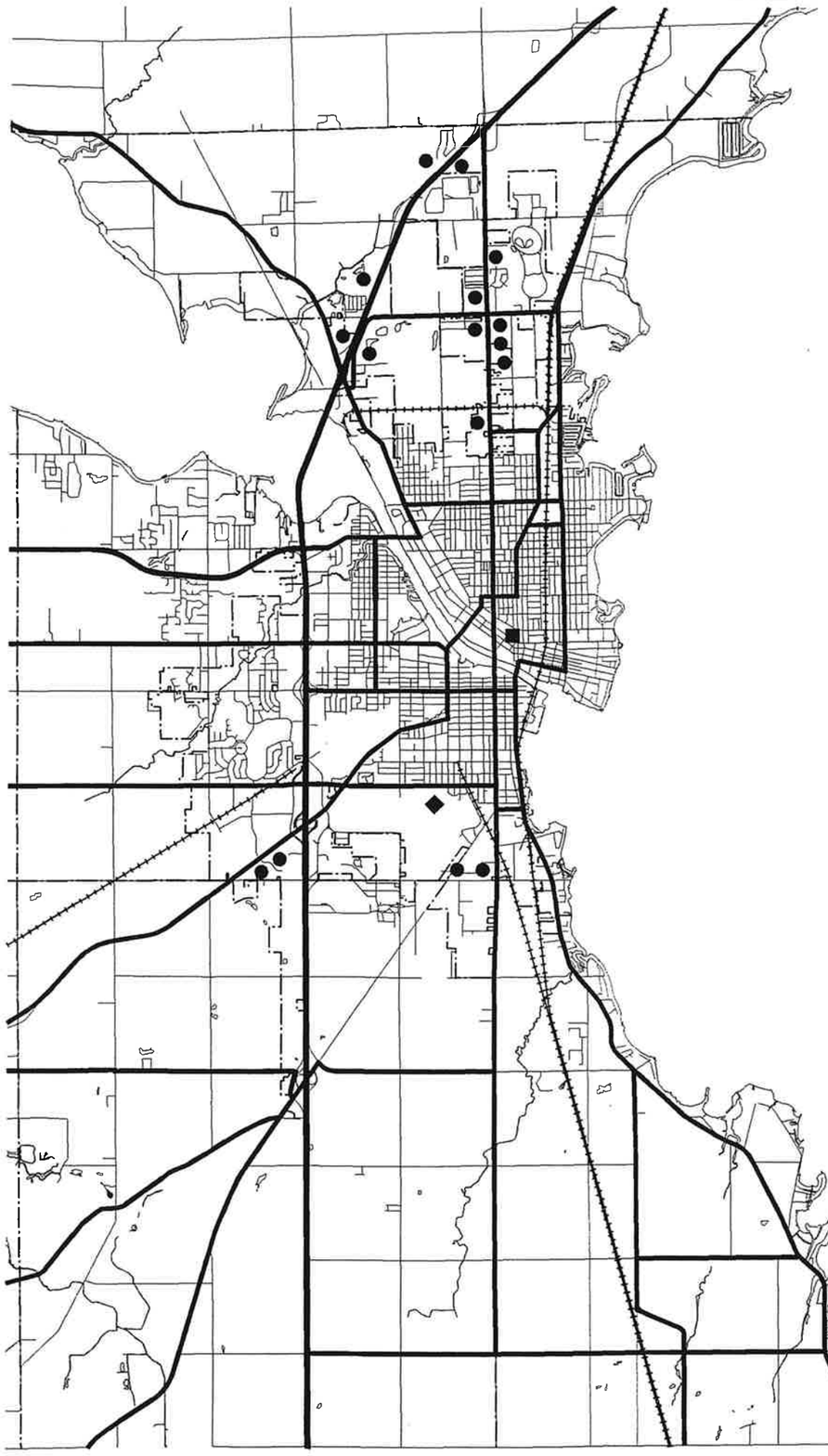

EXHIBIT 15
OSHKOSH AREA
TRUCK ROUTES
AND FREIGHT TERMINALS

TRUCK ROUTES

RAIL LINES

FREIGHT TERMINALS

- TRUCK
- SCHEDULED AIR CARRIERS
- INTERCITY BUS TERMINAL

NORTH

0 1 2

SCALE IN MILES

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – FEBRUARY 1997

LAND USE PLAN

LAND USE PLAN

INTRODUCTION

The land use plan for the Oshkosh area is based upon and integrated with the sewer service area planning process. The Oshkosh Sewer Service Area Plan was adopted by the East Central Wisconsin Regional Planning Commission on October 25, 1996. This planning process allocates growth areas within local jurisdictions to meet projected needs for sewered development over the next 20 years. The growth area needs are based on county population projections developed by Wisconsin Department of Administration. East Central disaggregates the county population to the town, village, and city level and then prepares employment projections based upon labor force participation and commuting patterns. This methodology, explained in Appendix A, provides a consistent data set and a coordinated urban planning process. Like the transportation/land use plan, the sewer service area plans are updated every five years.

The three land use plan alternatives described as scenarios in this report were all based upon the sewer service area planning process. This process developed control totals for population and employment projections and growth forecasts. The Oshkosh urbanized area is projected to grow at a slow and steady rate through the future 2020 planning horizon as depicted in Exhibit 16. Population is expected to increase over 9,000 people in the study area between 1995 and 2020. The employment is projected to peak in the year 2010 and decrease slightly for a year 2020 increase of over 3500. The specific methodology used in the development of the small area projections is described in Appendix A.

EXHIBIT 16

DEMOGRAPHIC PROJECTIONS FOR THE OSHKOSH STUDY AREA

Year	1990	1995	2000	2005	2010	2015	2020
Population	68,470	72,555	76,879	78,604	79,833	80,863	81,671
Employment	34,804	36,902	39,089	41,100	42,162	41,751	40,519

Source: U.S. Census Bureau, 1990: DOA, 1995: ECWRPC, 1996

Once the population and employment projections were established through the service area planning, land use growth forecasts were prepared. The growth acreage is listed in Exhibit 17 includes a need for 2,529 acres of residential development to the year 2020 and 1,116 acres of commercial and industrial land needs. Total urban area growth acreage is projected for 3,818 acres. Negotiations with each city, village, and town have resulted in a healthy expansion to the sewer service area boundary in excess of the forecast acreage (20%), to account for additional market flexibility and locational choices for development.

EXHIBIT 17

FORECAST LAND USE GROWTH

Single-family Residential	2,031 acres
Multi-family Residential	498 acres
Commercial/Industrial	1,116 acres
Public/Institutional	172 acres
Total Growth	3,818 acres

Source: ECWRPC, 1996

LAND USE ALTERNATIVES

The land use alternatives are described by three scenarios and include Uncontrolled Development, Concentrated Development and Current Plans (the selected alternative). These scenarios are illustrated in Exhibits 18, 19 and 20 in this section. The scenarios depict the representative land use growth through the year 2020. The analysis used in this planning process is intended to illustrate the difference between the effects of varied land use policies over time.

Because of the slow and steady growth rate, projections for the next approximately 25 years do not create a large enough difference in land usage to adequately illustrate the true long term effects of land use policy directions on transportation needs. For this reason, the approach taken here considers development as it could have occurred from 1960 to the present, and projected to 2020, under two of the considered growth scenarios. The third scenario (Current Plans) examines land use patterns as they have actually developed to date, with projections based on adopted plans, policies and practices.

Each of the scenarios uses very nearly the same 2020 control total for projected population, dwelling units, employment and vehicles. A slight variation in totals occurs because of varying household size in different minor civil divisions (MCDs). For the purpose of transportation planning, the Oshkosh study area is divided into smaller geographic units known as Transportation Analysis Zones (TAZ's). These TAZ's are presented in Appendix B and contain specific existing and projected socio-economic data sets for each scenario.

Uncontrolled Development Scenario. This scenario, shown in Exhibit 18, assumes a total lack of land use policy and regulation, with growth occurring totally at the whim of market forces. A land use pattern that could be expected to result from this situation is developed using 1960 as the base year. The mechanics of developing this land use scenario involve an examination of land use evolution in the Oshkosh urbanized area from 1960 to 1970, prior to the existence of much land use regulation particularly sewer service regulation.

This historic rate and pattern of development was continued, dispersing the growth acreage which occurred from 1960 to the present and then dispersing the forecast growth through the year 2020. This sprawl type of land use pattern is analyzed according to the probable effects on the environment and the transportation network and travel patterns.

EXHIBIT 18
OSHKOSH AREA
UNCONTROLLED GROWTH
SCENARIO

1964 DEVELOPED AREAS

PROJECTED CONTIGUOUS URBAN DEVELOPMENT AREAS (1964–2020)

PROJECTED SCATTERED DEVELOPMENT AREAS (1964–2020)

NORTH

0 1 2

SCALE IN MILES

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REGIONAL PLANNING COMMISSION – FEBRUARY 1997

Concentrated Development Scenario. In order to illustrate a more efficient land use alternative, the dense development scenario depicted in Exhibit 19 was compiled. This land use pattern maximizes the use of the land in compact, contiguous development. The analysis of the concentrated development scenario measures the relationship of this denser land use pattern to our present landscape, effects on the environment and on the existing transportation system (Exhibit 19).

Current Plans Scenario. (Selected Alternative) Between these two scenarios of uncontrolled growth and concentrated growth, an alternative is examined which considers growth as it has actually occurred to the present, and with continued application of adopted policies into the future to 2020, the current plans scenario (Exhibit 20). The evaluation will compare the general consequences of the other two extreme models of development to this more reality-based scenario. The Current Plans scenario is based on actual development patterns to the present, and future projections grounded in sewer service area planning, local plans, and adopted land use and transportation policy. The map does not depict the entire acreage projected earlier in this section. Excess acreage which allows for market choice is removed as it inflates the actual acreage needs. The detailed analysis of this scenario will measure the development's effects relative to the policies adopted earlier in the planning process and previously discussed in this document.

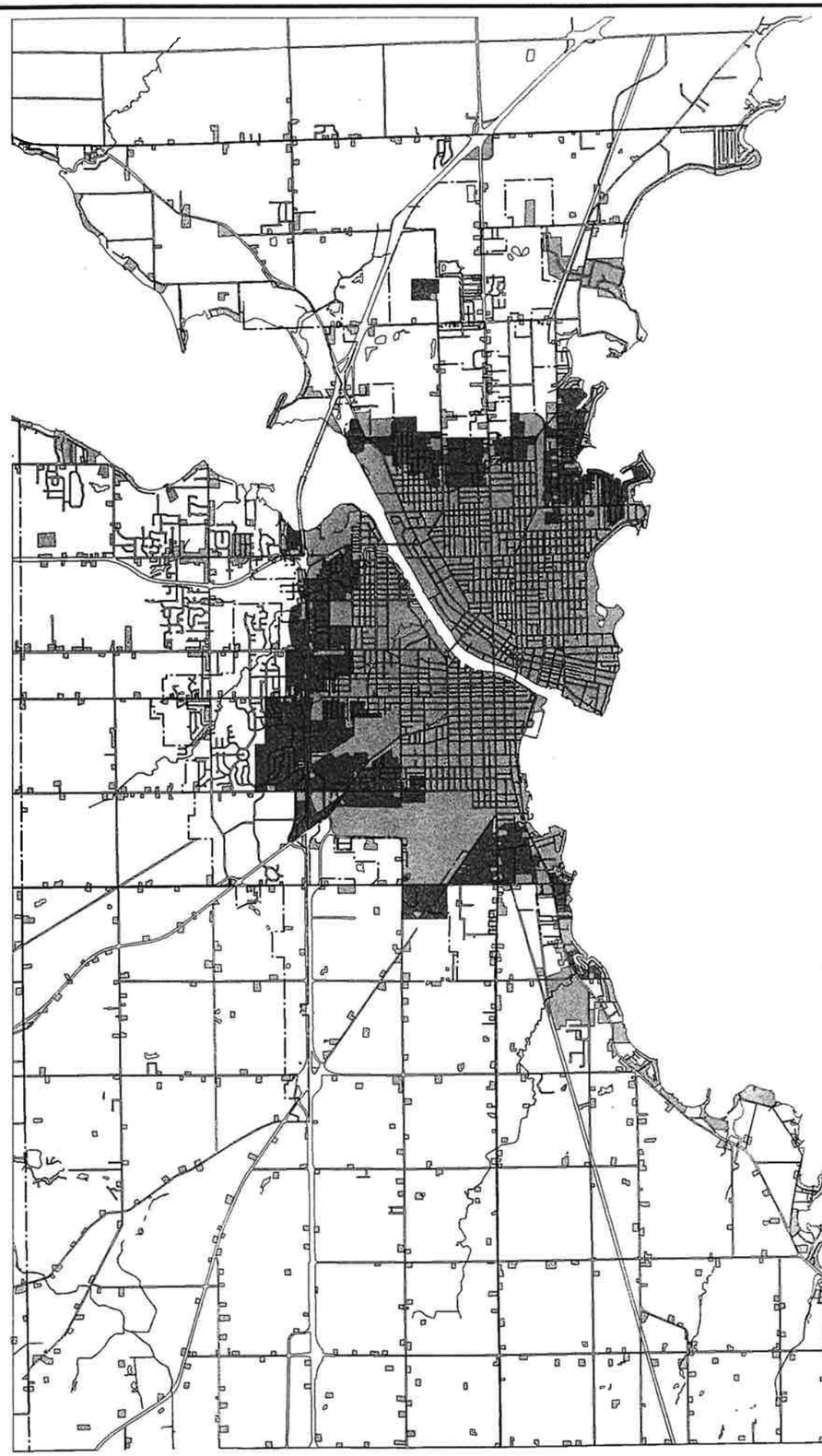

EXHIBIT 19
OSHKOSH AREA
CONCENTRATED
DEVELOPMENT SCENARIO

1964 DEVELOPED AREAS

PROJECTED DEVELOPMENT (1964–2020)

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NORTH

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SCALE IN MILES

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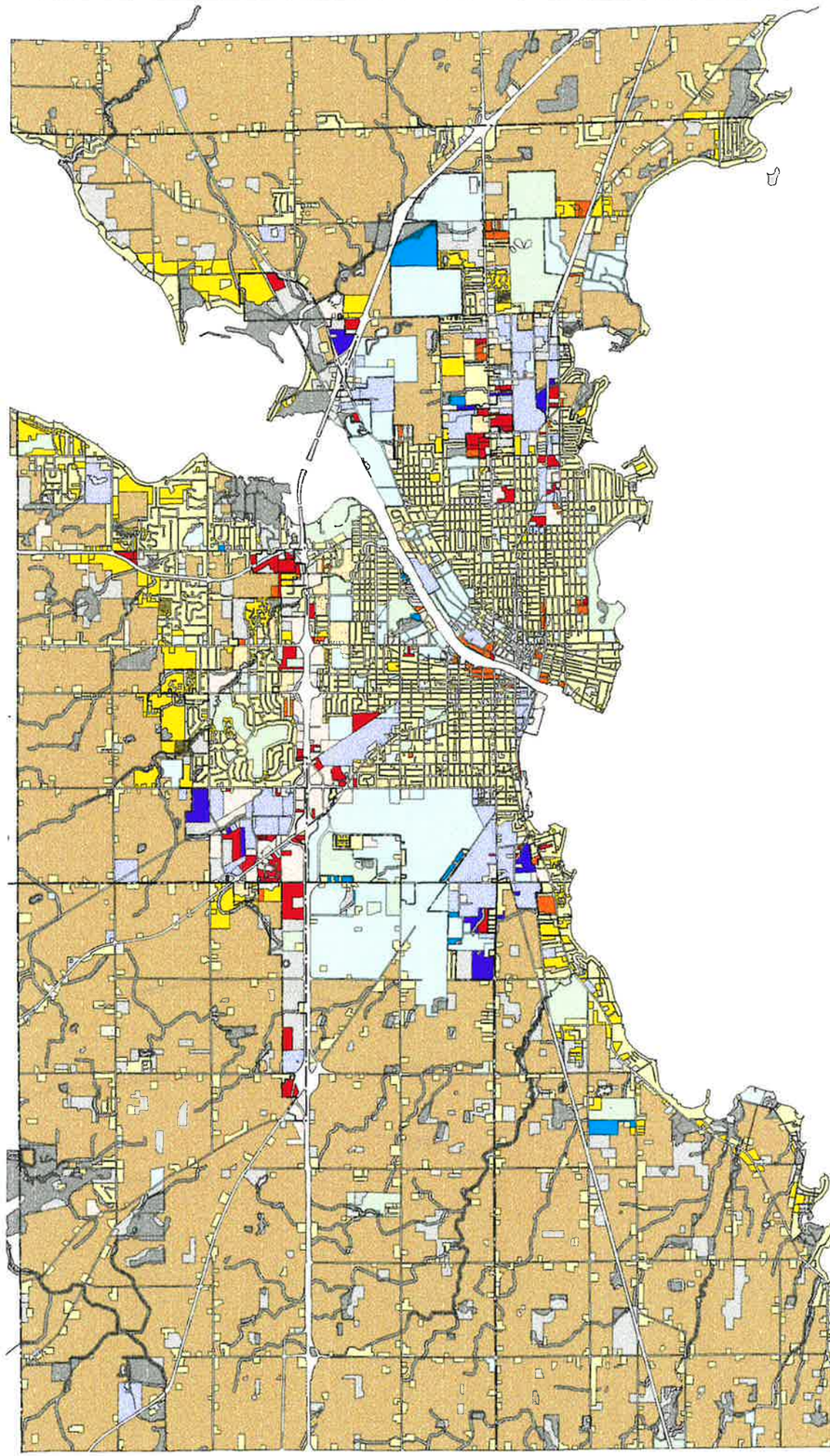

EXHIBIT 20
OSHKOSH AREA
CURRENT PLANS SCENARIO

EXISTING LAND USE

- SINGLE FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC / INSTITUTIONAL
- PARKS / RECREATIONAL / OPEN SPACE
- AGRICULTURAL LAND
- VACANT / UNDEVELOPED

PROPOSED LAND USE

- SINGLE FAMILY RESIDENTIAL
- MULTI-FAMILY RESIDENTIAL
- COMMERCIAL
- INDUSTRIAL
- PUBLIC AREAS
- ENVIRONMENTALLY SENSITIVE AREAS

NORTH

0 1 2

SCALE IN MILES

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REGIONAL PLANNING COMMISSION – DECEMBER 1996

ALTERNATIVE ANALYSIS

ALTERNATIVE ANALYSIS

INTRODUCTION

This section analyzes the three previously discussed land use scenarios relative to adopted goals, objectives, and policies. To facilitate this analysis, each of the scenarios was represented in a different disaggregation of the socioeconomic projections. The specific data disaggregation for each of the scenarios can be found in Appendix B. Each of the scenarios is measured as to its compliance with the goals, objectives, and policies previously discussed in this document. This measurement is depicted in a matrix, Exhibit 21, which lists each of the objectives. The specific policies under each of the objectives were used in the analysis to determine the scenario's ranking for each objective. The text more thoroughly describe the highlights and details of the policy analysis.

LAND USE

Land use goals, objectives and policies adopted in January of 1995 address four areas: growth management, urban service delivery, environmental resources, and open space. Discussion of the scenario analysis under each of these topic areas follows:

Growth Management

Allocated Growth. This objective promotes a balanced allocation of land, compatibility, and appropriate mix of land uses to provide accessibility to residents. As the basis for the disaggregation of the future population growth is based on the sewer service planning process, it fits well, in theory, with the policies under this objective. By definition, the land allocated for urban development approximates the current and future needs as determined from population, employment and land use projections developed in conjunction with adopted comprehensive or urban service area plans. How well that process supports the policies related to the encouragement of higher density, mixed use development, is in question. Since the land allocations in the sewer service area planning process are generally based on the average density of the last five years of development in each jurisdiction, compact development is not necessarily promoted. In fact, the current process may actually work against this policy, as communities developing at lower densities are allocated more acreage per projected dwelling unit than communities developing at higher densities. However, since the majority of development in the area does occur within the sewer service area, the current plans scenario is more effective in managing growth than is depicted by the uncontrolled growth scenario.

Planned Urban Communities. The current plans scenario may not fully meet the stated policies encouraging dense development, but the sewer service area planning process has served to steer development toward infill areas for sewer extension purposes. Also, efforts in the preservation of natural and man-made features of the region have been effective. The analysis shows that a concentrated development situation would better accomplish these desires through the use of strong regulation and drastically lower land consumption, while the uncontrolled growth scenario would not meet any of these policies.

Efficient Development. The concentrated development scenario rates highly against the policies under this objective. Infrastructure costs are lower if significantly less concrete and pipe are needed. Denser development is inherently more conducive to efficient serviceability by alternative modes of transportation than scattered, low density development which discourages alternative modes. With low density development, pedestrian and bicycle travel is no longer convenient. Public

transportation becomes inconvenient and very expensive, as vehicles must travel longer distances to pick up fewer people travelling to more dispersed destinations.

Within the context of this non-real world concentrated development scenario is a full variety of housing types and locations. As it is illustratively drawn, little low density development exists other than farms, a few scattered rural lots, and a limited number of large urban lots. While this may be more efficient, freedom of choice is limited, not necessarily by style, price, or prestige, but indeed by density. The uncontrolled growth scenario, on the other hand offers limitless urban or suburban choice, but overtly defies the policy of discouraging urban sprawl, unplanned development which is non-contiguous, low density scattered, and inefficiently served. Over time, a rural environment no longer exists. Farmers and individuals desiring a truly rural environment are pushed out beyond the study area.

Community Character Preservation. The preservation of community character is encouraged by the adopted policies in terms of preserving and enhancing central business districts, using a coordinated scheme of preservation, renewal, and removal to maintain a viable land use mix, preservation of unique amenities, and attention to urban waterfront use and preservation. While it is understood that these policies are not necessarily inherent in any of the scenarios, the difference lies in distribution of resources. A less dense community would need to commit more of its resources to serving less efficient development, with consequently fewer resources available to maintain and enhance existing land uses. A community with more dense land use would have less infrastructure to build and maintain.

Rural Land Development. This objective is aimed at preventing the intermingling of rural and urban land uses. Rural development should be allowed only if it does not disturb agriculture or open space uses. One policy specifically states that rural subdivision development should be restricted in urban planning areas until long-term urban services are provided. The concentrated development more closely follows these policies, while even the current plans scenario has little control over the pattern of rural development. In the uncontrolled growth scenario, large tracts of rural land do not exist in 2020.

Urban Service Delivery

Economical Public Facilities. The provision of public services are undoubtedly more economical in denser development. As discussed earlier, whether sewer pipes or transit service, it costs more to go a longer distance to service fewer people. The recognition that the current plans scenario still allows for significant low density development explains the relatively low ranking of that scenario under this objective.

Cooperative Provision of Services. While the relationship between the two extreme scenarios is similar to that for 'economical public facilities', above, the current plans scenario is ranked higher than in the previous objective because of the promotion and existence of intergovernmental agreements in the sewer service districts, as well as some other public service areas, such as libraries.

Equitable Service Delivery. A differentiation between the scenarios in terms of equitable service delivery is impossible with the given information. While one may be obviously more efficient, equitability is an administrative issue that could be handled in a range of manners under any scenario. Therefore, all three scenarios were given the same score.

EXHIBIT 21

SCENARIO ANALYSIS MATRIX

	Scenario 1 Uncontrolled Growth	Scenario 2 Current Plans	Scenario 3 Concentrated Development
Growth Management			
1. Allocated Growth	1	3	5
2. Planned Urban Communities	1	4	5
3. Environmentally Sound Development	1	4	5
4. Efficient Development	1	3	5
5. Community Character Preservation	1	3	4
6. Rural Land Development	1	2	5
Urban Service Delivery			
1. Economical Public Facilities	1	2	5
2. Cooperative Provision of Services	1	4	5
3. Equitable Service Delivery	3	3	3
4. Effective Sewerage Systems	1	4	5
Environmental Resources			
1. Water Quality Protection	1	3	4
2. Air Quality Maintenance	1	2	4
3. Environmentally Sensitive Area Protection	1	4	5
4. Wildlife Habitat Management	2	4	4
5. Food and Fiber Production	1	2	4
6. Solid Waste Management	1	3	4
Open Space			
1. Recreational Opportunity	3	3	3
2. Preservation Areas	1	3	3
3. Urban Recreational Needs	2	3	3
4. Cost-Effective Recreation	2	3	4
5. Attractive Communities	1	3	4
Transportation			
1. Integrated Planning	1	4	4
2. Maximum System Efficiency for all Residents	1	2	5
3. Efficient Street and Highway System	1	2	5
4. Safety	2	3	4
5. Minimum Environmental Disruption	1	3	5
6. Compatibility with Land Use Patterns	1	2	5
7. Conservation of Energy	1	2	5
8. Multimodal Interaction			
-Freight Transportation	3	4	4
-Public Transportation	1	2	5
-Bicycle and Pedestrian Travel	1	2	4
-Air Transportation	2	3	4

Source: ECWRPC, 1996

Effective Sewerage Systems. In terms of centralization of sewerage treatment, the more contiguous development of the concentrated growth scenario lends itself to a more effective system. The effects of sewer service regulation, however, do encourage alternative analysis and system design based on cost-effectiveness, giving the current plans scenario a fairly high rating. The scattered growth of the remaining scenario, however, encourages non-sewered development, likely system failure, and the lack of a cost-effective manner for fixing such problems.

Environmental Resources

Water Quality Protection. The unregulated assumption built into the uncontrolled growth scenario, gives way to the inherent risk of water quality deterioration, contrasted with the current plans scenario which assumes at least the current Department of Natural Resources regulations protect wetlands and shorelands, and control construction site erosion. The concentrated development simply disturbs less land, including sensitive rural wetlands, and does not create as much construction site erosion. It was, however, not given the highest possible rating because of likely residential development on the urban waterfront and the possibility of water quality deterioration in that effort. Also, agricultural runoff is not necessarily addressed.

Air Quality Protection. The analysis of the air quality implications was largely ranked in terms of projected emissions from the transportation model runs. Consistently, based on VMT, a more concentrated development ranks better. Also, a denser land use pattern will encourage increased use of alternative transportation modes such as transit, carpooling, bicycle use, and walking. The prevalence of longer trip lengths under current plans gives it a rating closer to that of uncontrolled growth.

Environmentally Sensitive Area Protection. Under current regulations, environmentally sensitive areas are fairly well protected from development and contamination. Such regulations would be assumed to not be in place under uncontrolled growth, and the scattering of development would likely cause damage. A more tightly urbanized pattern would not be using as much land and would be less likely to threaten sensitive areas, causing less challenge to protective regulations.

Wildlife Habitat Management. Scattered development illustrated in the uncontrolled growth scenario may not have a devastating effect on wildlife habitat, however, it could result in the fragmentation of habitats or corridors. Also, the assumed lack of regulation could result in the destruction of wetlands and surface water important to many species. While the current plans scenario still has significant scattered development, there are regulations in place to protect wildlife habitat to a large degree. Also, the somewhat lower density of urban development could be more conducive to urban wildlife proliferation than a higher density urban pattern. In the rural areas, however, the concentrated growth scenario simply does not disturb the habitat and generates less traffic on rural highways reducing the threat to animal mobility.

Food and Fiber Production. The primary difference between the scenarios in terms of food and fiber production, is land consumption. In the concentrated development scenario, food and fiber production still takes place within the study area in 2020. In the other two scenarios, little land is available for such uses. The viability of farming is additionally threatened by increases in land values, land use conflicts, and safety concerns, coupled with a decrease in the availability of productive farmland caused by scattered residential, commercial, and industrial growth. Under development pressure, property taxes on farmland can increase to a point which discourages continued farming, and results in a domino effect loss in productive land. The farmland preservation program, in an attempt to curb this loss, rewards farmers for keeping land in farming with tax credits.

In reality, if the demand exists and the developer is offering the right price, the temptation still exists to use the inflated value of the farmland as a retirement program, particularly when development is already making farming difficult. For that reason, the current plans scenario was not given a stellar rank in this relative analysis.

Solid Waste Management. A low ranking was given to the uncontrolled growth scenario due to higher costs for transportation of solid waste, as well as increased potential for land use conflicts which complicate and drive up costs of disposal site location. Land use conflicts can largely be avoided through land use planning and zoning regulations assumed to exist in the other two scenarios. Concentrated development stifles land use conflicts of this type by leaving more opportunities available for proper and efficient facility siting.

Open Space

Recreational Opportunity. A hierarchy of park sites, from neighborhood to regional parks, is needed to adequately serve an urban area. While scattered development could reduce accessibility to some residents, appropriate park development is possible under all of the land use patterns, granted community needs are properly assessed and accordingly addressed. The lesser population densities inherent in scattered development also makes it difficult to economically justify the provision of neighborhood parks, which should be spaced within a safe and convenient walking distance of residential development.

Preservation Areas. This objective not only calls for the preservation of uniquely significant areas, but also for the public use and enjoyment of those areas. Uncontrolled growth would pose a threat to such areas. In fact, the attractiveness of these areas could lead to their development and destruction. The issue of public access is one that cannot be differentiated between the other two scenarios and really rests on the willingness and ability of responsible governmental entities to purchase, or otherwise control use and access of the preservation areas as appropriate. History has demonstrated that there is less commitment to invest in the protection of these resources in areas of scattered development.

Urban Recreation Needs. Urban recreation needs could be addressed under any of the scenarios. However, with a general diluting of resources in all service areas, an urban sprawl situation could create difficulty in siting and developing adequate urban park facilities. Fragmentation of land in rural area and the higher land values for undeveloped land brought about by urban sprawl can also complicate and increase costs of acquisition and development of environmental corridors and the provision of open space for outdoor recreational activities.

Cost Effective Recreation. Providing all types of services to a population that is widely dispersed over a larger area can not be as cost effective as serving a more reasonably compact population. The adopted policies related to cost effective recreation discourage duplication of recreational facilities and programs and call for coordination between jurisdictions. While such coordination may be possible under scattered development, it is more complex and therefore more expensive. Concentrated growth areas would have more easily defined and consistent recreational needs that could simplify coordination efforts.

Attractive Communities. Again with the concentration of resources over a smaller area, dollars for beautification programs could be more concentrated and have stronger impact on the attractiveness of a community. Similar to the community character preservation objective, a stronger identification of residents with a centralized community will increase local support for such projects. The lack of

regulation assumed in the uncontrolled growth scenario would not curtail the proliferation of billboards along the more heavily traveled highways. The uncontrolled growth scenario also promotes a more random land use pattern and increases the potential for land use conflicts, resulting in reduced visual continuity and overall community attractiveness. The planned redevelopment of waterfront properties in Oshkosh, from older industrial use to multi-family residential development and parkland (Exhibit 20) closely follows the policies in the current plan.

TRANSPORTATION

The data depicted in Appendix B was used as input to the transportation model for street and highway analysis of the scenarios. The computer model provides a fairly quantitative analysis in relation to the adopted transportation policies. Exhibits 23-25 show the projected deficiencies of the existing highway plus committed projects network under the three scenario's demographic projections for the year 2020. Deficiencies are defined as all segments which function at level of service D, E, or F.

Integrated Planning. Requirements of the Intermodal Surface Transportation Efficiency Act (ISTEA) are the basis for the policies under this objective. ISTEA requires the update of long range transportation/land use plans every five years. These plans are to address the needs of existing and future development within a 20 to 25 year horizon and require the input of local citizens. In practice, the arena in which these plans are produced promotes compatibility between local, regional and state policies and plans, as well as between public and private transportation services. While this objective, pertaining more to the process than the product, does not realistically allow for comparison between the scenarios, the current plans scenario is a product of an integrated planning process in the urban area under existing regulations.

Maximum System Effectiveness for all Residents. While the current plans scenario does a reasonably good job of meeting the transportation needs of all residents, the somewhat dispersed land use creates challenges for public transportation for the economically disadvantaged, as well as the elderly, persons with disabilities, and other non-drivers. Efforts to meet such needs are currently being made through a coordinated effort of rural and urban services. For reasons similar to those deterring public transit use, bicycle and pedestrian modes are also deterred by dispersed land uses, and additionally by a shortage of safe and effective facilities. The current plans scenario has some control over density and contiguity of development as the sewer service planning effort does base a municipality's sewer service acreage allocation on the density of the development in the previous five years. This process therefore allows continued low density development in the towns where such development has occurred in the past, having the effect of expanding the area which cannot be effectively or efficiently served by public transportation. A denser than status quo scenario would better serve those who are economically disadvantaged. The analysis demonstrates that the concentrated development scenario would be more conducive to service by public transportation, and likewise encourage bicycle and pedestrian trip-making. If, indeed, development had occurred in this manner since 1960, public transportation would be servicing a more substantial role in urban trip making and the economically disadvantaged would be on a more even playing field, in terms of access to employment and services. On the other hand, the uncontrolled growth scenario strains the ability of public transportation to economically serve those without access to an automobile. The increasing trip lengths also discourage auto owners from using public transportation for some of their trips.

An Efficient Street and Highway System. While a future transportation network is not being developed for each of the three land use scenarios at this time, a comparison can be made between each scenario's ability to function with the existing network plus the committed projects. The current plans scenario yields 1,949,179 Vehicle Miles Traveled (VMT), with an overall volume to capacity ratio (V/C) of .68. The comparison of these statistics to the output of the other scenario model runs are shown in Exhibit 22.

EXHIBIT 22
SCENARIO COMPARISON
TRAVEL MODEL OUTPUT

	Current Plans Scenario	Uncontrolled Growth Scenario	Concentrated Development Scenario
Vehicle Miles Traveled (VMT)	1,949,179	2,144,895	1,826,880
Total Volume/Capacity (V/C)	.68	.73	.63
Total Congested Speed (MPH)	47.50	46.83	47.28
Total Accidents	22	25	21
Total Carbon Monoxide Emissions (grams)	20,892,500	23,352,170	19,458,310
Total Hydrocarbon Emissions (grams)	2,674,161	2,989,245	2,492,192
Total Nitrous Oxide (Ozone) Emissions (grams)	3,318,168	3,631,548	3,111,469
Total Fuel Use (gallons)	201,074	221,860	188,503
Total User Cost ($)	$313,233	$348,860	$292,288
Total Delay Due to Congestion (Veh. hrs.)	5,292	7,140	5,134

Source: ECWRPC, 1996: TRANPLAN Ver. 7.2

The data shown in the above table depicts the results of an average day's total travel on the network. A few of the data items may warrant further description. VMT and V/C are adequately described in other portions of the report. Here they describe the average daily miles traveled on the entire system and how the total volume of traffic on the entire system relates to the available capacity on the entire system.

Three types of emissions are listed on the table. Carbon Monoxide (CO) is an invisible, poisonous gas given off in the burning of fossil fuels. The other two, Nitrous Oxide (NO) and Hydrocarbons (HC) combine to form ozone. Another form of ambient air pollutant that is of concern to the U.S. Environmental Protection Agency is particulate matter, or PM-10. However, no reliable estimating technique exists for PM-10. The Oshkosh area is within the attainment standards for all of these pollutants at this time. Efforts must be made to avoid exceeding these standards and maintain attainment status. It could also be noted that the USEPA is currently reviewing the standards used in determining attainment status. A change in these standards could potentially cause a change in the area's status.

The next two factors in the table, fuel consumption and user cost are closely related, in that much of the user's cost is the cost of fuel. Again these two items represent a total on the system for an average day. Significant fluctuations in the price of fuel may cause these figures to be slightly inaccurate, however, the real purpose in showing them is to show the varying effects of the three land use scenarios. Because consistent cost factors are used in the analysis, this comparison is valid.

The traffic volumes produced by each scenario are loaded on the network to analyze deficiencies, and to compare the location and magnitude of those deficiencies between the scenarios. Exhibits 23-25 display all highway segments which operate at or below LOS D for the respective scenario. The concentrated development scenario shows significant difference from the other two scenarios. Under the concentrated development scenario the Lake Butte des Morts bridge does not show up as a deficiency as it does in the other two. Also, no deficiencies are indicated to the west of USH 41. Some added deficiencies show up in the downtown area. This can be explained by the concentration of employment and residential redevelopment in the downtown. The model does not account for probable increases in the use of alternative modes when densities are higher and trip lengths are shorter. Such considerations could moderate the slightly higher strain experienced on the streets in the downtown under the concentrated development scenario.

The current plans scenario and the uncontrolled growth scenario, with their more dispersed patterns of both employment and residential land uses, create more deficiencies on the outlying highways, including USH 41 and its frontage roads, along with the Lake Butte des Morts bridge, STH 110 to the north, and Oakwood Road and Witzel Avenue to the west of USH 41. Other highways showing deficiency under the uncontrolled growth scenario include major portions of STH 44, USH 45, and 20th Avenue (CTH K) to the west of USH 41. The excessive short-comings under these scenarios, especially uncontrolled growth, display a harshly inefficient use of the network.

Safety. The model output also includes a projection of accident occurrences. The model calculates this average figure based on VMT, speeds, and functional classification. The resulting data is 24, 22, and 21 accidents per day for Uncontrolled Growth, Current Plans, and Concentrated Development scenarios respectively. The analysis compares the relative relationship of the scenarios. It also demonstrates that scattered development produces longer trips on higher speed facilities which generally results in more accidents. Higher speeds generally result in higher cost accidents as well, both in terms of property damage and personal injury. It is expected that problem areas would be addressed in a traffic operations program under any scenario, but at least in theory, this would be a more challenging effort under the uncontrolled growth scenario.

Minimum Environmental Disruption. The results of the model analysis of these scenarios shows significant difference in environmental impact between the three. For the sake of control, all three were modeled on the same highway network, the existing network plus committed projects. In examining the model output it becomes obvious that scattered development requires longer trips which result in higher VMT, higher carbon monoxide, and particulate emissions, and an apparent need for more lane miles. The higher demand for lane miles means more construction and more surface runoff which, if not properly managed, contributes to water pollution. Perhaps most significantly, more dense development promotes the provision and use of more efficient and effective public and private transit services. The reduction of single occupant vehicle trips would further reduce emissions.

Compatibility with Land Use Patterns. The key difference between the scenarios in terms of land use compatibility concerns agricultural land uses. Since more prime agricultural land would be developed in the uncontrolled growth scenario, significant demand for local roads to access the

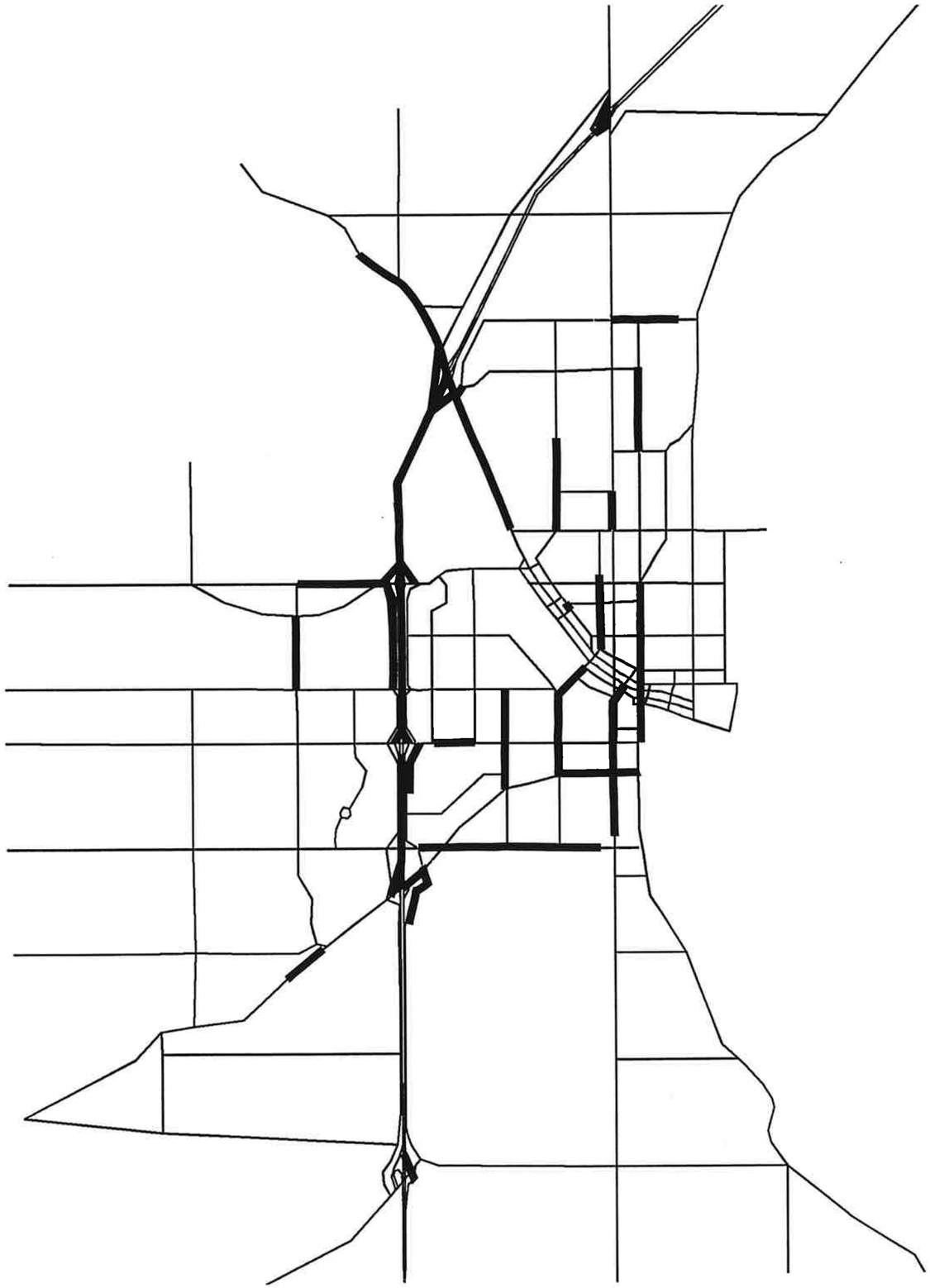

EXHIBIT 23
OSHKOSH AREA
DEFICIENCIES IN
HIGHWAY NETWORK
UNCONTROLLED GROWTH SCENARIO

DEFICIENT SEGMENT
functioning at 80%
or greater of capacity

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

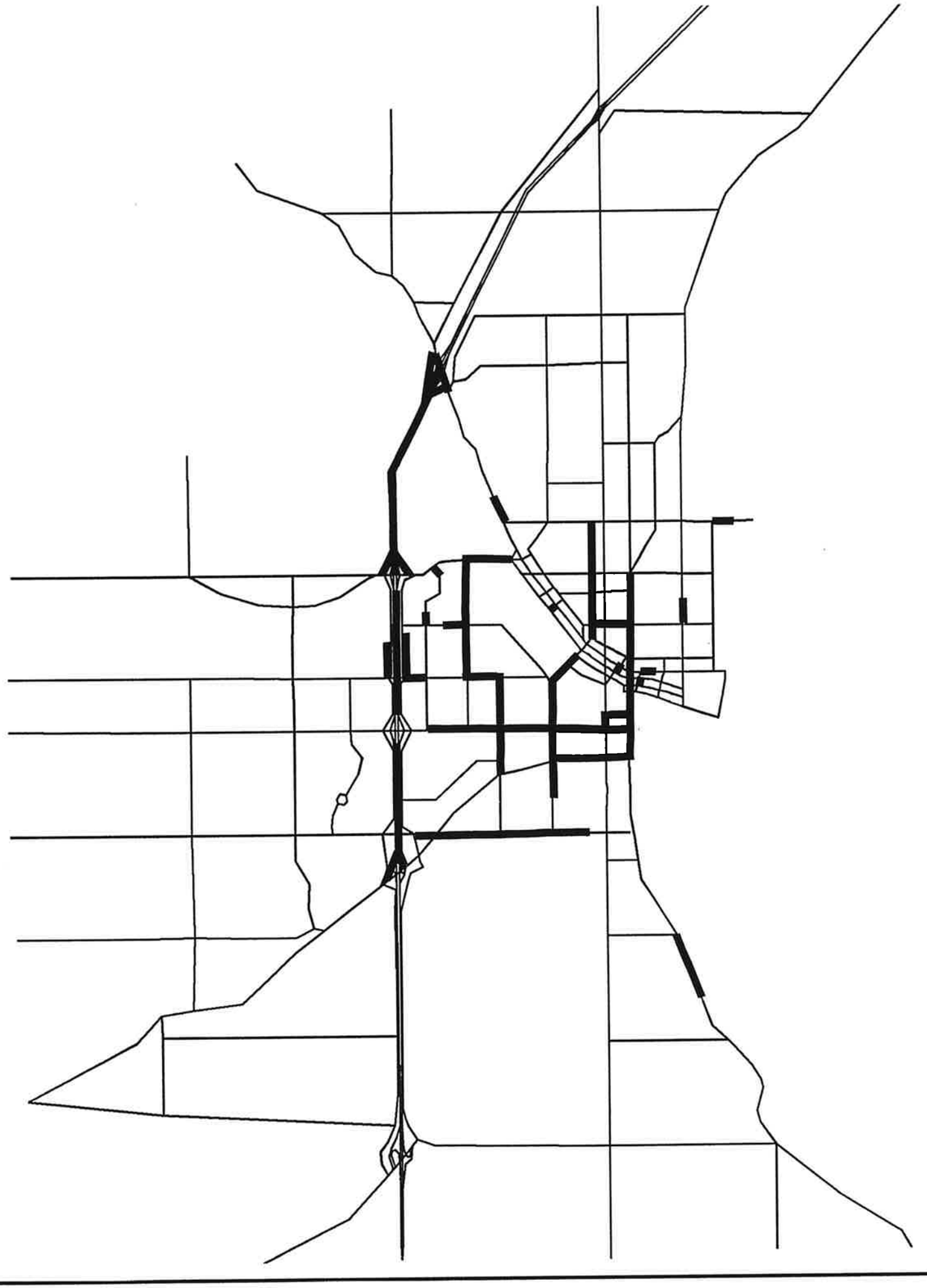

EXHIBIT 24
OSHKOSH AREA
DEFICIENCIES IN
HIGHWAY NETWORK
CONCENTRATED DEVELOPMENT SCENARIO

DEFICIENT SEGMENT
functioning at 80%
or greater of capacity

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

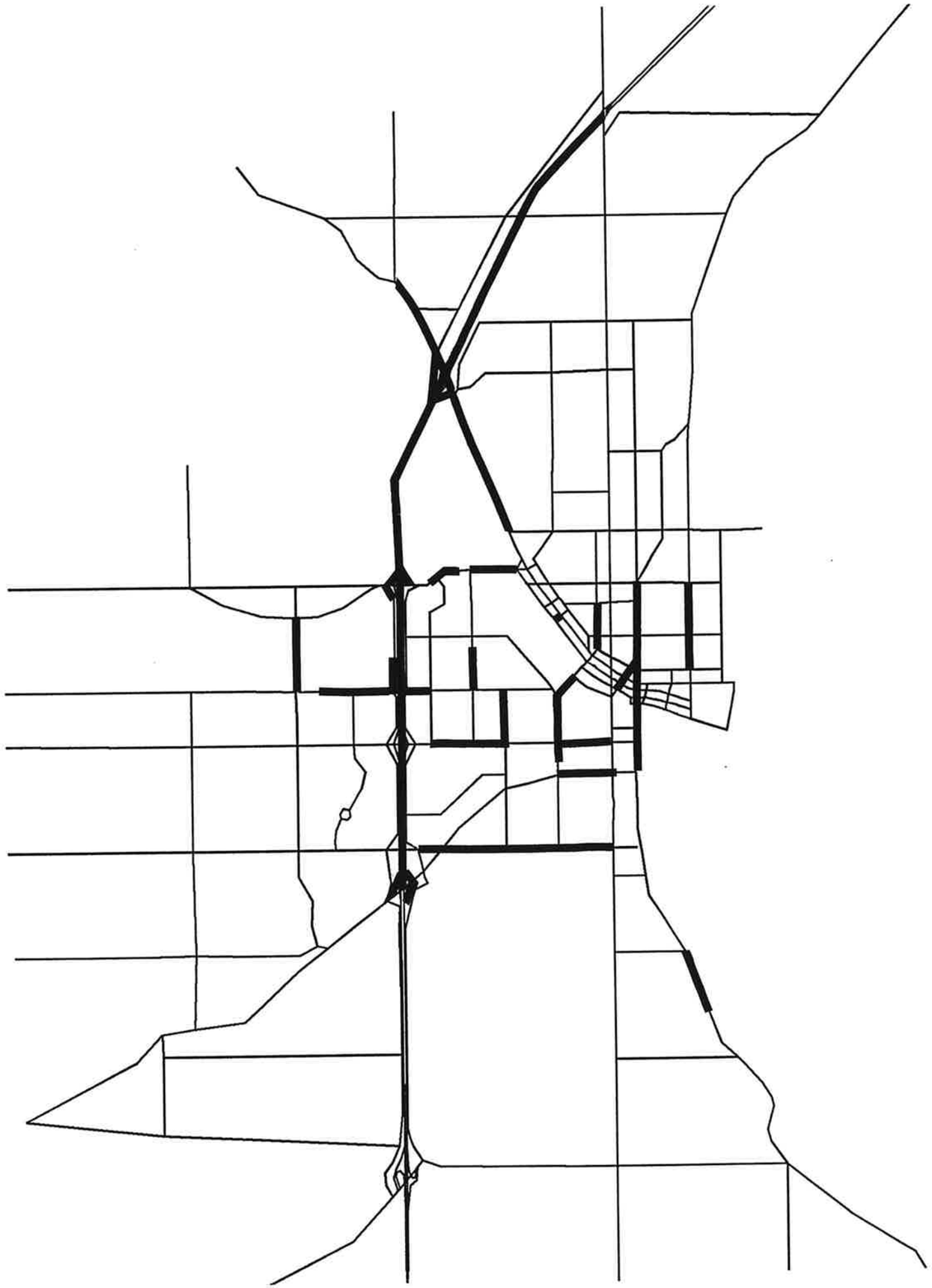

EXHIBIT 25
OSHKOSH AREA
DEFICIENCIES IN
HIGHWAY NETWORK
CURRENT PLANS SCENARIO

DEFICIENT SEGMENT
functioning at 80%
or greater of capacity

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

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development as well as eventual increased capacity needs on the arterial system would occur, in many cases consuming additional prime agricultural land. The scenario which best supports the policy of minimizing the amount of land used in roadways is the concentrated development scenario, with lower capacity needs in outlying areas and less need for local road development. The current trends scenario is rated relatively low because of the apparent need for roadway construction to serve new development areas and because of existing difficulties in effectively reserving right-of-way for proposed transportation facilities.

Conservation of Energy. The transportation model output includes fuel consumption estimates for each scenario, as shown in Exhibit 22. Additionally, the previously discussed propensity toward increased transit ridership, ridesharing, bicycling, etc. under the concentrated growth scenario would also contribute to energy conservation. Generally improved levels of service (LOS) on the highway network under that situation would result in less delay for drivers and reduced emission levels, as born out in the model testing.

Multimodal Interaction

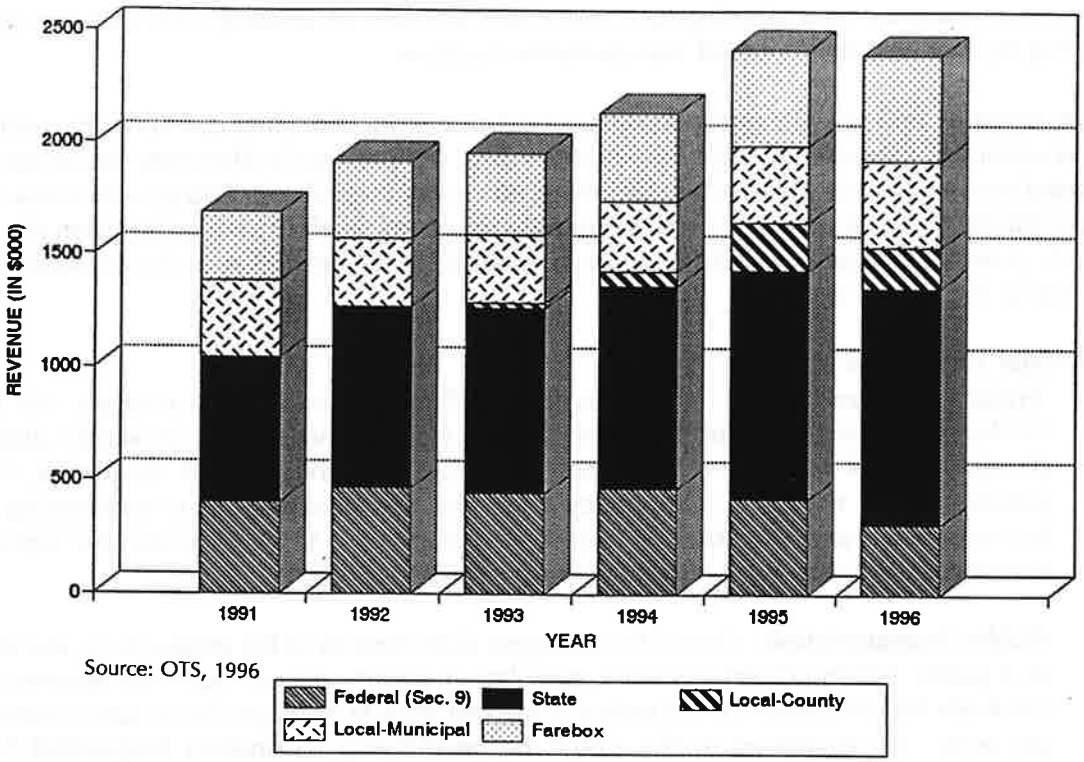
-Freight Transportation. In each scenario USH 41 provides the primary link between Oshkosh and freight origins and destinations. Also, all three scenarios would allow for the development of highway related uses in proximity to the corridor, and were, therefore, generally rated the same. One policy under this objective pertains to minimizing conflicts between truck and auto traffic. Increased volumes on USH 41 under the uncontrolled scenario causes it to have a slightly lower rating.

-Public Transportation. One of the strongest determinants of the productivity and efficiency of a public transportation system is population density. Fixed route bus systems, such as Oshkosh Transit System (OTS) notice a marked drop in productivity in areas under 4 units per acre. An exception to this could be an outlying destination frequented by transit dependent persons, but in general, lower density, scattered development is not conducive to this type of transit. Other types of public transit are more appropriate in lower density, or even in rural, areas. Demand responsive service responds only to requested trips, and therefore does not incur constant costs. However, the cost per trip for such service is significantly higher than for the typical trip taken on fixed route service. In the case of OTS existing services, the fixed route operates at a per trip cost of $3.84 (1996), compared to a demand responsive trip (elderly transportation program) at an average cost of $8.00 per trip. In many rural areas, public transportation is offered at a much lower service level. Often scarce resources provide only weekly opportunities to travel to the central city, likely on a very inflexible schedule. Generally, the service level provided is dictated by density and the related trip generation potential.

Winnebago County has taken great strides in the coordination of transit services in and around the Oshkosh area, but the continued trend toward lower density development reduces the system's effectiveness on a limited budget. The aging of the population over the planning period will increase the dependence on public transportation, worsening this difficult situation. Exhibit 26 shows a recent shift in funding sources, with local and state shares compensating for losses in federal operating funds. There have been recent discussions suggesting that the federal government would move away from funding transit operations. The most current word on the issue, however, is that there is no such proposal being considered at this time.

EXHIBIT 26

OTS OPERATING COSTS
BY FUNDING SOURCE



Source: OTS, 1996

-Bicycle and Pedestrian Travel. Shorter trip lengths and safe walking and riding conditions promote pedestrian and bicycle tripmaking. The policies under this objective promote the consideration of these modes in the planning and design stages for highway and street improvement projects, site design and considerations and the provision of appropriate amenities at destinations, and education and enforcement of rules of the road. The concentrated development has significantly higher potential for increased bicycle and pedestrian travel. Some difficulty still lies in dealing with the infrastructure which has developed to date with strong bias toward the automobile. Opportunities for retrofitting to serve these other modes effectively will likely only occur as highway expansion or reconstruction projects are required, and a full network of bicycle facilities will be slow in coming based on current trends.

Existing streets and roadways have been evaluated for their existing suitability to function effectively as bike routes. Each segment has been assigned a value ranging from "0" for unsuitable to "4" for good to excellent. A description of each value is provided below. The values are somewhat subjective and are based on the perceived comfort level (or perhaps more appropriately a stress index) for the Class A and high Class B bicyclist, one who would be expected to predominantly utilize the backbone collector and arterial street system on a regular basis. Although the value derived for each segment is subjective, it considers pavement width, traffic volumes and speeds, on-street parking, vehicular turn movements and other conflicts which contribute to the perceived safety of the bicyclist.

0 Unsuitable Segments

Segments generally exhibiting a combination of narrow pavement and/or traffic lanes, high traffic volumes and/or speeds, and inability of bicyclists to avoid imminent danger.

1 Very Low Comfort Level (Very High Stress) Segments

Segments generally exhibiting one or a combination of narrower than desirable pavement and/or traffic lanes, high traffic volumes, and multiple turn movements, contributing to a high level of potential use conflicts between bicyclists and motor vehicles. Generally very competitive conditions with individual bike movement dictated by the movement of motor vehicles.

2 Low Comfort Level (High Stress) Segments

Segments generally exhibiting one or a combination of narrower than desirable pavement and/or traffic lanes and relatively high traffic volumes, requiring a consistently high level of concentration and awareness on the part of the bicyclist. Generally competitive conditions with the bicycle considered part of the traffic stream.

3 Moderate Comfort Level (Moderate Stress) Segments

Segments generally exhibiting slightly narrower than desirable pavement and/or traffic lanes but relatively low traffic volumes and/or adequately wide shared lanes with on-street parking. Bicyclists generally perceive relatively safe biking conditions if they maintain a high level of concentration and awareness.

4 High Comfort Level (Low Stress) Segments

Segments exhibiting a combination of adequate design width, low traffic volumes and speeds, and function as neighborhood collectors and/or local streets.

The detailed results of this analysis are included in Appendix C.

-Air Transportation. Airport transportation is assumed to be of generally the same quality under these land use scenarios, however, access to the airport and land use conflict would likely vary. With volumes varying on USH 41 and the arterial system serving the airport, access is better under the concentrated development pattern, still functions well under the current trends scenario, and only slightly worse with uncontrolled growth. The proximity of the airport to a high level highway facility makes the variation fairly minimal. Land use compatibility could be compromised around the airport under an unregulated condition of the uncontrolled growth scenario. Encroachment of development could hinder future airport expansion.

PROJECT ANALYSIS

A number of the significant highway deficiencies appearing in the base year network and the current plans data set, the recommended land use plan, were further analyzed in terms of alternative projects. Deficiencies on Ninth Avenue, the Wisconsin Street bridge, Oakwood Road, STH 110, and Jackson Street were all tested with one or more improvement options. the following is a discussion of each project analysis as it was conducted.

Ninth Avenue. Ninth Avenue is a major carrier of east-west traffic through the entire study area, with an interchange with USH 41 and easy access to downtown Oshkosh. The average daily traffic (ADT) on Ninth Avenue is 14,000 vehicles, (WisDOT, 1994). The projected ADT for the year 2020 is 17,000, with a V/C ratio of 1.10. Two different project configurations were modeled to address this capacity need: Ninth Avenue as a four lane facility, and a one-way pair of Eighth and Ninth Avenues between Main Street and Rugby Street.

Under the one-way pair alternative, the abandoned railway right-of-way provides the convergence of the one-way traffic on the west end of the project. The one way pairing would, therefore, require little or no right-of-way acquisition and adequate capacity could be addressed in the existing pavement widths. Some loss of convenience would occur for residents and businesses on both Ninth and Eighth Avenues. And volumes would undoubtedly increase on the Eighth Avenue leg.

To reconstruct Ninth Avenue as a four-lane facility, parking would need to be removed and the pavement width increased from the existing 42 feet in some places, probably to a standard 48 feet, plus appropriate accomodations for bicycles. Current land uses in sections of Ninth Avenue have only minimal setback, and probable acquisition requirements could prove to be costly. the advantages, however, would be the continued use of Eighth as a local street, and the retention of two-way convenience.

With the reestablished model as a tool for the Oshkosh area it can be shown that either alternative would provide for the safe and effective movement of traffic, however, a corridor study would be required to examine the details of project needs and costs for both alternatives.

Jackson Street. Jackson Street, similar to Ninth Avenue, is an arterial, providing direct access through the entire urban area and an interchange at USH 41. Jackson Street changes its name to Oregon Street south of the Fox River. Also like Ninth, portions of Jackson, south of Murdock, are flanked by residential land uses. Unlike Ninth, Jackson Street is a U.S. highway, USH 45, and has been since that highway's designation long ago. Recent traffic counts on Jackson Street evidenced approximately 14,000 ADT (WisDOT: October, 1996), with a V/C ratio of about 80 percent of capacity. Special counts were taken along Jackson Street in 1996 due to an inconsistency in the 1994 count coverages. The 1996 count was factored back to 1994 and included in the calibration of the travel demand model. Model projections for the year 2020 foresee increases to over 16,000 ADT. It is important to note that Jackson Street is modeled as a four lane facility in the scenario testing shown in the previous section because it appears as a committed project in WisDOT's six year program. The alternatives modeled included the four-laning of Jackson from Murdock to Algoma, and upgrades to parallel facilities and their access to reduce traffic on Jackson.

Jackson Street, as a four lane facility, functions at a level of service B. The current pavement width of 44 feet requires only a minor widening with the removal of parking, and no need for right-of-way acquisition for travel lanes, with a portion of the terrace providing the added width. While this provides limited disruption of the residential area, the trade-off is a facility that is below desired design standards. Intersection improvement needs could warrant some acquisition, depending upon more detailed analysis and traffic volume projections. There has been some neighborhood opposition to this alternative based on concerns for safety of children, bicyclists, and pedestrians crossing the four lane facility, and the expectations of vehicle speed. There is significant crossing of Jackson by elementary school students in the vicinity of New York Avenue. This movement would need to be taken into consideration in design stages. In some cases, the expansion of a heavily traveled two-lane facility to four lanes can ease pedestrian crossing movements due to larger spaces between platoons of vehicular traffic.

Another alternative modeled in an attempt to ease the capacity problem on Jackson Street was intended to shift some of the traffic off of the overburdened Jackson Street to parallel facilities with available capacity. The alternative included the widening to four lanes of Wisconsin Avenue between Algoma and Irving, Irving from Wisconsin to Main, and Main from Irving to Murdock. This alternative does have some effect on Jackson Street traffic levels, with a reduction of approximately ten percent, a minor benefit in relation to the high cost of the required widening on Wisconsin, Irving, and Main. The direct access to downtown of Jackson Street appears to be an overriding factor in attempts to divert traffic to other facilities. Even with high volumes on Jackson, volumes on Wisconsin show little increase. A diversion to Wisconsin Street requires turning maneuvers at Murdock, onto Wisconsin, and to any of several east-west routes to common downtown destinations, apparently an unlikely option based on travel time.

It appears that the most effective alternative continues to be that included in the WisDOT six-year program, the expansion of Jackson to four lanes. That programmed project is supported by the analysis conducted in context of this long-range land-use/transportation plan, and by the transportation model for the Oshkosh area.

Wisconsin Street Bridge. The Wisconsin Street bridge is one of three arterial river crossings in downtown Oshkosh, the others being Oregon Street and Main Street. Wisconsin Street bridge is the only of the three that has only two lanes. That coupled with the natural bottleneck effect of bridges, forces this bridge to a level of service F, with a projected V/C ratio of 1.69 as a two-lane facility. The facility also functions at LOS F under current conditions. The future network model was used to simulate traffic movement with this bridge improved to a four lane facility. The rather interesting result is the continuation of LOS F on the bridge. The V/C ratio improves to 1.10, but the general condition persists, in part because of the proximity to the CBD, the limited number of river crossings, and the short distances between signalized intersections.

It is the general nature of WisDOT bridge replacement funding, that capacity is very seldom the determining factor in a project receiving funds. Because of the extensive need for bridge replacement funds to replace those that have structurally deteriorated, the lower priority need of those which still have useful life, but suffer capacity needs, may not justify replacement. Consideration should be given to replacement of the STH 44 crossing with a bridge of higher capacity within the plan horizon.

USH 41/STH 110. These two highways are addressed together because of their interrelationship for local traffic. USH 41 is recognized by WisDOT as a long range capacity need. The model shows the Oshkosh portion to have a few deficiencies by 2020. A particularly troublesome deficiency shows up on the Lake Butte des Morts bridge. A limited number of available crossings of the Fox River system in this vicinity cause considerable local traffic to join with the high through traffic volumes to drive the bridge to LOS E in 2020. With the strong commercial trip attractors in the USH 41 corridor, south of the bridge, and through trips projected to 53,000 ADT, diversion of the traffic to another crossing is not practical. The need for six lanes appears inevitable. Because USH 41 is an access controlled facility, and the project area is in excess of one mile in length, an Major Investment Study (MIS) is required to determine the most cost effective improvement. The six-laning project is a "placekeeper", pending the completion of an MIS.

Some relief is afforded to USH 41, particularly the Lake Butte des Mort bridge, with the expansion of STH 110 from the MPAB to Murdock Avenue. When modeled as a four lane facility in 2020, STH 110 operation improves from LOS D to LOS B, and has the secondary benefit of drawing approximately 20,000 trips off of the bridge, slightly improving its operation to LOS D.

Clairville Road. Continued development west of USH 41 shown in the current plans scenario increases projected volumes of several north-south arterials beyond an acceptable level of service. Oakwood Road in the Town of Algoma is currently a two lane facility and the adjacent corridor has nearly reached full development.

Clairville Road is the next arterial to the west of Oakwood Road and currently exists only to the south of Witzel Avenue, one mile to the south of STH 21. The extension of Clairville Road northward to the STH 21 intersection with Leonard Point Road was modeled. The results were fairly promising. With projected development in the area, the new segment could be expected to carry 1,200 ADT in the year 2020. Because Clairville Road continues south through the entire urban area and beyond, it offers some relief to Oakwood Road and portions of STH 21, just west of USH 41 when extended to STH 21. The extension should be official mapped by the town to avoid improper development in the corridor. Further study should be conducted to determine proper design, timing, and cost estimates.

RECOMMENDATIONS

RECOMMENDATIONS

INTRODUCTION

Much of the analysis in this report was intended to measure the validity of previously made recommendations. Two largely hypothetical land use scenarios, previously discussed, and the existing plans or current trend were measured against the adopted goals, objectives, and policies to provide a clear differentiation in each scenario's effect on urban development and associated costs. The reestablishment of the long range transportation model for the Oshkosh area was used to measure a number of previously proposed projects, as well as to measure the existing and future adequacy of the entire highway system. The following is a compilation of recommendations including land use, highway projects, transit system and other modal recommendations, as well as recommendations for additional study.

LAND USE

Land use recommendations include the implementation of adopted land use policies, as published in *Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Goals, Objectives and Policies*, (adopted January, 1995) and *Long-Range Transportation/Land use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Addendum*, (adopted February, 1996). The recommendation for the Current Plans Scenario allowed for analysis to occur in a realistic and fairly quantitative arena in conjunction with the sewer service area planning process. A major vehicle for the implementation of the adopted policies rests in the sewer service area planning and amendment process. While this analysis has made a case for the benefits of the policies over time, the next update of this plan will include land use alternatives which represent potential development patterns for the future rather than the hypothetical alternatives required to make the point in a slowly growing urban area.

TRANSPORTATION

The overall goal of the transportation program is to achieve a safe, efficient, and environmentally sound transportation system that provides personal mobility for all segments of the population and supports the economy of the region. As stated in *Corridors 2020*, "The development of an improved, efficient highway network can enhance the economic vitality of our state in the 21st century by creating an attractive environment in which business, industry, agriculture and tourism can grow". The recommendations of this plan are intended to meet these goals through the fulfillment of the underlying structure of goals, objectives and policies, while meeting the needs of the Oshkosh area as projected under the recommended land use scenario.

The following recommendations stem both from this long range planning effort and the recommendations of other efforts as confirmed in this process. The City of Oshkosh comprehensive plan recommendations are included as confirmed or altered through the analysis in this document. WisDOT's six year program, and WisDOT's longer range planning program are addressed or noted in this plan. Recommendations for transportation modes other than automobile are also made, generally in terms of implementation of the adopted policies.

Highway Projects

Exhibit 27 is a listing of recommendations that originated from the 1979 Oshkosh highway network plan, the Oshkosh TIPs, WisDOT six year programs and longer range planning process, 1993 Comprehensive Plan for the City of Oshkosh, project amendments to those plans and this update.

The projects are categorized as expansion (E) or preservation (P) projects and (B) if the facility is on the proposed bike route shown on Exhibit 29. While all of the projects are capacity expansion projects, in analyzing them as expansion versus preservation projects as part of this evaluation, a distinction is drawn between new street expansions or significant modifications to existing roadways and minor modifications (including parking removal) to achieve increased capacity. The latter instance would be considered preservation even though the project may involve total reconstruction of the pavement.

The highway project recommendations included in the listing are also shown on a map of the area, Exhibit 28, following the listing. The number at the beginning of each listing corresponds to the numbers noted on Exhibit 28.

EXHIBIT 27

STREET AND HIGHWAY RECOMMENDATIONS

1) (E)(B) Network Facility: **AIRPORT ROAD** Facility Segment: Hughes Avenue to 20th Avenue. Jurisdiction: City of Oshkosh
Proposed Project: 1993 Comprehensive Plan recommendation to construct 4-lane facility on or near the current Perimeter Road.
Implementation Date: Long range improvement, 10-20 years.
Actions Taken: Not yet scheduled.
Plan Recommendation: Conduct a coordinated study with the city, airport, railroad, bicycle interest, and others, to consider the corridor as it relates to a number of transportation modes. The study should consider modal opportunities or facilities including truck to rail, rail to air, container, or other modal choices. The travel demand model does not show the need for 4 lanes based on traffic volumes. However, based on existing and proposed land use, i.e. industrial, manufacturing, rail and airport facilities, the project merits further consideration.

2) (E) Network Facility: **ALGOMA BOULEVARD (STH 110)** Facility Segment: Murdock Avenue to USH 41. Jurisdiction: WisDOT.
Proposed Project: Reconstruction of Highway 110, widening to 4 lanes.
Implementation Date: Long range improvement, 7-20 years.
Actions Taken: Not yet Scheduled. WisDOT plans to relocate USH 45 onto facility and reconstruct within the plan horizon.
Plan Recommendation: WisDOT should proceed with plans to increase capacity on Algoma Boulevard within the plan horizon. The travel model shows deficiency on STH 110 within the planning period when tested as 2 lanes. The 2020 network with STH 110 as 4 lanes from the MPAB to Murdock Avenue shows some congestion relief on the USH 41 Lake Butte de Morts bridge.

3) (E) Network Facility: **BOWEN STREET** Facility Segment: Ceape Avenue to Murdock Avenue. Jurisdiction: City of Oshkosh.
Proposed Project: 1993 Comprehensive Plan recommendation to reconstruct facility within existing right-of-way to 48 feet with 4 lanes.
Implementation Date: Long-range improvement, 10-20 years.
Actions Taken: Not yet scheduled.
Plan Recommendation: The city should proceed with plans to reconstruct Bowen as 4 lanes within the plan horizon. Travel model shows deficiency within the plan horizon when tested as 2 lanes.

4) (E)(B)Network Facility: **CTH A (NORTH SHORE DRIVE)** Facility Segment: Harrison Street to Snell Road. Jurisdiction: Winnebago County.
Proposed Project: Construct new facility within existing right-of-way to 48 feet with 4 lanes based primarily on north industrial park access.
Implementation Date: 1999-2000.
Actions Taken: Planned for STP-urban funds, 1999 construction.
Plan Recommendation: Proceed with plans as described in the Oshkosh Transportation Improvement Program (TIP), based primarily on land use, connectivity and bicycle and pedestrian considerations. Travel model shows segments at over 70 percent of capacity within plan horizon.

5) (E)(B) Network Facility: **CTH A** Facility Segment: Snell Road to CTH Y.
Jurisdiction: Winnebago County
Proposed Project: Completion of a new 4-lane facility from Harrison Street to CTH Y.
Implementation Date: Short range improvement 5-10 years
Actions Taken: Not yet scheduled. Project approved by Winnebago County Board as part of plans to reconstruct CTH Y from CTH A to USH 45.
Plan Recommendation: Proceed with the 4-lane improvement coincidental with a study for an improved facility between Oshkosh and Neenah, considering accommodations for on-street or off-street bicycle and pedestrian for the length of the corridor. Travel model does not show a need for 4 lanes within the plan horizon.

6) (E)(B) Network Facility: **CTH A** Facility Segment: CTH Y to MPAB.
Jurisdiction: Winnebago County
Proposed Project: Part of a Winnebago County Board proposal to study a new 4-lane facility from Oshkosh to Neenah.
Implementation Date: Long range improvement 10-20 years
Actions Taken: Not yet scheduled. Study and design funding approved by Winnebago County Board.
Plan Recommendation: Proceed with a study for an improved facility between Oshkosh and Neenah, considering on-street or off-street bicycle and pedestrian for the length of the corridor. Travel model does not show a need for 4 lanes within the plan horizon. However, an improved local route between Neenah and Oshkosh may remove some traffic from the USH 41 corridor and the Lake Butte de Morts bridge structure.

7) (E)(B) Network Facility: **CTH Y** Facility Segment: CTH A to USH 45.
Jurisdiction: Winnebago County
Proposed Project: Reconstruct CTH Y as 4 lanes from CTH A to the new county facilities west of USH 45.
Implementation Date: Short range improvement 5-10 years
Actions Taken: Not yet scheduled. Project approved by Winnebago County Board to serve the Sunnyview county offices, the fairgrounds, county park and the new county highway complex west of USH 45.
Plan Recommendation: Proceed with a high-level 2-lane improvement, designed to ultimately accommodate 4 lanes, based primarily on land use along the corridor. Turn lanes should be included on some segments, considering traffic volumes associated with the county fair or similar events or activities on the county grounds. Travel model does not show a need for 4 lanes within the plan horizon.

8) (E)(B) Network Facility: **FERNAU AVENUE** Facility Segment: STH 110 to Jackson Street.
Jurisdiction: City of Oshkosh, Town of Oshkosh.
Proposed Project: Construct new facility on new right-of-way based primarily on land use associated with the north industrial park.
Implementation Date: Short range improvement, 5-10 years.
Actions Taken: Completed between Jackson Street and Harrison Street, was scheduled for 1997 as a 4-lane facility between STH 110 and Vinland Road as an STP-Urban project, and recommended in the 1993 Comprehensive Plan as a long-range new 4-lane facility between Vinland Road and Jackson Street and between Moser Street and CTH A. STP funds were reassigned to Koeller Street project.
Plan Recommendation: Proceed with plans to construct the facility based primarily on land use, truck traffic and the east-west connection to the USH 41. Travel model does not show need for 4 lanes based only on traffic volumes.

9) (P)(B) Network Facility: **FISK AVENUE** Facility Segment: USH 41 to Oregon Street.
Jurisdiction: Winnebago County, City of Oshkosh.
Proposed Project: 1993 Comprehensive Plan recommendation to reconstruct and widen to 4 lanes.
Implementation Date: Long-range improvement, 10-20 years.
Actions Taken: Fisk Avenue is planned to be realigned as part of WisDOT's STH 26/USH 41 interchange reconstruction, not yet scheduled.
Plan Recommendation: Proceed with further study to define right of way needs, consider access control measures and capacity needs based on proposed industrial land use and east-west connection to USH 41. The proposal to construct the 4-lane facility may be warranted based primarily on land use and potential truck traffic. Travel model did not show need for 4 lanes based only on traffic volumes, perhaps a high level 2-lane facility would be adequate.

10) (E) Network Facility: **IRVING AVENUE** Facility Segment: Wisconsin Street to Bowen Street. Jurisdiction: City of Oshkosh.
Proposed Project: Portion from Wisconsin Street to Main Street is a short-range recommendation in 1993 Comprehensive Plan with the addition of left turn lanes at intersections.
Implementation Date: Short range improvement, 5-15 years.
Actions Taken: Not yet Scheduled.
Plan Recommendation: Proceed with plans to increase capacity to 4 lanes within the plan horizon. Travel model shows deficiency from Wisconsin Street to Main Street by 2020 when tested as 2 lanes. Construct new facility within existing right-of-way widening to 48 feet with 4 lanes.

11) (E) Network Facility: **JACKSON STREET (USH45)** Facility Segment: Algoma Boulevard to Murdock Avenue. Jurisdiction: WisDOT, City of Oshkosh.
Proposed Project: 1993 Comprehensive Plan recommendation to reconstruct as a 4-lane facility with turn lanes.
Implementation Date: Short-range improvement, 2-6 years.
Actions Taken: Scheduled for reconstruction and included in WisDOT's six year program. Special traffic counts were taken as requested by a group opposed to the project.
Plan Recommendation: Proceed with plans to construct the facility as 4 lanes. Facility is currently operating below the recommended level of service "C", with significant future deficiency based on the travel model when Jackson Street is tested as 2 lanes.

12) (E)(B) Network Facility: **KOELLER STREET** Facility Segment: STH 21 to Witzel.
Jurisdiction: City of Oshkosh.
Proposed Project: Reconstruct to 4 lanes.
Implementation Date: Short-range improvement, 2-6 years.
Actions Taken: Special study conducted in 1988 of USH 41 frontage road needs resulting in recommendations to rebuild Koeller Street as 4 lanes between STH 21 and CTH K (20th Avenue). Segments between 20th Avenue and Witzel Avenue have been completed. An extension between 20th and STH 44 (aligning with Knapp Street (east frontage road) has been completed incidental to a commercial development. Project was first funded with STP-urban award from the 1995-96 allocation, is being supplemented by TIP amendment redesignating the STP-urban award for 1997, originally assigned to FERNAU, to Koeller Street, and also receiving the 1998 STP-urban allocation, for a total of $1,338,996 in federal funds, 53.6 percent of the total project.
Plan Recommendation: Proceed with plans to reconstruct facility as 4 lanes. Travel model shows deficiency within the plan horizon when tested as 2 lanes.

13) (P) Network Facility: **MAIN STREET** Facility Segment: Algoma Blvd to Murdock Ave.
Jurisdiction: City of Oshkosh.
Proposed Project: Highway Network Plan, 1993 Comprehensive Plan recommendation to improve to 4 lanes with left turn lanes.
Implementation Date: Long-range improvement, 10-20 years.
Actions Taken: Not yet scheduled.
Plan Recommendation: Proceed with further study to consider alternatives to on-street parking and ultimately reconstruct the facility as 4 lanes within the plan horizon. Currently at 48' and determined to be a parking issue. Travel model shows deficiency when tested as 2 lanes.

14) (P)(B) Network Facility: **MARION ROAD** Facility Segment: Wisconsin Street to Jackson Street. Jurisdiction: City of Oshkosh.
Proposed Project: Recommended in the 1993 Comprehensive Plan as a short-range improvement.
Implementation Date: Short-range improvement, 5-15 years.
Actions Taken: Not yet Scheduled.
Plan Recommendation: Construct new facility relocated or on existing right-of-way depending of riverfront redevelopment. Projects should take advantage of an opportunity to meet ASHTO standards and follow WisDOT guidelines to accommodate pedestrians and bicycles when associated with new or proposed residential development. Travel model shows 2 lanes would be adequate for vehicle traffic.

15) (P) Network Facility: **NEW YORK AVENUE** Facility Segment: High Avenue to Main Street. Jurisdiction: City of Oshkosh.
Proposed Project: Recommended in the 1993 Comprehensive Plan as a short-range improvement to reconstruct as a 4-lane facility.
Implementation Date: Short-range improvement 5-10 years.
Actions Taken: Not yet Scheduled.
Plan Recommendation: Reconstruct existing facility including repairing and/or replacing curbs. Travel model shows 2 lanes is adequate for the facility within the plan horizon.

16) (P) Network Facility: **NEW YORK AVENUE** Facility Segment: Main Street to Hazel Street. Jurisdiction: City of Oshkosh.
Proposed Project: Recommended in the 1993 Comprehensive Plan as a short-range improvement to reconstruct as a 4-lane facility.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Not Yet Scheduled.
Plan Recommendation: Reconstruct existing facility by repairing and replacing curbs and replacing pavement. Travel model shows 2 lanes is adequate for the facility within the plan horizon.

17) (E)(B) Network Facility: **OAKWOOD ROAD** Facility Segment: 20th Ave to STH 21.
Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: 1993 Comprehensive Plan recommendation to improve and widen to 4 lanes.
Implementation Date: Long range improvement, 10-20 years.
Actions Taken: Completed segment between West 20th Avenue and Waukau Avenue at STH 44 incidental to industrial park development. Segments between West 20th Avenue and STH 21 have not yet been scheduled.
Plan Recommendation: Proceed with plans to reconstruct the facility as 4 lanes. Travel model shows deficiency within the plan horizon when tested as 2 lanes.

18) (E) Network Facility: **OHIO STREET (STH 44)** Facility Segment: Witzel Avenue to South Park Avenue. Jurisdiction: City of Oshkosh.
Proposed Project: Recommended in the 1993 Comprehensive Plan as a long-range improvement (10-20 years) to reconstruct as 4 lanes with turn lanes at intersections.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Scheduled as a minor reconditioning project by WisDOT in 2000.
Plan Recommendation: Proceed with plans to reconstruct the facility as 4 lanes. Travel model shows deficiency when tested as 2 lanes.

19) (E)(B) Network Facility: **OREGON STREET** Facility Segment: Ripple Ave. to Fisk Ave.
Jurisdiction: City of Oshkosh, Winnebago County.
Proposed Project: 1993 Comprehensive Plan recommendation to reconstruct and widen the segment from 35th Avenue to Fisk Avenue to 4 lanes.
Implementation Date: Long-range improvement, 10-20 years.
Actions Taken: Oregon Street or CTH I reconstructed as 4 lanes from 20th Street to 35th Avenue.
Plan Recommendation: Proceed with construction based on existing land use, proposed industrial development and the linkage with Fisk Avenue (CTH N), the connection with USH 41. Travel model does not show need for 4 lanes based only on traffic volumes.

20) (E) Network Facility: **PEARL AVENUE** Facility Segment: Jackson Street to North Main Street Jurisdiction: City of Oshkosh.
Proposed Project: 1993 Comprehensive Plan recommendation to reconstruct as 5 lanes.
Implementation Date: Long-range improvement, 10-20 years.
Actions Taken: Not yet scheduled.
Plan Recommendation: Proceed with plans to reconstruct as 5 lanes with improved signalization, based on traffic patterns in the downtown, with consideration of various congestion management strategies within the CBD. Travel model shows current and future deficiencies near Main Street.

21) (E) Network Facility: **STH 44** Facility Segment: Wisconsin Street Lift Bridge.
Jurisdiction: WisDOT.
Proposed Project: Reconstruct as 4 lanes with accommodations for bicycles and pedestrians.
Implementation Date: Long Range 10-20 years.
Actions Taken: Not yet Scheduled, WisDOT longer range planning.
Plan Recommendation: Proceed with 4 lane (w/bike/ped) bridge replacement. Bridge is currently over capacity.

22) (E) Network Facility: **STH 110** Facility Segment: USH 41 to MPAB.
Jurisdiction: WisDOT.
Proposed Project: A portion of WisDOT's plan to construction a new 4-lane expressway from USH 41 to STH 116.
Implementation Date: Short Range 5-10 years.
Actions Taken: Scheduled in the WisDOT six-year program.
Plan Recommendation: Proceed with plans to construct 4-lane expressway. Travel model shows deficiency within the plan horizon when tested as 2 lanes.

23) (E) Network Facility: **USH 41** Facility Segment: USH 45 to STH 44.
Jurisdiction: WisDOT.
Proposed Project: Increase capacity to 6 lanes including the bridge structure over Lake Butte de Morts.
Implementation Date: Not yet scheduled and dependent on major investment study.
Actions Taken: Included in long range recommendations as a placekeeper project that requires a major investment study (MIS). The facility is currently approaching deficiency, with 48,000 vehicles per day. WisDOT plans to reconstruct substandard interchanges in the corridor within the plan horizon.
Plan Recommendation: WisDOT should proceed with a major investment study for the corridor. Travel model shows deficiency within the plan horizon.

24) (E)(B) Network Facility: **USH 45** Facility Segment: Waukau Ave to Ripple Ave.
Jurisdiction: Winnebago County
Proposed Project: Reconstruct USH 45 as 4 lanes from Waukau Avenue to Ripple Avenue.
Implementation Date: Long range improvement 10-20 years
Actions Taken: Not yet scheduled.
Plan Recommendation: Proceed with construction of a 4-lane facility within the plan horizon. Travel model shows a need for 4 lanes within the plan horizon.

25) (E)(B) Network Facility: **VINLAND ROAD** Facility Segment: Smith Street to Snell Road.
Jurisdiction: City of Oshkosh, Town of Oshkosh
Proposed Project: Completion of a new 4-lane facility to accommodate bicycles and pedestrians with regard to residential and industrial development.
Implementation Date: Long range improvement 10-20 years
Actions Taken: Not yet scheduled.
Plan Recommendation: Proceed with 4-lane improvement within the plan horizon based on proposed land use, bicycle and pedestrian accommodations and significant truck traffic on the northern portion of the facility. Travel model does not show a need for 4 lanes within the plan horizon.

26) (E)(B) Network Facility: **WASHBURN STREET** Facility Segment: STH 21 to Witzel Ave.
Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: Construct 4-lane urban section.
Implementation Date: Short Range Improvement 5-10 years.
Actions Taken: Not yet scheduled. Special study conducted in 1988 of USH 41 frontage road needs resulting in recommendations to rebuild Washburn Street as 4 lanes between STH 21 and CTH K (20th Avenue). Two segments, between West 9th Avenue and Dickinson Avenue and between Witzel Avenue and 9th Avenue have been completed.
Plan Recommendation: Proceed with plans to construct 4-lane facility. Travel model shows deficiencies within the plan horizon.

27) (E)(B) Network Facility: **WASHBURN STREET** Facility Segment: Dickinson Ave. to 20th Ave. Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: Construct 4-lane urban section.
Implementation Date: Short Range improvement 5-10 years.
Actions Taken: Not yet scheduled. Special study conducted in 1988 of USH 41 frontage road needs resulting in recommendations to rebuild Washburn Street as 4 lanes between STH 21 and CTH K (20th Avenue).
Plan Recommendation: Proceed with plans to construct two segments as 4 lanes, between West 9th Avenue and Dickinson Avenue, and between Dickinson Avenue and 20th Avenue. Travel model does not show the need for 4 lanes based only on traffic volumes. Construct 4 lanes based on the previous frontage road study, and access to commercial land uses along the facility.

28) (E)(B) Network Facility: **WITZEL AVENUE** Facility Segment: Oakwood Road to USH 41
Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: Widen to accommodate bicycles and pedestrians within the plan Horizon.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Proposed bicycle route, not yet scheduled.
Plan Recommendation: Reconstruct the facility as 4 lanes and accommodate bicycles within the plan horizon. Travel model shows need for 4 lanes.

29) (E)(B) Network Facility: **WITZEL AVENUE** Facility Segment: Bicycle/Pedestrian Overpass
Jurisdiction: City of Oshkosh, WisDOT.
Proposed Project: Widen approaches to USH 41 bridge, including structure to better accommodate bicycles and pedestrians within the plan Horizon.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Proposed bicycle route, not yet scheduled.
Plan Recommendation: Connect bridge structure and sidewalk to Witzel Avenue. Retrofit bridge or construct free standing structure to accommodate bicycles within the plan horizon. Travel model shows need for 4 lanes.

30) (E) Network Facility: **WESTFIELD STREET** Facility Segment: Witzel Ave to 9th Ave.
Jurisdiction: City of Oshkosh.
Proposed Project: From 1993 Comprehensive Plan, construct new facility on new right-of-way.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Not yet scheduled. Completed segment from Chippewa Avenue to Witzel Avenue in 1990.
Plan Recommendation: Proceed with plans to construct 4-lane facility. Travel model shows deficiency when tested as 2 lanes.

31) (E) Network Facility: **WESTHAVEN DRIVE** Facility Segment: Witzel Avenue to STH 21.
Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: 1993 Comprehensive Plan recommendation construct a new street extension to STH 21 with 4 lanes.
Implementation Date: Short range improvement 5-10 years.
Actions Taken: Not yet scheduled.
Plan Recommendation: Construct urban 2-lane facility including an additional 4-lane frontage road connecting with the relocated Washburn Street farther west of the STH 21/USH 41 interchange. Travel model does not show a need for 4 lanes.

32) (E)(B) Network Facility: **20TH AVENUE** Facility Segment: Oakwood Road to USH 41
Jurisdiction: City of Oshkosh, Town of Algoma.
Proposed Project: Widen to accommodate bicycles and pedestrians within the plan Horizon.
Implementation Date: Long range improvement 10-20 years.
Actions Taken: Proposed bicycle route, not yet scheduled.
Plan Recommendation: Proceed with plans to widen to accommodate bicycles within the plan horizon. Travel model does not show need for 4 lanes.

33) (E)(B) Network Facility: **20TH AVENUE** Facility Segment: USH 41 to Oregon Street
Jurisdiction: City of Oshkosh.
Proposed Project: Stripe or retrofit to accommodate bicycles and pedestrians within the plan Horizon.
Implementation Date: Short range improvement 5-10 years.
Actions Taken: Currently 4 lanes, not yet scheduled.
Plan Recommendation: Proceed with plans to accommodate bicycles within the plan horizon. Travel model shows deficiencies on the already 4-lane facility, that may be relieved by proposed improvements to 9th Avenue.

34) (E)(B) Network Facility: **20TH AVENUE** Facility Segment: Oregon Street to Main Street (USH 45) Jurisdiction: City of Oshkosh.
Proposed Project: Construct new facility, new right-of-way required between Oregon Street and Main Street.
Implementation Date: Short range improvement 5-10 years.
Actions Taken: Right-of-way officially mapped in 1993, not yet scheduled.
Plan Recommendation: Proceed with plans to construct the facility based on connectivity, 4-lane continuity and current traffic congestion in the area. Travel model shows deficiencies on the routing to Main Street (24th Street) within the plan horizon.

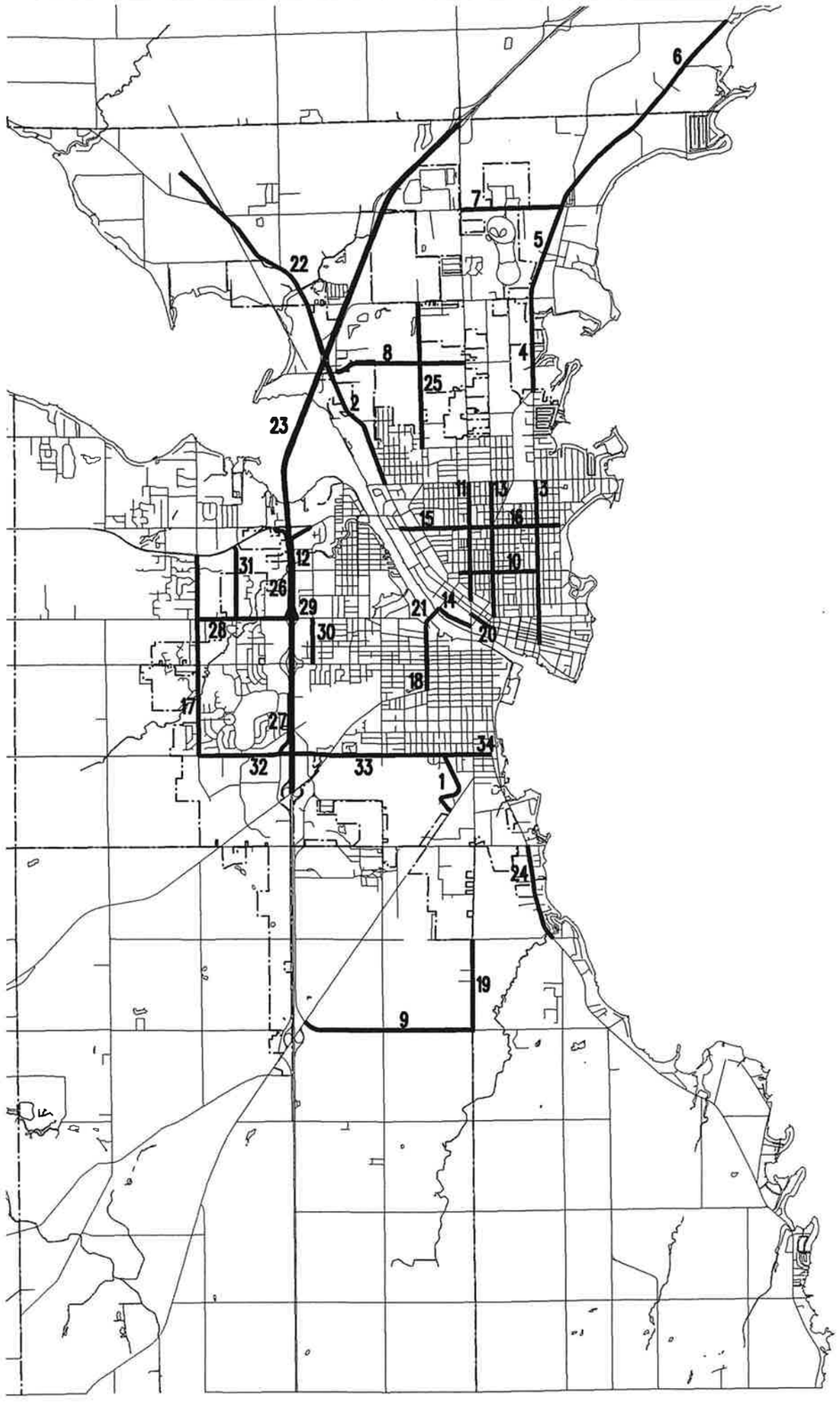


EXHIBIT 28
OSHKOSH AREA
RECOMMENDED PROJECTS

PROJECT LOCATION

23 PROJECT NUMBER

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

NORTH

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SCALE IN MILES

Prepared By
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REGIONAL PLANNING COMMISSION – FEBRUARY 1997

Corridor Preservation. As was noted in the interim status report, the 1993 Comprehensive Plan for the City of Oshkosh has established sound preservation and access control policies and standards to adequately address the land use/traffic carrying capacity relationships of arterial extensions. Two corridors needing specific attention are the Fernau Avenue east/west corridor on the north side and the Fisk Avenue east/west corridor on the fare south side of the urban area.

Fernau's importance stems from its critical location relative to the USH 41/STH 110 interchange and the ability to achieve direct access from the North Industrial Park to USH 41 with minimum disruption to the evolving development pattern. Protecting this corridor (already officially mapped) and implementing at the earliest possible date are desirable.

Fisk Avenue presents opportunities for reducing existing trip dislocations and minimizing disruptions from truck movements related to the South Industrial Park. While the need for implementation is longer range to be staged with development, preserving adequate right-of-way for the future is desirable.

A third area of future development impact is to the northwest, west of USH 41, in the STH 110 corridor. Needs of the corridor area being addressed within the context of the STH 110 expressway facility moving toward construction at the present time. The facility will ultimately be USH 45 and is anticipated to be rerouted through Oshkosh on Murdock Avenue and Algoma Boulevard.

Westward development of the urban area is also impacting long range decisions. Plan recommendations include Westhaven Drive extended from Witzel to STH 21 and the reconstruction of Oakwood Road to 4 lanes. Farther west a corridor should be preserved for future Clairville Road from Witzel Avenue to STH 21 at Leonard Point Road.

Transit

As Oshkosh Transit System continues to operate at a level favorable to other mid-sized transit systems, it is recommended that no significant changes be made in the route structure prior to an update of the system's 1992 transit development plan (TDP) within the next two years. A general policy to serve the core area of the City is expected to carry through the planning period. One minor exception to this could be special arrangements with major employers or employment areas for peak service. These need to occur on a case by case basis, and justified by consistent, sizeable ridership.

Consistent with the policies adopted in January, 1995 in the document *Long-Range Transportation Land Use Plan for the Fox Cities (Appleton-Neenah), Oshkosh, and Fond du Lac Urban Areas: Goals, Objectives, and Policies* it is recommended that OTS continue its coordination efforts with Winnebago County, and other public and private transportation providers in the Oshkosh area. Such efforts should be directed toward providing the most efficient and effective services possible to the transit dependent population, as well as providing appropriate services to discretionary riders where potential warrants. A good example of this is the recently added fixed route from Oshkosh to Winneconne and Omro, operating three round trips daily, and currently doing well in its test period.

It is also recommended that study continue on the issue of service between the cities of Neenah and Oshkosh. While Neenah and Oshkosh are in separate urbanized areas, they are both in Winnebago County. Many county services, such as the Department of Social Services, have branch offices in

Neenah, but there is still occasion to travel to Oshkosh for court appearances, work sites in either city, or for social engagements. Available services for Winnebago County's elderly and disabled are limited to rural trips, excluding trips between the two urbanized areas. The non-driving population of Neenah and Oshkosh should have services comparable to other Winnebago County residents. The study should determine the magnitude of the demand, the needs of the potential riders, and then confer with WisDOT personnel to determine the most suitable program and funding for the service. The financial side of transit recommendations is presented in the Financial Analysis section of this report.

Intercity Transit

It is recommended that the city work with the transportation providers and reconsider the location of intercity bus connections in the Oshkosh area. Currently intercity buses must travel from the USH 41 corridor to the intercity terminal located on Main Street in the downtown. A study should consider a location nearer to USH 41, with access provided by the Oshkosh Transit System fixed routes. With appropriate linkage to the fixed route system, passenger convenience would not be threatened by such a move. A location in the USH 41 corridor would provide more convenience and shorter trip lengths to passenger bus lines, and perhaps enable coordination with tour lines or other carriers. From a land use perspective, a bus terminal would be considered an appropriate land use in the highway corridor.

Bicycle and Pedestrian

The physical recommendations for bicycle and pedestrian facilities are shown on Exhibit 29. It is not anticipated that existing highways will be retrofitted to accommodate bicycles without the occurrence of a reconstruction project. It is recommended that bicycle and pedestrian travel be considered in the design stages of all highway projects. Accommodations should be appropriate to traffic volumes, parking and other physical conditions, safety for both the bicyclist or pedestrian and the auto driver. While details on the recommendations for bicycle and pedestrian travel can be found in the *Long Range Land Use and Transportation Plan for the Oshkosh Area - Bicycle and Pedestrian Plan*, the following are recommended guidelines included in that plan:

All new street construction and reconstruction projects located on roadways identified as bike routes should be designed to be in compliance with AASHTO Standards for such routes.

All new 4-lane urban sections intended to function as collectors or arterials should be constructed to a minimum curb-to-curb width of 56′. This would include an outside (curbside) lane of 14′ and an interior lane of 12.

All existing 4-lane urban sections constructed to a width of 48′ should be re-striped so that the outside (curbside) lane is 13′ in width and the interior lane is 11′. They should be expanded to comply with the 52′ minimum width at the time they are slated for reconstruction.

All new 2-lane neighborhood collectors designed to accommodate on-street parking should have a minimum curb-to-curb width of 40′.

When existing 2-lane collectors are upgraded, they should be built to a minimum standard which allows 14′ for shared driving/biking lanes and 14′ for shared parking/biking lanes. Lanes used strictly for motor vehicles should be 12′ in width.

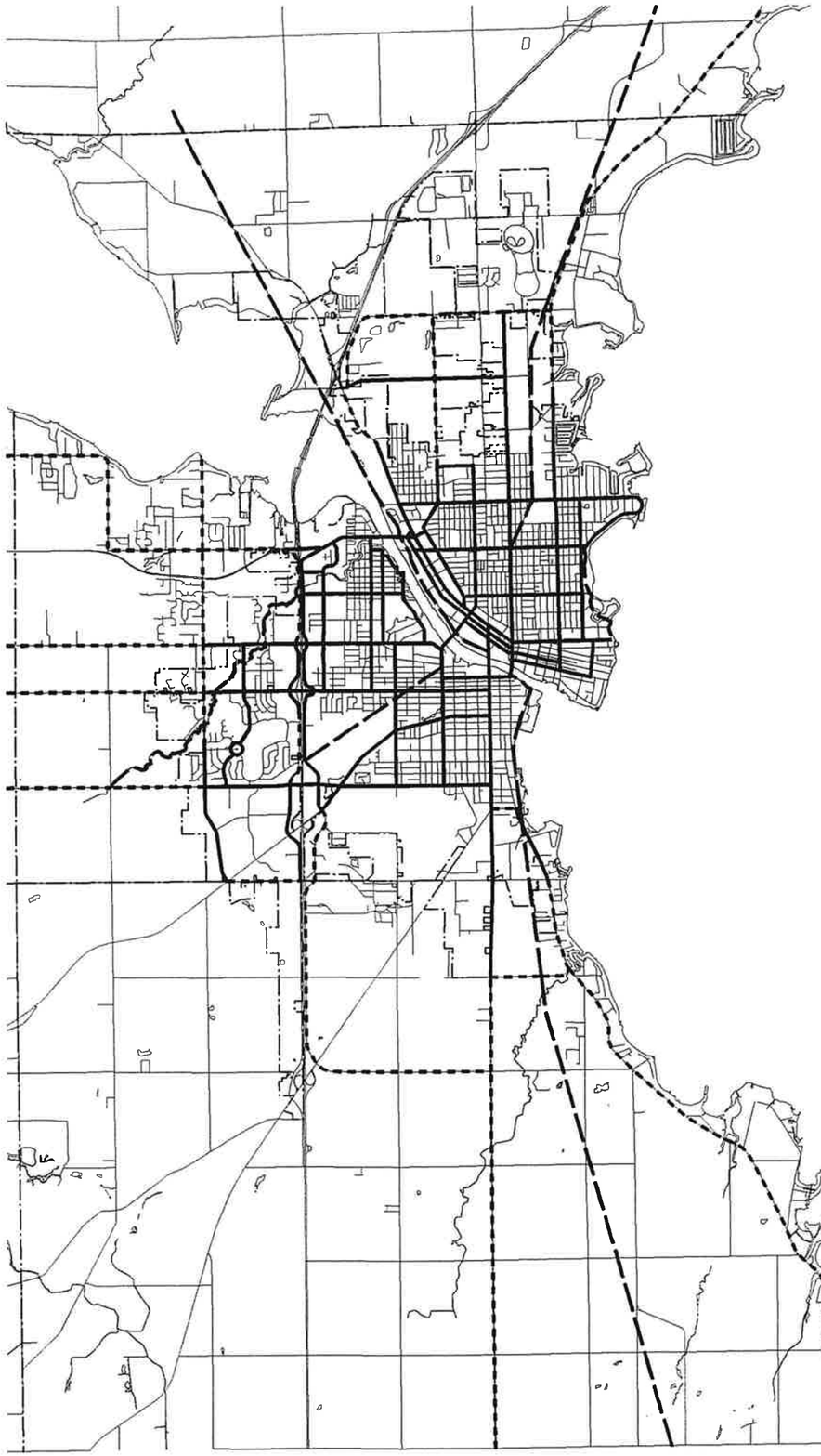

EXHIBIT 29
OSHKOSH AREA
PROPOSED BIKE ROUTE SYSTEM

ON-STREET ROUTES
PAVED SHOULDERS
OFF-ROAD PATH

* BASED ON PRESENT ROAD SURFACE, SOME RURAL SEGMENTS ARC EXPECTED TO BE RECONSTRUCTED AS URBAN SEGMENTS DURING THE PLANNING INTERVAL.

NORTH

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SCALE IN MILES

Prepared By
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REGIONAL PLANNING COMMISSION – DECEMBER 1996

Reconstruction of all rural collectors and arterials should include a striped and paved shoulder at least 5′ in width adjacent to a 12′ lane and 6′ in width adjacent to a 11′ lane. If speeds are in excess of 40 MPH paved shoulders should be at least 6′.

Whenever possible, a minimum width of 16′ should be provided on the exterior lane of all bridge decks at the time of their construction to accommodate bicycles. Even better, a 6′ striped bike lane should be provided if it is possible to provide a 12′ travel lane for motor vehicles.

A sidewalk should be provided on at least one side and preferable both sides of the roadway. If feasible, these guidelines should be adhered to at the time existing bridge decks are replaced.

Convenient access to the on-road bike route system should be available from off-road bicycle/pedestrian paths.

Appropriate striping to define (and emphasize) bicycle movements should be undertaken on bike routes in those areas where significant vehicular turn movements and other points of congestion and conflicts between the bicycle and the motor vehicle occur.

Appropriate diagonal striping with diamond markings should be considered on a case-by-case basis to better define shared bike/on-street parking lanes.

A minimum width of 10′ and preferably 12′ should be used as the standard for all off-road bicycle/pedestrian paths.

All urban sections constructed of concrete should have an integrated curb/gutter section a minimum of 5′ wide to the pavement joint.

Site plans should be reviewed to ensure pedestrian access to and between buildings included in the plan. Subdivisions should be reviewed to ensure appropriate pedestrian and bicycle facilities, including connections within the development and access to the subdivision from existing development.

Freight

Indications from the freight-oriented users during the advisory committee deliberations were that existing accessibility is good in the Oshkosh area. The only recommendation at this time is to continue the consideration of land use and truck route access in the location of freight related and freight dependent facilities. This will help to insure the continued economic health of the area and to most efficiently use the existing highway network.

Additional Study

MIS Needs. Capacity deficiencies are projected for the USH 41 corridor through the Oshkosh area by the year 2020. Because USH 41 is an access controlled facility and the project area is in excess of one mile in length, a Major Investment Study (MIS) is required under ISTEA. The purpose of the MIS is to assure proper consideration of all possible actions, including examination of alternative modes of transportation, to correct the indicated problem in the most cost effective manner. The MIS is to be headed by the appropriate agency with primary jurisdiction over the facility. In the case of USH 41, WisDOT would be expected to lead the MIS process.

Other Studies. Several other corridors in the urban area require further study, though no other require an MIS. Clairville Road extension, discussed in the Project Analysis section, is recommended for official mapping at this time. Study should be conducted to determine the alignment of the right-of-way through potentially sensitive areas.

The Ninth Avenue corridor is recommended for further study to consider the right-of-way and neighborhood impacts of considered alternatives, including but not limited to a one-way pairing of Eighth and Ninth, and the 4-laning of Ninth Avenue. In the modelling process, both noted alternatives meet the needs of 2020 traffic. Either alternative would likely have significant neighborhood impacts. Therefore, a corridor study is in order to determine the balance between effectiveness and impact. In addition to potential congestion improvements on 9th Avenue, actions may provide relief on STH 21, 20th Avenue, Witzel Avenue and other east-west routes into the city. No projects are recommended for the already 4-lane east-west facilities showing deficiencies that could be improved by the ultimate actions taken on 9th Avenue.

While the pavement width on Main Street, from Algoma Boulevard to Murdock Avenue is currently adequate to serve four traffic lanes, this would require the removal of on-street parking in the central business district. The proposal of this action would likely face considerable controversy. A study should be undertaken to determine the feasibility of rear-lot parking for the businesses along this portion of Main Street which now rely on on-street parking to serve their customers.

ENVIRONMENTAL REVIEW

ENVIRONMENTAL REVIEW

INTRODUCTION

As the Metropolitan Planning Organization (MPO) for the Oshkosh urbanized area, the East Central Wisconsin Regional Planning Commission is responsible for conducting the urban transportation planning process. This planning effort involves the implementation of the Intermodal Surface Transportation Efficiency Act (ISTEA), which requires the consideration of the overall environmental, social, and economic effects of the metropolitan transportation plan.

An extensive issues identification process was completed to develop goals, policies, and objectives for the long range land use/transportation plan. The environmental assessment scoping process was initiated concurrently with the issue identification phase of the planning process. The issues were established through special committees and were subject to public review. Multimodal transportation, the connectivity of transportation and land use, and the potential environmental effects of these planning goals and objectives were addressed to meet the requirements established by the ISTEA.

This chapter evaluates the potential environmental impact of goals, objectives, and recommendations contained in the long range land use/transportation plan. The assessment of potential environmental effects addresses economic, social, and natural resource impacts.

ECONOMIC AND SOCIAL IMPACTS

Economic Impacts

The effects of the land use/transportation plan have the potential to extend into economic and social arenas. Level of service on roadways, multimodal opportunities, and accessibility for businesses are all issues to be considered. If levels of service on the transportation network decline during the planning period, the potential for more time spent on roadways would be significant. (Level of service is discussed further in the Congestion Impact section.) Additional business and personal travel time translates into increased transportation costs. However, economic incentives exist to keep business travel expenses to a minimum, and policies within the plan target the need to maintain acceptable levels of service on roadways.

Focusing on maintaining and improving existing facilities and multimodal opportunities will provide benefits to businesses and residents. The plan identifies policies, which if enacted, would ensure that appropriate types and levels of multimodal transportation services are provided to the area. Additionally, maintaining and/or improving transportation facilities will enable the transportation system to continue to provide adequate accessibility to agricultural supplies and markets. An integrated transportation system combining different modes, including rail and trucking facilities, enhances the movement of goods and services. Efficiently routing truck traffic and providing joint terminals and delivery services would increase the accessibility of distant suppliers. Enhanced accessibility and multimodalism will provide incentives for businesses to expand and improve the business climate to attract new businesses.

Social Impacts

One of the objectives within the long range transportation/land use plan is to make individual communities more attractive. The Oshkosh Urban Area has substantial shoreland along the Fox

River, Lake Winnebago and Lake Butte des Morts. Much of this shoreland is already developed. This plan and the plan adopted by the City of Oshkosh include policies such as the preservation and redevelopment of waterfront areas for greater recreational use, preserving scenic easements for viewsheds, and creating multimodal recreational opportunities, such as bicycling or walking along a redeveloped waterfront or park area. Enacting these policies would make the Oshkosh urban area a more attractive place to work, live, and play.

Another social impact addressed by this plan is the effect transportation investments will have on each resident's ability to travel to and from work, school, a friend's house, or other important places inside and outside the community. In the recent past, transportation planning has focused on automobile travel, with public transportation planned for separately. Pedestrian and bicycle travel were considered to be recreational. This has contributed to the design and construction of auto dependent suburbs in Oshkosh and elsewhere. Auto-dependent designs not only reduces the mobility of non-drivers, but also creates an artificial tax, as owning an automobile is no longer a choice, but a necessity.

This plan includes goals, policies, and objectives for public transportation, pedestrian, and bicycle travel as alternative modes. Providing alternative modes of transportation reduces traffic congestion, and provides individuals, particularly the elderly, the young, and the poor with greater independence of movement. It also makes automobile usage a matter of choice, rather than a necessity. The transportation plan has been developed to work with the land use plan to enable Oshkosh residents and visitors to reach vital destinations quickly and safely.

Currently, only residents in portions of the urban area have a variety of modes to choose from. While the plan encourages the development of alternative modes, realistically, they can not be available everywhere. The density of existing development in some areas is too low for fixed route public transit to be a viable option. Many streets within the central city and some outside the central city are too narrow and busy for bicycle travel. Much of the existing development has occurred at densities or in land use patterns which make pedestrian and bicycle travel inconvenient. In some areas, no facilities were provided for pedestrian or bicycle travel. Right of way would have to be purchased to provide these facilities. Purchasing right of way in developed areas can be very expensive.

LAND USE IMPACTS

Policies within the plan state that the disruption and dislocation of neighborhoods, households, businesses, industries, and public and institutional buildings by construction or expansion of existing transportation facilities should be minimized. Integrated planning is an objective in the land use/transportation plan as a means to maintain a transportation system that supports current land use plans and desired patterns of future development. Plans for the area include the latest comprehensive plan for the City of Oshkosh (adopted 1993), a land use and development plan for the Town of Algoma (completed 1995) and an open space and recreation plan for the Town of Algoma (completed 1996). Planning efforts for the towns of Nekimi and Black Wolf are currently underway.

City of Oshkosh Comprehensive Plan. The objective of the land use section of the Oshkosh Comprehensive Plan is to provide recommendations for guiding new development in the peripheral areas, while promoting the redevelopment of many of the older sections of the city. Some recommendations are very similar to policies in the land use/transportation plan. One

recommendation encourages in-filling of land areas already served by public facilities and services, which is more efficient than extending development into new areas that will require major extensions of public facilities and services. The plan also recommends exercising extraterritorial plat review powers to control the premature division of future development land outside of Oshkosh's corporate limits which would foreclose opportunities for efficient development patterns in the future.

The Oshkosh plan addresses peripheral development by stating that most new development has occurred in peripheral growth areas. Specifically, most new community development has occurred along the Highway 41 corridor and most new industrial development has occurred in planned industrial parks. As a result of this development pattern, the Oshkosh plan acknowledges that many sections of the central city are underutilized and in need of redevelopment.

Redevelopment of the central city will most likely result in the movement of existing warehousing and industrial uses to planned industrial parks. This will provide the opportunity for redevelopment of these sites for housing, office, and retail use. The Oshkosh plan states further that the best redevelopment opportunities are along and near the riverfront and lakefront in the central city. Many of these areas are targeted for housing. Investigations of the industrial sites after their relocation may indicate leakages or contamination of soils which would require reclamation. If so, the city should be prepared to help developers clean up these sites. Once the housing is in place, the potential of effluents flowing into the Fox River and/or Lake Winnebago will be much less than when the industrial uses occupied the land. The same is true of emissions. The elimination of these negative industrial externalities will enhance the waterfront and central city areas. The city's plan, which also suggests creating a riverwalk along the Fox River from the Park Plaza Mall to the WIOUWASH Recreation Trail, will also enhance this area. Future residents for these areas will have quick and easy access to downtown and the university, plus a variety of transportation modes to choose from.

The periphery area targeted for the largest population growth, which is forecasted to be over 100 percent of the current population, is identified as the "West Planning Area". The west planning area is bounded by Highway 41 on the east, the Algoma town line on the west, County Trunk Highway X on the south, and Lake Butte des Morts on the north. The west planning area is anticipated to be the primary development area for Oshkosh. The Oshkosh plan further states that urban services will be extended to Clairville Road and that most of the land area east of Clairville will be fully developed. Growth along Clairville Road has the potential to expand beyond the Oshkosh city limits. Further study of development on this roadway is necessary. Both the City of Oshkosh and the Town of Algoma have more vacant sewer service acreage east of Clairville Road, than the current projected growth can fill. Policies for rural development contained within the land use/transportation plan state the need to preserve agricultural land and open space characteristics of rural areas, which includes avoiding splits of agricultural land. East Central would encourage both jurisdictions to practice infilling and contiguous development to avoid further fragmenting farmland. Also, pushing development to Clairville Road and beyond puts additional development pressure on the Town of Omro, a rural community currently outside the metropolitan area boundary.

Agriculture is an essential part of Wisconsin historically, culturally, and economically. Consequently, the concern over the need for additional agricultural land to accommodate urban growth is addressed in several of the policies set forth in the land use/transportation plan. The planning and design of transportation facilities should promote compact development. Also, the relative accessibility provided by the highway system should be adapted to comprehensive plans by providing a higher level of accessibility to areas where development is to be encouraged. Providing increased accessibility to designated areas and adhering to a policy of preserving prime farmland

should minimize the need to expand into agricultural areas. While the adopted policies support this notion, the land use plan, based on the sewer service area plan, allows for a significant amount of growth in the rural sections of the Oshkosh area. Further curbing of such development would require voluntary action on behalf of the towns or land use regulation, ostensibly from the state level.

Town of Algoma. Due to its proximity to the urban fringe and its pro-growth stance, the Town of Algoma has experienced considerable residential growth in the last ten years. While its rate of growth is already declining, the town is expected to continue to experience significant growth during the planning period. Like all newly developing areas, the town's character is changing and it is experiencing fiscal, environmental, and traffic strains. As the town continues to grow, these strains will continue to increase. The town's plan recommends slowing the rate of growth to allow the town to "catch up", so that it can maintain its quality of life by balancing the need for additional services with the residents desire to maintain lower property taxes. The town plan also recommends infilling vacant lots in existing subdivisions, limiting new plats to areas where services are readily available, and insuring that new plats have proper stormwater management and drainage, good traffic flow, and protection of sensitive natural areas. If the town follows these policies, land use impacts can be reduced. If the town does not follow these policies, its growth will lead to further farm fragmentation, increased erosion and stormwater problems, increased potential for groundwater contamination, and higher costs.

CONGESTION IMPACTS

The impacts of congestion on a transportation system can be severe. For example, as traffic increases on a street, the likelihood of accidents will increase as well. A traveler on a severely congested street will probably experience frequent stops and starts, vehicles weaving through traffic to change lanes, and other hazardous situations that could result in an accident. Other negative effects of congestion include more significant wear on the street and vehicle, increased driver stress and vehicle emissions attributable to frequent acceleration and extended idling time. However, the provision of incentives to use modes of transportation other than the single occupant vehicle could reduce the number of vehicles on the Oshkosh street network.

The plan addresses the likelihood of congestion in the Oshkosh urbanized area and identifies methods of reducing traffic at these potentially hazardous locations. The plan's policies state that an efficient street and highway system must consider financially constrained improvements to minimize congestion and to keep travel times low. Some of these improvements include channelization, signalization, and/or removal of on-street parking to maintain adequate service. In addition, the use of alternative modes of transportation such as transit, walking, and bicycling should be strongly encouraged to minimize the number of cars on the network. All new road construction in any jurisdiction within the Oshkosh Metropolitan Area, should consider these alternative modes of transportation.

The standard used to evaluate traffic operating conditions and identify congestion is known as level of service (LOS). This is addressed below.

Level of service. Level of service is typically broken into the following six categories:

Level of service A, which is characterized by free traffic flow. Under these conditions, transportation system users are virtually unaffected by other users and travel safety and comfort are very high.

Level of service B, which is characterized by stable traffic flow. LOS B conditions allow system users a significant amount of freedom to choose their own speeds, but a slight amount of interaction with others is common. Travel safety and comfort are also high under LOS B conditions.

Level of service C, which is characterized by stable yet restricted traffic flow. Under these conditions, the amount of interaction with other transportation system users becomes significant, and the general level of comfort and convenience begins to decline.

Level of service D, which is characterized by high-density traffic flow, lower speeds, and restricted maneuverability. LOS D conditions generally create uncomfortable and inconvenient traveling conditions; however, traffic flow is typically stable.

Level of service E, which is characterized by unstable traffic flow and volumes that are at or slightly below capacity. Under these conditions, system users experience poor comfort and convenience levels, and accident exposure is increased.

Level of service F, which is characterized by forced flow, traffic queues, and stop-and-go situations. Under these conditions, the amount of traffic that is present on a facility exceeds the amount that can be served, which creates the problems mentioned above. System users will typically experience low comfort and convenience, poor travel times, and high accident exposure on an LOS F roadway.

The land use/transportation plan uses LOS C as the minimum desirable level of service for each major roadway. During the development of this plan, a computer model was used to identify which of the area's roadways will likely experience levels of service below this threshold during the planning period. This process and its relationship to level of service are summarized below.

Modeling process. Estimating levels of service requires the collection of a significant amount of data. Included are both block level 1990 census data, such as population, household characteristics, employment and information describing the Oshkosh area street and highway network. Network information includes annual average daily traffic (AADT) volumes and facility types in terms of function, width, number of lanes, land use, speed and capacity. Statistical relationships, developed using travel surveys, link the socioeconomic data from the census to trip-making behavior. The relationships are used by the TRANPLAN to simulate trips between traffic analysis zones (TAZ's) within the study area. In addition to these internal trip exchanges, trips traveling through the study area are also included in the overall modeling effort. During calibration, these modeled trip exchanges were "assigned" or added to the computerized network of the study area's roadways and compared and calibrated to actual traffic counts.

Once the base traffic conditions were calibrated, the same relationships were used in creating the year 2020 model. The trip generation rates developed for the calibrated base year model are then applied to the socioeconomic projections to create the future (2020) model for the area. This process involved estimating growth or decline within each of the study area's TAZs through 2020 to estimate the levels of traffic generation within and between zones.

The assignment of traffic to the base and future networks is generally determined by each street's average speed and capacity. When creating the network, each street is assigned a speed and capacity in the Tranplan database. These attributes largely determine each street's relative attractiveness to a vehicle traveling to, from, or within the Oshkosh study area; therefore, streets with the highest speeds, directness, and capacities will generally have the greatest number of vehicles assigned to them. As mentioned above, the calibration process helps to create a network that

represents actual (or estimated future) traffic levels on each street in the model. Once this is completed, level of service can be estimated for the future network by comparing the traffic assignment for each street with its corresponding capacity. Those streets that equal or exceed a volume to capacity (v/c) ratio that represents LOS C (80 percent of capacity) could experience traffic levels identified as undesirable in this plan.

Potentially congested roadways. The roadway capacity improvement recommendations included in this plan resulted from the modeling of projected traffic on the existing network to determine areas of deficiency, and the subsequent modeling of alternative improvements. The resulting recommendations are intended to alleviate future congestion problems in the Oshkosh area.

COMMUNITY AND NEIGHBORHOOD IMPACTS

Several policy statements in the plan support the development of a transportation system compatible with existing and future development patterns. The policies include minimizing the disruption of neighborhoods and reducing the penetration of neighborhood units by arterial streets. Minimizing both of these activities will enhance the efficiency of the transportation network within communities. Policies also state that the location of new or relocation of existing facilities in or through recreational, historical, scenic, or cultural sites should be avoided whenever possible.

When identifying transportation projects for a long range plan, it is essential that existing and proposed land uses be considered to ensure that these projects do not isolate neighborhoods from important destinations. For example, it would not be wise to place a major street between an elementary school and a densely populated residential area, for many children could be forced to risk injury while walking to and from the school. Granted, proper signalization at intersections and clearly marked crossing zones could reduce the risk, but the presence of the street would certainly create a safety risk for the residents.

This plan considers the effects that major transportation investments could have on Oshkosh and its neighborhoods and attempts to minimize the negative impacts that could result from the projects proposed in the document.

Noise Impacts. The consideration of the impact of noise is addressed in policies stating the need to meet national standards ensuring that residential areas, schools, and other areas with high concentrations of people are not exposed to harmful levels of noise from transportation facilities.

Visual Impacts. In an effort to develop attractive communities, the plan promotes designing transportation facilities to be aesthetically pleasing and sensitive to the natural landscape. Incorporating amenities such as boulevards, berms, and attractive landscaping is important in the design of major arterials in urban areas. For rural areas, the plan stresses the need to minimize views such as junkyards, billboards, and strip commercial development.

Historical and Cultural Impacts. As discussed previously, the disruption of neighborhoods, historic areas, and recreational areas is discouraged in the development of a transportation system. When expansion, relocation, or new construction is proposed, the consideration of the costs and benefits of the new or updated facility must be weighed against the dislocation of these areas.

NATURAL RESOURCES

Water Resources

Many water resources are part of environmentally sensitive areas. The location of roadways through environmentally sensitive areas should be kept to a minimum. Maintaining natural water depths and implementation of construction site erosion control measures are ways to prevent sediment laden run-off from flowing into surface waters. Run-off control measures must be taken during any construction of a transportation facility. Exhibit 30 shows wetlands and streams in the Oshkosh area.

The location of new developments should be planned in conjunction with both existing transportation facilities and land uses to promote sanitary sewer systems which will effectively and economically serve urban development. To facilitate compact development, vacant developable lands within the existing urban area should first be in-filled. Sanitary sewerage service to existing development should be provided whenever it is the most cost effective alternative for addressing failing on-site disposal systems.

Sewer service area plans play a significant role in development. East Central Wisconsin Regional Planning Commission, under a contract with the Wisconsin Department of Natural Resources (WDNR), prepares sewer service area plans, while the WDNR ultimately reviews and approves the plans. The Oshkosh Comprehensive Plan cites weaknesses in the sewer service amendment process, and the current plan scenario reflects some of the undesirable effects such as sprawl or "leapfrog" development. Because the sewer service area planning process is largely based on growth projections, the results of boundary limits established can in some instances be too restrictive or too liberal. If the boundary is too restictive, development can be pushed into unsewered areas and into non-contiguous villages. If the boundary is too liberal, development can occur in a haphazard, or leap frog fashion. Communities have criticized East Central's projections for being too conservative and have fought for additional acreage allocations. In response to community's demands and to provide a choice of developable sites within the sewer service area boundary, East Central has historically provided excess acreage within the sewer service planning area. At the time of this last update, the Towns of Oshkosh and Black Wolf had more vacant area available for sewered development than their projected growth is expected to consume in the next 20 years, the Town of Algoma had 15 years of growth available, and the City of Oshkosh had 10 years of growth available. This last update provided 982.96 excess acres within the Oshkosh Urban Area sewer service area allocations. By providing this level of excess available acres, East Central is leaving the burden of controlling development to individual jurisdictions.

Air Quality

The Oshkosh urbanized area is currently an attainment area. To remain an attainment area, the plan supports efficient traffic control measures and the encouragement of transit, bicycle, and pedestrian travel. Air quality should be monitored to ensure that motor vehicles, including air and water craft, do not exceed the exhaust emission standards established by the Environmental Protection Agency (EPA).

Energy Consumption

The plan recognizes that energy supplies are uncertain and that the conservation of energy is important. The conservation of energy encompasses the need for development to occur at densities adequate to sustain reasonable urban services and to support multimodal transportation. The use of ride sharing, organized efforts such as Travel Demand Management (TDM) programs, and transit should be considered especially in areas where major employers are located, and the location of major businesses should consider the availability of transit. Pedestrian and bicycle facilities should

be made available where possible. Pedestrian and bicycle facilities can easily be incorporated concurrent with new development. It is more difficult and costly to incorporate these facilities into existing development. Lower densities also can not be efficiently served by transit. While densities within the older portion of the City of Oshkosh are capable of sustaining transit, new development in the city and surrounding towns is not.

The design of highway facilities needs to include smooth pavements and the elimination of steep grades and sharp curves to conserve energy. Traffic flows and transportation facility locations should provide the fewest interruptions and shortest travel paths for the greatest number of trips. Efforts to improve energy conservation through improved fuel efficiency of vehicles and through educational programs on better driving travel habits are also necessary.

Ecosystems and Habitat Fragmentation

Minimizing environmental disruption and maintaining a quality environment is a priority of the land use/transportation plan. Locating and expanding roadways through environmentally sensitive areas should be kept to a minimum. These areas include wetlands, areas subject to flooding, steep slopes (areas with slopes greater than 12 percent), high bedrock, and areas where endangered plants and wildlife are found. Encouraging the presence of natural vegetation, especially along roadsides, offers protection to wildlife and a reduction in the need for herbicides.

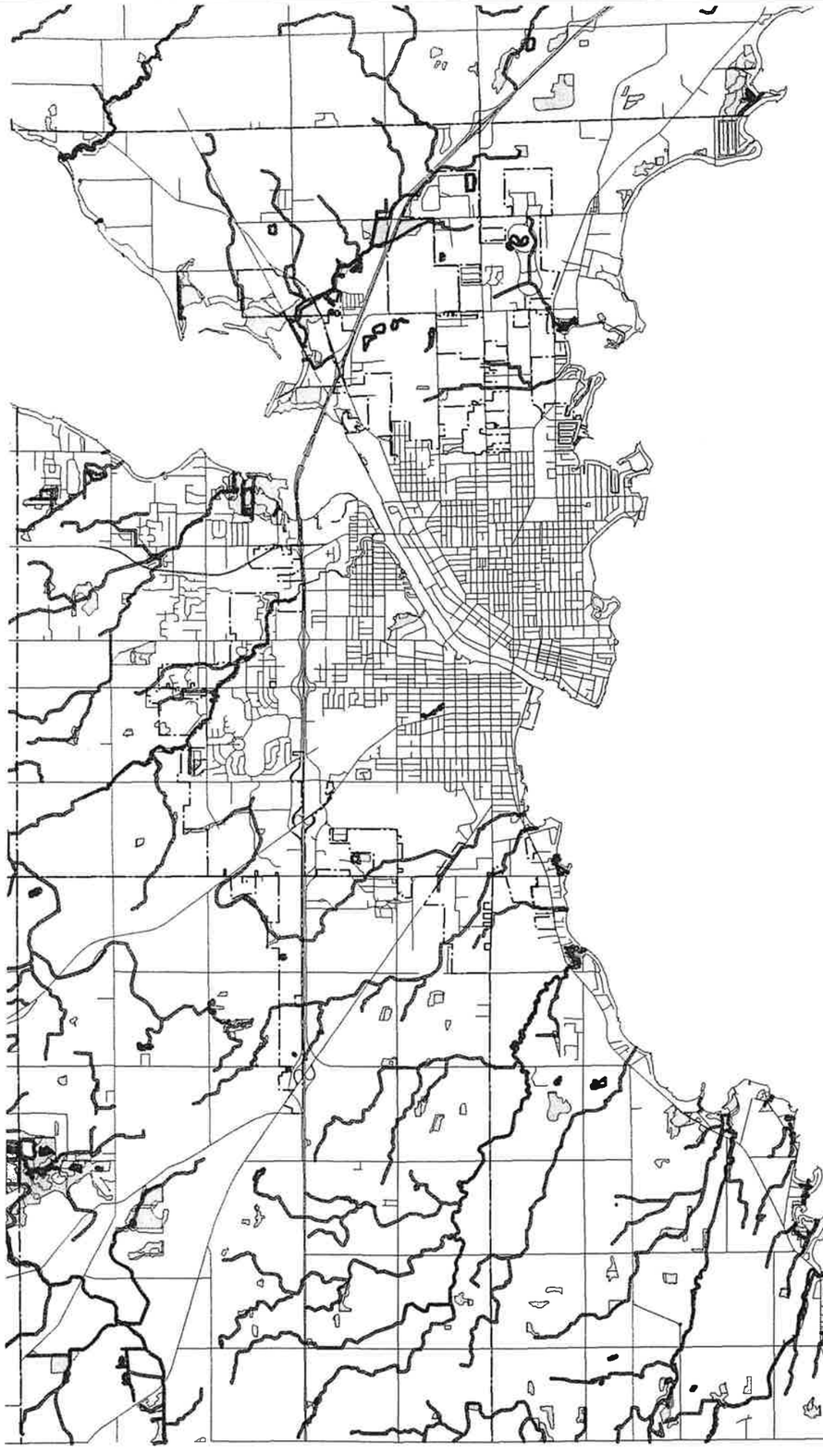

EXHIBIT 30
OSHKOSH AREA
WETLANDS AND STREAMS

WETLAND

STREAM BUFFER (75')

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

NORTH

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SCALE IN MILES

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

FINANCIAL PLAN

FINANCIAL PLAN

INTRODUCTION

The primary goal for the street and highway network is to connect activity centers and meet the short and long-range needs, interest and objectives of the citizens of the area in a cost-effective manner. A determination must be made as to what is cost effective, relative to adequately providing an efficient street and highway system. What level of spending is required to provide and maintain the street and highway network and how equitable are the arrangements between jurisdictions and the populous to support the total network? The financial plan considers anticipated future funding and the adequacy of existing spending by comparing transportation expenditures across all jurisdictions.

While the focus is the Oshkosh Metropolitan Planning Area, the analysis is based on the *Long-Range Transportation/Land Use Plan, Interim Status Report,* ECWRPC 1994. The study considered the Fox Cities, Oshkosh and Fond du Lac planning areas and included historic transportation expenditures and revenues for over 20 jurisdictions. The Oshkosh financial plan builds on the previous study to identify specific street and highway needs and estimate related costs over the life of the plan. The analysis includes a pavement inventory for the minor arterial and collector system completed by ECWRPC in 1995 using the ROADWARE pavement management system. The principal arterials and connecting highway information is based on the 2020 urban corridor needs analysis prepared by WisDOT, working in cooperation with local governments, and other agencies. The information provides a general overview of the cost and complexity of the street and highway network and the arrangements in place to maintain and improve it.

Collectively, local jurisdictions in the Oshkosh study area spent about $11 million in 1994 on the construction, maintenance and administration of the street and highway system. From 1996 to 2020 the expenditure for the various jurisdictions to provide and maintain a comparable transportation system may amount to over 380 million in current dollars.

PLANNING AREA BOUNDARIES

Population and other socioeconomic information used in the various plan forecasts is primarily available by minor civil division (MCD) or political jurisdictions, i.e. county, town, village and city boundaries. As part of the sewer service area planning, the Oshkosh study area includes the City of Oshkosh and the tier of towns surrounding the city. ISTEA requires that financially constrained planning be done within an area smaller than the study area boundary described earlier in this report, the Metropolitan Planning Area Boundary (MPAB) (Exhibit 31). The MPAB represents that area anticipated to be urban in nature by the year 2020. Another boundary requiring definition for this section is the Urbanized Area Boundary (UAB). The UAB is that area currently developed in a contiguous urban nature and categorized by the U.S. Bureau of Census as the Urbanized Area. It is within this boundary that projects are eligible for urban category funding programs.

Historic, existing and projected information used in the financial analysis is adjusted to include only the Metropolitan Planning Area for final state, federal and local funding as they relate to anticipated needs over the life of the plan.

HIGHWAYS

Street and Highway Miles

The Fox Cities and Oshkosh interim study was completed using WisDOT 1992 Urban Functional Classification System Mileages or mileage within the federal urbanized area. Functional classification is a system to rank streets and highways based on their function, traffic carrying capacity and access to land use. The functionally classified network are those streets and highways selected, by local governments in cooperation with WisDOT, as the most important to the urban area regardless of jurisdiction. Principal and minor arterials have larger volumes of traffic, serving mainly through traffic, with less direct access to land use. Collector streets provide more access to the various land uses, or destinations, and serve a lesser role in carrying traffic. This study gives additional focus to the classified system and the jurisdictional arrangements in place to provide and maintain the transportation network.

Federal regulations state that up to 35 percent of total street and highway miles may be included in the functionally classified network, eligible for STP Urban funding. In 1992 the Oshkosh Urbanized Area had approximately 34% of the system classified or about 97 of the total 287 miles. Local streets account for the balance, amounting to about 190 miles (Exhibit 32). Local streets provide access to land use and carry traffic to collectors and arterials for the major portion of the trip. Projects on local streets are not eligible for STP Urban Funding and must be funded by local revenue and/or other programs.

EXHIBIT 32

1992 OSHKOSH URBANIZED AREA MILEAGE

Principal Arterials	31.11
Minor Arterials	42.90
Collectors	35.40
Total Classified System	96.97
Local Streets and Highways	190.52
Total Urbanized Mileage	287.49
Percent Total Miles Classified	34%

Source: WisDOT, 1992

For the purpose of this study street and highway miles are adjusted to reflect the larger Oshkosh Urbanized Area in the year 2020, the MPAB. Road mileage information is based on WisDOT urban area files converted to ROADWARE pavement management software and includes the minor arterial and collector portion of the functionally classified system. Included in the classified system are about 15 miles of county trunk highway, both minor arterials and collectors.

The principal arterials and/or state trunk or connecting highways were adjusted and provided by WisDOT. The remaining miles are local streets and highways and are based on WisDOT local road files, proportioned to reflect the townships within the Metropolitan Planning Area.

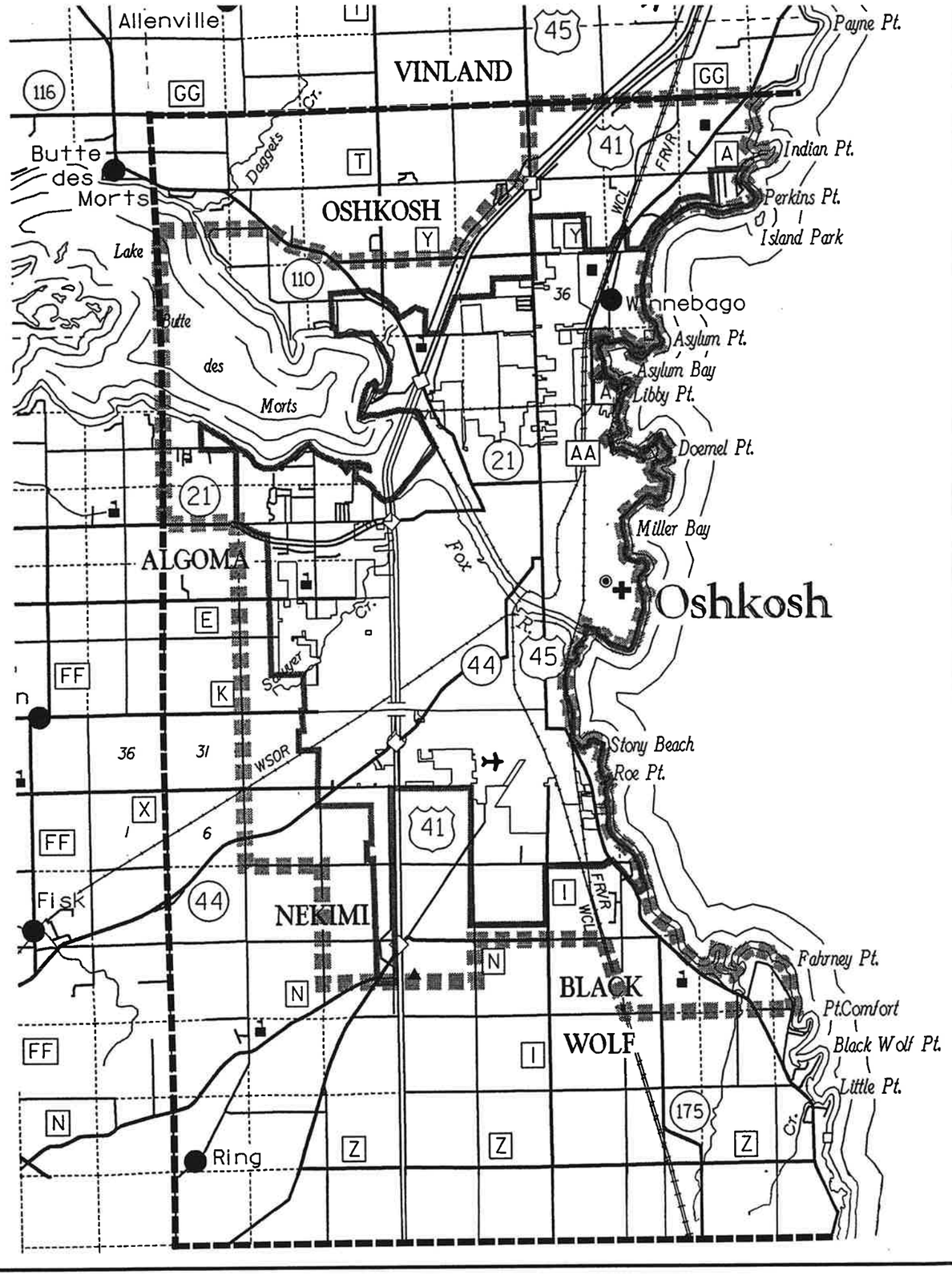


EXHIBIT 31
OSHKOSH STUDY AREA

- STUDY AREA BOUNDARY
- URBANIZED AREA BOUNDARY
- METROPOLITAN PLANNING AREA BOUNDARY

Source: WISDOT DECEMBER 1993

This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

The proposed 2020 system includes 45 miles of principal arterials, 42 miles of minor arterials, 37 miles of collectors, with the remaining 254 miles, local streets and highways (Exhibit 33). The projections comply with federal regulations in that up to 35 percent of the total system may be classified and eligible for STP Urban Funding. Typically, not all of the possible mileage is used so that future street and highway projects may be added as part of the planning process.

EXHIBIT 33

2020 OSHKOSH URBANIZED AREA MILEAGE

Principal Arterials	45.60
Minor Arterials	42.99
Collectors	37.13
Total Classified System	125.72
Local Streets and Highways	254.28
Total Urbanized Mileage	380.00
Percent Total Miles Classified	33%

Source: WisDOT, ECWRPC, 1996

Estimated Long Range Funding

The following analysis is based in part on annual bulletin of *County and Municipal Revenues and Expenditures,* published by the Wisconsin Department of Revenue (DOR) from 1988 through 1994. 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.

The reports also identify state highway aids as a line-item, but exclude costs incurred by the state or county for the principal arterials, connecting highways and county trunk highways within the MPAB. To isolate local expenditure, the state and federal highway aids are separated from the total transportation costs reported. The 1994 local expenditure is then projected in constant dollars over the life of the plan and is assumed to a reasonable estimate of anticipated local revenue.

In 1994 the jurisdictions in the Oshkosh study area spent over $9 million on the transportation system (Exhibit 34). The largest portion, over $8.5 million and nearly 95 percent, was spent by the City of Oshkosh. The total anticipated local spending over the life of the plan amounts to nearly $228 million.

Projected state and federal funding for the Oshkosh Metropolitan Area is provided by WisDOT and show specific funding in various programs over the 25 year plan. Two 5 year time frames and one 15 year time frame are based on specific annual funding amounts. The data shows no major projects are anticipated beyond the initial five-year program (Exhibit 35). The information shows anticipated funding of nearly $400 million over the life of the plan.

EXHIBIT 34

1994 LOCAL TRANSPORTATION EXPENDITURES
PROJECTED REVENUE 1996 TO 2020
Oshkosh Metropolitan Area

Oshkosh Study Area	Local Transportation Expenditure $	Percent of Total Expenditure
City of Oshkosh	8,523,700	94%
T. Algoma	297,700	3 %
T. Oshkosh	61,200	1 %
T. Nekimi	103,000	1 %
T. Black Wolf	58,900	1 %
T. Vinland	54,500	1 %
Total Local Expenditure	9,099,600	100%
Projected Local Revenue	$9,099,600 X 25 Years	$227,490,000

Source: DOR, ECWRPC 1996

EXHIBIT 35

WISDOT LONG RANGE FUNDING PROJECTION
Oshkosh Metropolitan Planning Area

	1996 - 2000	2001 - 2005	2006 - 2020	Plan Total
2020 Backbone	6,350,000	6,350,000	19,050,000	31,750,000
Other STH Highways	95,000	1,420,000	3,696,000	5,211,000
Major Projects	6,730,000	0	0	6,730,000
Bridges (High Cost)	415,000	415,000	1,162,000	1,992,000
Maintenance (STH)	2,770,000	2,770,000	7,756,000	13,295,000
LRIP	890,000	1,475,000	7,420,000	9,785,000
General Aids	13,670,000	17,720,000	51,338,000	82,728,000
STP Urban Program	1,675,000	1,675,000	4,690,000	8,040,000
STP Rural Program	85,000	85,000	238,000	408,000
Total Funding	32,680,000	31,910,000	95,350,000	159,940,000

Source: WisDOT, 1996

The constant dollar assumption to project local funding, combined with the state and federal projections provided by WisDOT, shows anticipated revenue over the life of the plan at about $387 million (Exhibit 36). Additional funding is anticipated from other sources such as Winnebago County and the Oshkosh Transit System, but the amounts are much smaller when compared to their specific needs and thus, less significant in the big picture.

Maintenance and funding agreements are complex and common across all jurisdictions. For example, it may be more cost effective for a town to plow a portion of county highway if they are out there anyway. Typically, the county is working through agreements with the state to maintain the state trunk highways. The various arrangements and agreements make it difficult to ferret out who is paying what. The county trunk highway system and public transportation are addressed in other discussions.

EXHIBIT 36

PROJECTED LONG RANGE FUNDING
Oshkosh Metropolitan Planning Area

Anticipated Revenues	1996 - 2000	2001-2005	2006-2020	Plan Total
Local	45,498,000	45,498,000	136,494,000	227,490,000
State and Federal	32,680,000	31,910,000	95,350,000	159,940,000
Total Revenue	78,178,000	77,408,000	231,884,000	387,430,000

Source: DOR, WisDOT, ECWRPC 1996

ESTIMATED LONG RANGE NEED

Principal Arterials

WisDOT recently completed an update of the 1989 Urban Corridors Study, an inventory and assessment of the state trunk highways and other principal arterials within federal urban areas. The study includes statewide data on all urban principal arterial needs that is then provided to the MPOs and used in the preparation of financial plans. The WisDOT Districts met with local governments and operating agencies to compile a listing and schedule of principal arterial improvement projects, then prepared estimates of the various costs over the life of the plan.

The corridor study identifies over $43 million in needs over the planning period and includes over $37.5 million for state trunk and connecting highways and another $5.6 million for other principal arterials on local streets in the urban area (Exhibit 37). Connecting highways are those streets owned by the local jurisdiction, but are signed and designated state trunk highways, paid for by WisDOT through local maintenance agreements.

Still other streets belong to the local jurisdiction, are classified principal arterials based primarily on traffic volumes, and are eligible for additional funding through the classification program. Principal arterials can also be on county trunk highways and would be subject to maintenance agreements with Winnebago County. However, no county highways are classified as principal arterials in the Oshkosh urban area.

EXHIBIT 37

OSHKOSH AREA URBAN CORRIDORS
PRINCIPAL ARTERIAL NEEDS SUMMARY
(Total in Current Dollars $)

State Highways / Connecting Highways	1996 - 2020
Preservation	
Resurface / Recondition	18,477.000
Reconstruction	5,316,000
Spot Improvements	881,000
Preservation Subtotal	24,643,000
Expansion	
Additional Lanes	5,411,000
New/Revised Interchanges	7,426,000
Expansion Subtotal	12,837,000
State Highway / Connecting Highway Total	**37,510,000**
County Trunks / Local Streets	
Preservation	
Resurface / Recondition	988,000
Spot Improvements	4,633,000
County Trunk/Local Preservation Total	5,621,000
Grand Total	**43,131,000**

Source: WisDOT, 1996

Minor Arterials and Collectors

In 1995 an inventory and evaluation was completed for all functionally classified streets and highways using the PASER pavement surface rating system. The rating system has been developed and improved over the years by the Transportation Information Center (TIC) at the University of Wisconsin - Madison, in cooperation with and sponsored by WisDOT. Streets are evaluated based on a 1 to 10 rating of the roadway surface, with "1" being in the worst condition and "10" being a brand new facility. The results are entered into a computer program. The ROADWARE pavement management system, also developed by the TIC, converts digital WisDOT local road files into a format that can be used on a typical PC. After the inventory and evaluation, the street and highway segment data base is updated, with the rating scores used by the software to suggest surface treatments and estimate cost, as well as prioritize projects based on functional classification.

The software also simulates or models the deterioration of the road surface and projects surface conditions up to five years into the future. During the simulation, street and highway projects can be selected based on an annual budget designated by the user. For example, if a selected project is rated at "7", and requires crack seal and patching, it subtracts that cost from the budget. At the same time it raises the condition rating of the street and improves the overall system. The software allows testing with various funding amounts in an effort to keep up with maintenance or even improve the overall surface condition rating over time.

A condition rating graph of the current minor arterial and collector system shows that 19.26 of the 80.12 miles of streets and highways were rated at "7" (Exhibit 38). Streets rated from "6" to "7" are considered to be in good condition, but require routine maintenance. Over 20 miles of streets were rated "8" or better and require no maintenance. Another 20 miles rated "5" or worse will require some type of resurfacing or reconstruction.

EXHIBIT 38

MINOR ARTERIAL AND COLLECTOR
PAVEMENT CONDITION

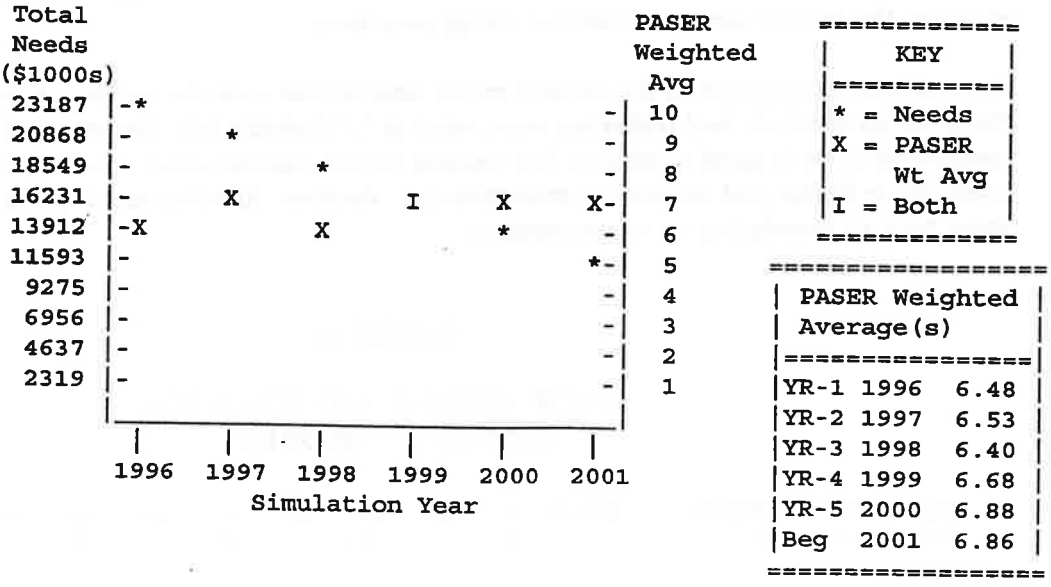
CR	SUGGESTED TREATMENT	MILES	0 10 20 30 40 50 60 70 80 90 100
			|....|....|....|....|....|....|....|....|....|....|
10	NO TREATMENT	6.700	***** 8.36
9	NO TREATMENT	6.890	***** 8.60
8	NO TREATMENT	7.790	***** 9.72
7	JT/CRACK SEAL	19.260	********** 24.04
6	SURFACE TREATMENT	16.890	********** 21.08
5	SURFACE TREATMENT	10.730	******* 13.39
4	STRUCT/REHAB	5.320	******* 6.64
3	STRUCT/REHAB	4.120	*** 0.00
2	RECONSTRUCT	1.830	** 2.28
1	RECONSTRUCT	0.590	* 0.74
	TOTAL:	80.120	

Source: ECWRPC, ROADWARE@ Ver. 6.0, 1996

In 1996 the PASER weighted average condition rating was 6.48, with a backlog of $23,186,679 expressed as total needs (Exhibit 39). Using a budget of $2.8 million annually shows a slight improvement to the system, with the overall condition rating reaching 6.88 by the year 2000. At the same time backlog projects are being addressed and are reduced to $10,596,756 by 2001. However, roads wear out relentlessly for a number of reasons and by the beginning of 2001 the overall condition rating has dropped to 6.86. Additional funding would be required to increase the rate of improvement and ultimately eliminate backlog projects.

EXHIBIT 39

PROJECT SIMULATION
BUDGET TABLE



BUDGET TABLE FOR: Minor Arterial & Collector

Year	PASER Wt Avg	Total Needs	Selected Project(s)	Trial Budget	Remaining Budget
1 - 1996	6.48	$23,186,679	$2,799,298	$2,800,000	$702
2 - 1997	6.53	$20,446,993	$2,799,673	$2,800,702	$1,029
3 - 1998	6.40	$18,003,406	$2,798,935	$2,801,029	$2,094
4 - 1999	6.68	$15,682,128	$2,801,940	$2,802,094	$154
5 - 2000	6.88	$12,996,447	$2,797,272	$2,800,154	$2,882
Beg - 2001	6.86	$10,596,756			

Selected Project(s) Total Cost

$13,997,118

Remaining Budget Amount Rolled Over: 100%

Source: ECWRPC, ROADWARE@ Ver. 6.0, 1996

The budget of $2.8 million annually seems to reasonably keep pace with maintenance requirements, but would not eliminate the backlog projects over the planning period. In the five year simulation from 1996 to 2001 nearly $14 million in projects were selected. Based on the 2.8 million dollar annual figure, about $70 million would be needed over the life of the plan for minor arterial and collector preservation. Including funding for the backlog projects about $93 million would be needed over the life of the plan for the minor arterial and collector system. The principal arterial need of over $43 million combined with the $93 million for the minor arterial and collector system, amounts to about $136 million in need for entire classified system.

Local Roads

No inclusive street and highway inventory and evaluation has been done for the local streets and highways, although the need to do so is apparent, to justify the ever increasing amount of funding required. Needs for the local roads are estimated based on the classified system analysis and the previous *Interim Status Report,* ECWRPC 1994. The financial element of the interim plan identified the range of expenditures across jurisdictions and discussed possible approaches to better spread the cost over all jurisdictions for the functionally classified system.

Needs are estimated on a dollar/per mile basis, using the assumption that local streets and highways are less expensive to provide and maintain than the classified system. Expenditures for the street and highway network vary widely based on facility type and jurisdictional responsibility, which in turn reflects levels of urban development and traffic volumes. Studies show cities have the greatest per mile expenditures, followed by villages, counties and towns. Cities have the largest portion of 4-lane facilities, higher traffic capacity requirements, typically more sidewalks, with most streets requiring accommodations for sewer, water, utilities and other infrastructure associated with the transportation corridor. County trunk highways fall somewhere in between, built to a higher standard than town roads, but typically lacking curb and gutter or other amenities.

The principal arterial need of $43 million, applied to the 45.6 miles, over the planning period amounts to nearly $38,000 per mile annually for the principal arterials. The same method applied to the 80.12 miles of minor arterials and collectors converts the $70 million into about $35,000 per mile annually, slightly less than the principal arterials. Based on the assumption that local streets, primarily urban, are slightly less expensive than minor arterials or collectors, $33,000 per mile is applied to the 254.28 miles of local roads (Exhibit 40). The formula shows the estimated need for the local roads approaching $210 million over the life of the plan. The grand total for the identified need amounts to nearly $323 million.

EXHIBIT 40

ESTIMATED LOCAL NEEDS FORMULA

Facility Type	Total Miles	Annual Cost Per Mile Times 25 Years	Anticipated ($) Need
Principal Arterials	45.60	x $37,834 x 25 Years =	$43,131,000
Minors/Collectors	80.12	x $34,947 x 25 Years =	$70,000,000
Local Roads	254.28	x $33,000 x 25 Years =	$209,781,000
Grand Total			$322,912,000

Source: WisDOT, ECWRPC 1996

Bicycle and Pedestrian

Past history provides strong evidence that improvements enabling bicyclists and pedestrians to co-exist safely and effectively in the world of the motor vehicle often have not received high priority. As a result, many long stretches of roadway and site-specific locations continue to pose significant challenges for these modes of transportation.

Retrofitting existing roadways to make them more user-friendly for bicyclists and pedestrians encompasses a myriad of potential actions and has a correspondingly broad range of cost implications. Although many potential improvements would be highly beneficial to the bicyclist and/or pedestrian, they often require significant costs and most cannot be economically justified as "stand alone" projects. For these types of improvements, their timing by necessity should correspond to major improvement actions slated for the roadway. Some major projects designed to accommodate the bicyclist and pedestrian, however, are independent actions which to not entail modification of the roadway and should be constructed as funding permits. Examples of these types of projects include off-road paths, sidewalks, and pedestrian overpasses. Additionally, there are a number of improvements, particularly at site-specific locations, which can be successfully implemented at relatively little cost and by effecting only minor roadway design changes. These types of projects would include improvements such as safety islands, sidewalk curb cuts, paved shoulders, striped bike lanes, bicycle-friendly drainage grates, strategically located bike racks, and so forth. To demonstrate a commitment to creating a more user-friendly environment for bicyclists and pedestrians in the urban area, a relatively consistent level of funding should be applied so that selected improvements can be undertaken on an annual basis until the list is depleted.

To be cost-effective, bicycle and pedestrian related improvements should be built into the design of new projects. Any design modifications needed to satisfactorily accommodate bicyclists and pedestrians beyond that of the standard design for roadway construction for motor vehicle use only is justifiably a cost of implementing the bicycle/pedestrian component of the long-range plan. In Oshkosh, for example, new four lane arterials have traditionally been constructed at a pavement width of 48 feet. The additional cost to utilize a new standard pavement width of 56 feet to comply with AASHTO standards for safe bicycle accommodations is logically allocated to the bicycle/pedestrian component of the plan and can be relatively easily quantified. Similarly, the cost of providing extra width paved shoulders, sidewalks, and pedestrian overpasses associated with new construction or reconstruction activities can be estimated as a segregated component of total project cost. The cost of undertaking site-specific improvements can be estimated for budgeting purposes once they are inventoried and prioritized. For this analysis costs for streets and highways proposed as bicycle routes (Exhibit 29) are estimated to include the additional width and amenities discussed earlier.

Recommended Projects

As part of the previously identified needs, a number of future transportation projects have been recommended through the planning process including the *1993 Oshkosh Comprehensive Plan* , and the *Interim Status Report* and the *Bicycle and Pedestrian Plan*, both adopted in 1994. A project list was compiled and used within ROADWARE to estimate costs based on the length, width and type of amenities included in the proposed facility. Larger, long range projects include the reconstruction of Bowen Street from Ceape Avenue to Murdock Avenue and the construction of portions of Oakwood Road to complete a 4-lane facility from 20th Avenue to STH 21 (Exhibit 41). Witzel Avenue is one example of a project designed to better accommodate bicycle and pedestrians and includes existing bridge modifications or a free standing bridge structure over USH 41. Specific project information is provided in the recommendation portion of the plan.

EXHIBIT 41

RECOMMENDED MAJOR PROJECTS

Street or Highway	From	To	Estimated Cost
20TH AVENUE	Oakwood Rd	Oregon St	1,403,860
20TH AVENUE	Oregon St	USH 45	302,786
9TH AVENUE	Oakwood Rd	Linden Oaks Dr	207,650
AIRPORT ROAD	Hughes Ave	20th Ave	870,345
BOWEN ST	Ceape Ave	Murdock Ave	2,681,261
CTH A	Bowen St	CTH Y	2,474,438
CTH I	Fisk Ave	Ripple Ave	1,164,560
CTH K	MPAB	Oakwood Rd	324,453
CTH Y	<USH 45	CTH A	495,202
FERNAU AVE	STH 110	USH 45	1,578,072
FISK AVE	USH 41	CTH I	1,484,320
IRVING AVE	Wisconsin St	Hazel St	1,603,126
MAIN ST	Algoma Blvd	Murdock Ave	2,192,412
MARION RD	STH 44	Jackson St	509,581
NEW YORK AVE	High Ave	Main St	1,496,174
OAKWOOD RD	20th Ave	STH 21	2,690,133
OREGON ST	Fisk Ave	Ripple Ave	1,164,560
PEARL AVE	Jackson St	Main St	444,408
SNELL RD	STH 110	CTH A	911,714
STH 44 over Fox River	4-lane / Lift	Bridge Structure	8,000,000
USH 45	Waukau Ave	Ripple Ave	1,300,000
VINLAND RD	Smith Ave	Snell Rd	2,087,462
WASHBURN ST	Witzel Ave	STH 21	1,348,131
WASHBURN ST	20th Ave	Dickinson Ave	857,901
WESTFIELD ST	9TH Ave	Witzel Ave	762,096
WESTHAVEN DR	>Abbey Ave	STH 21	958,922
WITZEL AVE	Oakwood Rd	Washburn St	838,483
WITZEL AVE over USH 41	Bike/Ped	Bridge Structure	1,000,000
Recommended Projects Total			41,152,050

Source: ECWRPC, ROADWARE@ Ver. 6.0, 1996

In summary, the study identifies over $387 million in long range needs within the Oshkosh Metropolitan Planning Area (Exhibit 42). Local roads represent the largest portion of the mileage and will require more than half of potential funding over the life of the plan.

EXHIBIT 42

LONG RANGE FINANCIAL NEED SUMMARY
Oshkosh Metropolitan Planning Area

Anticipated Need	Plan Total	% Total
Principal Arterials	43,131,000	
Minor Arterial & Collectors	70,000,000	
Recommended Projects	41,152,050	
1996 Minor Arterial and Collector Back Log	23,186,679	
Total Functionally Classified System Need and Percent of Total	177,469,729	45%
Local Road Need and Percent of Total	209,781,000	55%
Grand Total Need	387,250,729	100%

Source: WisDOT, ECWRPC, 1996

A comparison of funding and need shows that monies will be available to implement the proposed actions over the life of the plan. The Local revenue of about $227 million represents the largest portion of the funding and, consistent with the needs analysis, will represent more than half of the potential spending over the life of the plan (Exhibit 43).

EXHIBIT 43

LONG RANGE FUNDING SUMMARY
Oshkosh Metropolitan Planning Area

Revenue Sources	Plan Total	% Total
State and Federal Anticipated Funding and Percent of Total	159,940,000	42%
Local Anticipated Funding and Percent of Total	227,490,000	58%
Grand Total Funding	387,430,000	100%

Source: WisDOT, ECWRPC, 1996

Relative to the 20 year plan horizon estimated expenditures are fairly balanced, with some flexibility for additional projects as part of the planning and update process. While the roughly 180 thousand dollar difference would not finance larger projects like the USH 41 Lake Butte de Morts bridge, it may be enough for associated studies and preliminary engineering. Other projects that may begin within the plan horizon could include the reconstruction of CTH A within the metropolitan area as part of a proposed facility between Oshkosh and Neenah. In addition, many of the recommended projects associated with the bicycle and pedestrian plan may require additional right-of-way not included in the estimating procedure. In summary, any of the above projects or even minor cuts in proposed funding or changes in inflation rates could bring the balance to zero or lower instantly.

TRANSIT

The projected expenses, both operating and capital, for OTS are shown in Exhibit 44. The figures shown assume a 3.5 percent annual inflation factor applied to a relatively stable operating budget. Beginning in the year 2001, the proposals of Translinks 21, a recent statewide planning effort, are assumed to be implemented. The funding proposals included in Translinks 21 call for a combined state and federal funding level of 65 percent of operating expenses. In a stable program, like OTS, this results in a significant decrease in local share. Since new services are not anticipated at this time, other funding pots proposed in Translinks 21, specifically for new services, are not considered in this planning process.

The City of Oshkosh, as owner/operator of OTS, has a strong policy to only raise fares as a last resort. Even in the long-range horizon of this planning effort, it was felt that a fare increase was inappropriate. This is reflected later in the financial section of this report with an average fare of approximately 37 cents carrying through the planning period. OTS currently has the lowest cash fare in the state. A full cash fare for an adult rider is 50 cents.

Capital expenses reflect major purchases, primarily fleet replacement. As discussed in the existing conditions section, partial fleet replacements are anticipated in 2008 and 2009, eight buses, and again in 2012 and 2013, eleven buses. For years which do not experience bus purchases an average annual capital expenditures amount was calculated. In a year that does not include bus purchases, $60,000 is a typical capital budget. This covers bus parts, office equipment, and other routine purchases. No other major capital expenditures, such as a transit center or garage facility are anticipated within the planning horizon.

EXHIBIT 44

OSHKOSH TRANSIT SYSTEM
TRANSIT CHARACTERISTICS PROJECTIONS (TO 2020)

	ACTUAL		PROJECTED				
	1986-1990	1991-1995	1996-2000	2001-2005	2006-2010	2011-2015	2016-2020
OPERATING							
Operating Expensies ($000)	7,488	10,162	12,953	15,460	18,362	21,808	25,901
Fixed-Route	4,629	8,676	9,223	10,902	12,853	15,265	18,131
Paratransit	--	1,486	3,730	4,558	5,508	6,542	7,770
Farebox Revenue ($000)	1,572	1,856	2,465	2,880	3,454	4,142	4,967
Fixed-Route	890	1,337	1,661	2,005	2,608	3,393	4,413
Paratransit	15	519	804	893	938	986	1,036
Deficit ($000)	5,916	8,306	10,488	12,580	14,907	17,666	20,933
Federal	1,989	2,194	1,569	*	*	*	*
State	2,331	4,199	5,662	10,049	11,935	14,175	16,836
Other Local	--	302	985	741	864	976	1,085
Local - Municipal	1,096	1,611	2,298	1,772	2,016	2,278	2,531
CAPITAL							
Capital Expenses ($000)	1,190	2,972	1,126	290	1,940	2,710	300
Federal ($000)	952	2,350	901	232	1,552	2,168	240
Local ($000)	238	622	225	58	388	542	60
OPERATING STATISTICS: Fixed Route							
No. of Buses	26	26	26	19	19	19	19
No. of Employees	33	33	33	28	28	28	28
Revenue Hours (000)	231	246	230	230	230	230	230
Revenue Miles (000)	2,948	2,697	2,300	2,300	2,300	2,300	2,300
Revenue Passengers (000)	4,369	4,034	4,549	5,493	7,146	9,295	12,091
Average Fare	0.36	0.33	0.37	0.37	0.37	0.37	0.37
Operating Ratio (Rev/Exp)	0.21	0.15	0.18	0.18	0.20	0.22	0.24
Cost per Vehicle Mile	2.54	3.22	4.01	4.74	5.59	6.64	7.88
Cost per Passenger	1.71	2.15	2.03	1.98	1.80	1.64	1.50
Cost per Vehicle Hour	32.42	41.31	40.10	47.40	55.88	66.37	78.83
Passengers per Veh. Mile	1.48	1.50	1.98	2.39	3.11	4.04	5.26
Passengers per Veh. Hour	18.91	16.40	19.78	23.88	31.07	40.41	52.57

* - Beginning in the year 2001, federal and state funding is combined into one figure. (65% of operating expenses.)

Source: Oshkosh Transit System, ECWRPC, 1996

APPENDICES

APPENDIX A

Methodology - Population, Housing and Employment Forecasts

Vehicle Forecasts

Long-Range
TRANSPORTATION /LAND USE PLAN
for the Fox Cities, Oshkosh and
Fond du Lac Urban Areas

Population, Housing, and Employment

Methodology:

Oshkosh Urbanized Area

November 1996

Population Projection Methodology

East Central has developed a ratio methodology termed share-of-the-county to distribute Department of Administration (DOA) county projections to the minor civil division (MCD) level. The share of the county population for each MCD is calculated for four years. The four years selected include the last three census counts and the most recent DOA population estimate. The average annual percentage change in the share of the county population for each historic reference point is calculated and used as a constant to project the future percentage shares for each MCD. This constant is multiplied times the number of years between the most recent reference point and the chosen projection year. This number is added to the base share to obtain an MCD's projected share of a county's population. These projected shares are then multiplied by the county population projections to estimate the potential MCD population for that corresponding year.

The set of equations used are:

1) $m_y / c_y = s_y$

2) $(s_d - s_y) / n = a$

3) $(a_1 + a_2 + a_3 + a_4) / 4 = k$

4) $(k * n) + s_d = p_y$

5) $p_y * c_y = m_y$

where: m = MCD population; c = county population; s = share of the county; s_d = most recent reference share; a = annual change; k = average annual change; n = number of years between $year_1$ and $year_2$; p = projected MCD percentage share of the county's population; $_y$ = appropriate year.

For example, for the most recent population projections, the historic reference points would be 1970, 1980, 1990 and 1996. The projected years would be 2000, 2005, 2010, 2015, and 2020.

The last county population projections from DOA were published in June 1993. In 1994 and 1995, the official county population estimates for one or more counties was higher than the 1995 DOA projections. As a result, East Central modified the county projections in 1994 and 1995. These projections were again modified in 1996, as the 1996 projections for one county were higher than the 2000 projection. The DOA projections were modified by calculating a monthly growth rate for each county in the region. This growth rate was used to estimate the potential population for the next projection year. This intermediate population projection is compared to the DOA population projection. The resulting ratio is used to adjust the DOA county population projections through the projection period. These revised county projections are then

substituted for the DOA county projections in the share-of-the-county methodology.

The equations used to modify DOA county projections are:

1) monthly growth = $\frac{\text{current DOA est. - last census count}}{\text{number of months between them}}$

2) intermediate pop. projection = (p * t) + d

where: p = monthly growth; t = number of months to the next projection; and d = current DOA estimate

3) projection ratio = intermediate pop. projection / DOA pop. projection

4) revised pop. projections = projection ratio * DOA pop. projections

Household Projections

Household projections are calculated by subtracting the estimated population in group quarters from share-of-the-county population estimates and dividing the adjusted population by the projected persons per household (pphh). It is assumed that the population in group quarters will remain at 1990 levels[1]. County level projected persons per household are provided by DOA. Projected MCD persons per household were derived by calculating a ratio of 1990 MCD persons per household to the 1990 county persons per household and assuming that relationship holds constant throughout the projection period.

The equations used are:

1) Adjusted population = MCD pop. projection - 1990 pop. in group quarters

2) MCD pphh ratio = $\frac{\text{1990 MCD pphh}}{\text{1990 county pphh}}$

3) Projected MCD pphh = MCD share * projected county pphh

4) Number of households = adjusted population / projected MCD pphh

[1] The one exception is the Oshkosh Correctional Institution, which supplied a letter stating that their expected population is expected to reach 1,900 by 2000.

Single Family Multi-family Split

For land use purposes, residential housing units are divided into two categories, single family housing and multi-family housing. Single family housing includes one and two unit structures. Multi-family housing includes all residential structures with 3 or more units. In the Oshkosh Urban Area multi-family housing as a percentage of total housing increased approximately .31% a year between 1970 and 1995. In order for this trend to continue, 61% of the total new units built between 1995 and 2020 would have to be multi-family. While it is possible that this trend will continue or even increase, factors such as lower mortgage interest rates, availability of starter homes, or other factors may decrease the rate of multi-family housing growth. Since this housing split is also used for the Oshkosh Sewer Service Area Update and single family homes require more acreage than multi-family homes, the rate of change was cut in half to provide surplus residential acreage, should this trend decrease. The equations used to project the number of multi-family and single family dwelling units are:

1) $(h_{95} - h_{70}) / 25 = c$

2) $(^1/_2c * n) + h_{95} = h_y$

3) $h_y * p = m$

4) $t - m = s$

where: h = Percent multi-family; c = rate of change; n = number of years between 1995 and projected year; y = projection year; p = total projected dwelling units for that year; m = projected multi-family units; t = total projected dwelling units; s = projected single family units.

Employment Projections

Employment projections are based on age cohort projections. Age cohort projections are calculated for males and females using projected county level fertility, survival, and migration rates by age cohort. These rates were obtained from DOA. Male and female age cohort projections are added together to obtain a total projected population by age cohort. Since county population projections have been modified based on current DOA estimates, age cohort projections do not match the share-of-the-county projections. Modifying the rates to adjust the age cohort projections would be very time consuming and expensive. As a result, staff assumes that the percentage of population in each age cohort will remain the same, and adjusts the age cohort projections by multiplying the percentage of population in each age cohort times the share-of-the-county projected population.

Individuals between the ages of 15 and 64 are considered the working age population. Labor force participation rates from the census are used to determine what percentage

of the working age population is in the labor force. Place of work data from the census is used to determine what portion of the labor force works locally, and which portion commutes. Multiple job holders are estimated by calculating the difference between the total number of employed persons and the total number of workers.

Employment in the Oshkosh Urban Area

Projected fertility, survival, and migration rates are not available at the MCD level. For this reason, it is assumed that population changes within the urban area will change as the county population changes. Since the City of Oshkosh is a university town, it has an inordinate share of population within the ages of 18 to 35. Many of these individuals are temporary residents, and therefore should not be included in the age cohort projections. The university population was derived by multiplying the city's population in age cohorts 15 to 49 by the percentage of that population enrolled in college as shown in the 1990 census. The number of students is assumed to remain constant over time. The student population is deducted from the city's population by sex and age cohort. The adjusted population by age cohort for the City of Oshkosh is combined with the 1990 population by age cohort for the other MCDs in the urban area to obtain a 1990 urban area population by age cohort. Male and female age cohort projections are calculated using county level fertility, survival, and migration rates. The student population is held out of the calculations and added to the projected male and female population by age cohort as a constant. Male and female age cohort projections are combined to obtain a total projected population by age cohort. This projected population by age cohort is adjusted to match share-of-the-county urban area projections.

According to sample data from the 1990 census, 64.3% of the working age population in the Oshkosh Urban Area was in the labor force. Place of work data indicates that 75.2% of the urban area work force worked in the City of Oshkosh, and commuters[2] comprised 25.3% of the city's total labor force. Place of work data includes place of residence by MCD for each county, but only 20 destinations for place of work for each county. The destinations shown include cities, MSAs, and counties. Towns are not included in the choice of 20 work destinations. As a result, workers who live in the urban area and work in urban area towns are not included in the published data. Within the Oshkosh Urban Area, employment does exist within the urban area towns. Since this employment is not included in the place of work data, the percentage of the work force which lives and works in the urban area has to be greater than 75%. Place of work data indicates that 81.05% of workers in Winnebago County work in Winnebago County. Since the Oshkosh Urban Area has by far the largest number of employees in the county and the local work force has been undercounted, staff chose to increase the percentage of local workers to 80%. This percentage is held constant through the projection period. The percentage of working age population in the local labor force is increased gradually to

[2] A commuter is defined as someone who lives outside of the Oshkosh Urban Area and works in the Oshkosh Urban Area.

66.2%. It is assumed that the percentage of a county's labor force commuting to Oshkosh will remain constant through the projection period. According to survey data, in 1995 approximately 36,902 jobs existed within the TAZ boundary. The estimated total 1995 labor force was 32,493. Assuming that the difference between the estimated number of jobs and estimated labor force is filled by multiple job holders, approximately 13.57% of the labor force holds multiple jobs. This percentage is held constant throughout the projection period.

The equations used to project the Oshkosh Urban Area labor force are:

1) $a_1 + a_2 = w$

2) $w * p = r$

3) $r * .80 = l$

4) $(\text{sum}(c * k)) + l = t$

5) $(t * .1357) + t = e$

where: a_1 = population age 15 to 19; a_2 = population age 20 to 64; w = total working age population; p = labor force participation rate; r = resident labor force; l = resident labor force which works in the Oshkosh Urban Area; c = working age population in a county with individuals commuting to the City of Oshkosh to work; k = percent of the working age population which commutes to the City of Oshkosh; t = total labor force; e = total employment.

Once the total employment is forecasted, that employment is distributed into six industrial sectors: commercial, manufacturing, wholesale, trade, service, and other. Employment is distributed to these sectors by multiplying the total forecast employment for that year times the percentage of employment forecasted for that sector for that year. Changes in sectoral employment are calculated by multiplying the projected annual change times the number of years from the base year to the forecast year, then adding the product to the percent of employment by sector for the base year. The projected annual change is determined by subtracting the 1995 share of employment in a sector from the estimated 2020 share of employment. The 2020 share of employment by sector was established by comparing the current distribution of employment by sector for the City of Oshkosh to that of the United States and the Lake Winnebago Region, examining historical sectoral changes in employment for the United States, the Lake Winnebago Region[3], and the City of Oshkosh, and the projected sectoral changes for the U.S. and the Lake Winnebago Region. The overall continued declining share of

[3] The Lake Winnebago Region includes Fond du Lac, Green Lake, Winnebago, Calumet, Outagamie, and Waupaca Counties.

employment in manufacturing was moderated, as manufacturing employment in Oshkosh and the Lake Winnebago Region has been more stable that the country as a whole. The increasing share of service sector employment was also moderated, as the shift from manufacturing to service sector employment is not as pronounced in Oshkosh as it is for the nation. The following table shows the 1995 percent of employment by sector and the estimated 2020 employment by sector.

Percent of Employment by Sector

Sector	1995	2020
Commercial	22.11%	24.00%
Manufacturing	26.38%	22.00%
Wholesale	3.99%	5.61%
Trade	4.84%	4.00%
Service	37.98%	39.39%
Other	4.71%	5.00%

Source: ECWRPC

The set of equations used to project employment by sector are:

1) $(s_{2020} - s_{1995}) / 25 = c$

2) $(c * n) + s_{1995} = r$

3) $r * t = e$

where: s = share of employment in a sector; c = projected annual change; n = number of years between 1995 and the forecast year; r = projected sector ratio; t = total employment for the forecast year; e = employment by sector

Allocating Projected Population, Housing, and Employment to TAZs

The study area for the Oshkosh Urban Area includes the City of Oshkosh and the towns of Algoma, Black Wolf, Nekimi, Oshkosh, and a portion of the Town of Vinland. The population and household projections for these MCDs are summed and the total is used as the control total for the urban area. The urban area has been divided into 183 internal traffic analysis zones (TAZs). Each TAZ is comprised of one or more census blocks. The 1990 population and housing by block is assigned to TAZ(s) which have corresponding geographic boundaries. Some census blocks are divided among two or

more TAZs. Land use is used to allocate information in split blocks to each of these TAZs. 1995 employment is allocated to TAZs based on the address location of the employer.

Once the population, housing, and employment projections have been made for the urban area, those units have to be distributed to individual TAZs. In 1990, 99.33% of dwelling units and 98.34% of the population in the urban area were within the TAZs. In 2020, 97.09% of the dwelling units are expected to be within TAZs. The percent of population within TAZs may vary slightly, depending on the persons per household within the TAZs where dwelling units are distributed. All new employment is expected to be within the TAZs.

Dwelling units allocated within the TAZ boundary are distributed to TAZs based on vacant single family/multi-family acreage within the sewer service area, community plans for single family/multi-family distribution and redevelopment, MCD household projections, and community and committee recommendations. Projected population is distributed to TAZs by multiplying the total number of DUs per TAZ times the projected persons per household for each TAZ. TAZ level persons per household projections are derived by calculating the 1990 ratio of TAZ persons per household to the urban area persons per household. This ratio is multiplied by the projected urban area persons per household for the forecast year. Exceptions are made in TAZs where the persons per household is 1.7 or less. If the persons per household is 1.7 or less, the persons per household for that TAZ remain constant through the remainder of the projection period. Employment is distributed to TAZs based on vacant commercial/industrial acreage, location of existing employment and infrastructure, community plans and community and committee recommendations.

Long-Range
TRANSPORTATION/LAND USE PLAN
for the Fox Cities, Oshkosh and Fond du Lac Urban Areas

VEHICLE FORECAST METHODOLOGY: OSHKOSH URBANIZED AREA

October 1996

VEHICLE FORECASTS

The forecasts for vehicles in the 2020 target year was determined by applying a trended vehicle availability rate to the forecast dwelling units. The vehicle availability rate(number of vehicles per dwelling unit) was specifically calculated for each TAZ.

Because census vehicle availability data was not available at the TAZ level, the vehicle availability rate was determined for each TAZ using a technique developed for the Transportation Program at Princeton University.[1] This technique expresses the relationship between the number of vehicles per household and a "hybrid housing variable" composed of median market value of owner occupied households and the percentage of total dwelling units that are owner-occupied. Because the Latter two data items are generally available from the census for small geographic areas, this technique can be used to estimate the number of existing or future year vehicles at the TAZ level.

The equation which expressed this relationship is of the form:

$$y^c = a + bx$$

where:

y = vehicle availability per household;

x = hybrid housing variable: average market value of owner-occupied households multiplied by the proportion of households that are owner occupied;

a, b = calibration constants;

c = a shape parameter selected to obtain the proper shape of the calibrated curve.

The calibration constants and exponential shape parameter for a Fox Cities equation were determined using vehicle availability and hybrid housing variable base data from the Appleton-Oshkosh-Neenah MSA by census tract. Statistical regression techniques were applied to this data set to solve for the a and b constants and the c exponential. For a more detailed explanation of this procedure, see the previously referenced report. The resulting best fit equation was:

$$y^{3.2} = -0.01144 + 0.127386x$$

The specific form of the hybrid housing variable is:

$$x = \text{Percent Owner Occupied Dwelling Units} \times \frac{\text{Median Market Value of Owner-Occupied Dwelling Units}}{1000}$$

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[1] Simplified Aids for Transportation Analysis: Derivation and Use of Automobile Availability as a Variable for Estimating Travel Demand, Peat, Marwick, Mitchell & Co., prepared for the Urban Mass Transportation Administration, U.S. Department of Transportation, 1979.

Evaluating the Trend of the Vehicle Availability Function

Figure I on the following page portrays the relationship between the number of vehicles per occupied dwelling unit and the hybrid housing variable. The first three graphs for 1970, 1980 and 1990 show the distribution of points depicting the number of vehicles per household by the hybrid housing variable for each TAZ plus the best fit curve representing that distribution. The fourth graph juxtaposes the three best fit curves from which we can see an evolving trend; that trend being the flattening of the curve as housing values increase over time.

Between 1970 and 1980 it is difficult to see any change in the curve. They seem to be running parallel to each other with the primary difference being the base data difference between the 1970 census when only automobile data was collected and the 1980 census when vehicle (automobiles and light trucks which, for the most part, are used as automobiles) data was collected. The relationship of housing value to vehicle ownership was still evolving and upward mobility measured by the value of one's one closely predicted the propensity to have more vehicles. Each of the curves was continuing to point upward as housing value increased. By 1990 however, the fact that everyone in the household had a car available to use meant that as housing values increased on the upper end, the tendency to own more vehicles was no longer keeping pace. Since you can only drive one vehicle at a time, you do not need to buy more simply because you have more money.

So, while we see increased vehicle purchasing in the lower end of the curve in 1990, we also begin to see flattening of the curve in the upper end. Now there is empirical data to demonstrate that expected flattening is beginning to happen. Thus the 1990 curve gives us a better predictive tool for the future year forecasts for 2020. Whether the flattening of the curve has fully evolved will require verification by 2000 census data.

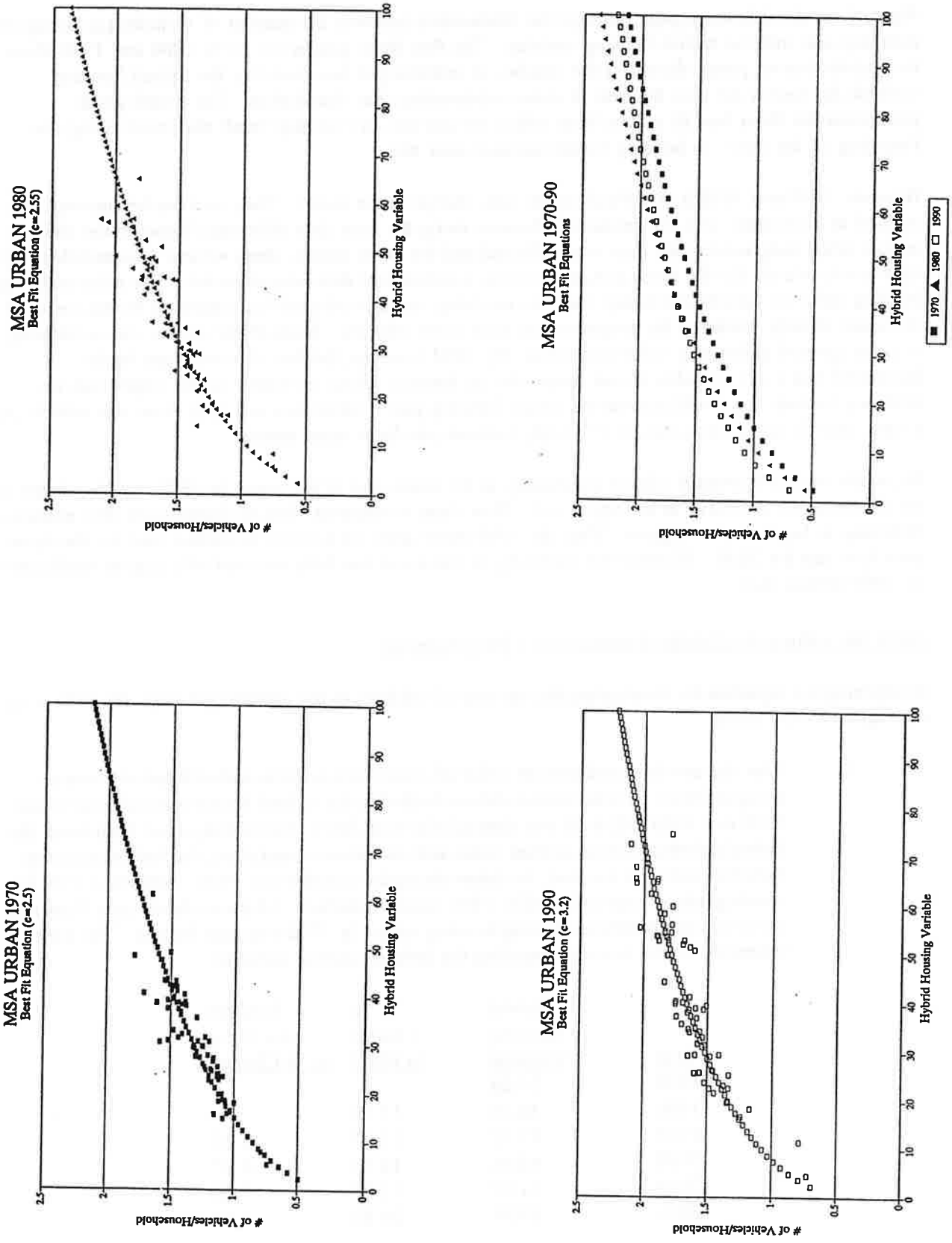
Using the Vehicle Availability Function for a 2020 Forecast

In applying the equation for forecasting the number of vehicles in the 2020 target year, the following assumptions were made:

1) That the trends in real market value of owner-occupied households and the owner-occupied share of total households embodied in the hybrid housing variable between 1970 and 1990 will hold true through the year 2020. Therefore, rather than trend the individual components, market value and owner-occupied share, the hybrid housing variable itself was trended. In determining the variable for 1970, 1980 and 1990, the housing values were adjusted to 1990 constant dollars. Likewise future year forecasts use a variable determined using housing values in 1990 constant dollars. The table below shows the basis for trending the hybrid housing variable:

Year	Hybrid Housing Variable	% Change in HHV	Straight Line Drop in % Change
1970	31.00		
1980	36.39	17.38	
1990	42.12	15.75	-1.63
2000	48.06	14.12	-1.63
2010	54.07	12.49	-1.63
2020	59.94	10.86	-1.63

FIGURE I


MSA URBAN 1980
Best Fit Equation (c=2.55)
# of Vehicles/Household
Hybrid Housing Variable
MSA URBAN 1970-90
Best Fit Equations
1970 1980 1990
MSA URBAN 1970
Best Fit Equation (c=2.5)
MSA URBAN 1990
Best Fit Equation (c=3.2)

Between 1970 and 1980 the hybrid housing variable increased from 31.00 to 36.39, an increase of 17.38 percent. The variable increased from 36.39 to 42.12, an increase of 15.75 percent. Thus the percentage change in the two decades actually declined by 1.63 percent. It was the decline in the decennial percentage change in the hybrid housing variable that was used in straight-line fashion to project decennial percentage change and recalculate the hybrid housing variable each decade. The application between 1990 and 2000 is a -1.63 incremental change in the decennial percentage increase (1980 to 1990 percentage change of 15.75 minus 1.63 equals 14.12 percentage change between 1990 and 2000).

2) That the 1990 equation calibration constants and the exponential shape parameter in the equation would remain constant for 2020 with only the hybrid housing variable changing.

The number of vehicles for the base years and the 2020 projection year are as follows:

Year	# of Vehicles	Absolute Change	Decennial Percentage Change	Number of Households	Vehicles per Household
1970*	23,893			19,687	1.21
1980	32,695	8,802	36.8	21,941	1.49
1990	38,425	5,730	17.5	24,093	1.59
2020	50,735	12,310	9.7	28,134	1.80

* The number of vehicles in 1970 does not include light trucks, only automobiles.

New Dwelling Unit Assumptions

In entering new dwellings into the housing stock for the 2020 projection year, the units were classified as either single- or multi-family units. However, the hybrid housing variable distinguishes units as either owner-occupied or renter-occupied. To convert the forecasted units to be compatible with the hybrid housing variable an assumption was made that all new single-family units were owner-occupied units and that all new multi-family units were renter-occupied units.

Oshkosh Urban Area, 1990

NOTE: TRANSPORTATION MODEL TAZS ONLY GO TO 1183. 1184-1187 ARE SSA TAZS.

TAZ	1990 Total Occupied Units	1990 Owner-Occupied Units	1990 Percent Owner-Occupied	1990 Weighted Median Value	1990 Hybrid Housing Variable	2020 # of Veh. /Exist. HH	2020 # of Veh.	2020 # of New SF HHs	2020 # of New MF HHs	2020 Percent Owner-Occupied	2020 Hybrid Housing Variable	2020 # of Veh. /HH	2020 # of Veh.
1001	5	4	80.00%	79700	63.76	2.15	11	0	0	80.00%	91.30	2.15	11
1002	44	39	88.64%	79700	70.64	2.22	98	2	0	89.13%	101.72	2.23	102
1003	41	39	95.12%	80051	76.15	2.27	93	28	0	97.10%	111.31	2.29	158
1004	108	90	83.33%	79700	66.42	2.18	235	2	0	83.64%	95.45	2.18	240
1005	60	56	93.33%	72500	67.67	2.19	131	0	0	93.33%	96.90	2.19	132
1006	3	2	66.67%	72500	48.33	1.97	6	7	0	90.00%	93.44	2.17	22
1007	61	46	75.41%	95800	72.24	2.23	136	367	311	55.89%	76.67	2.04	1507
1008	237	219	92.41%	95800	88.52	2.38	564	110	0	94.81%	130.07	2.41	835
1009	121	112	92.56%	79700	73.77	2.25	272	65	0	95.16%	108.61	2.27	423
1010	4	4	100.00%	79700	79.70	2.30	9	3	0	100.00%	114.13	2.31	16
1011	164	155	94.51%	68800	65.02	2.16	355	76	0	96.25%	94.83	2.18	523
1012	71	68	95.77%	68800	65.89	2.17	154	143	97	67.85%	66.84	1.95	608
1013	84	19	22.62%	90356	20.44	1.51	127	237	186	50.49%	65.33	1.94	983
1014	89	36	40.45%	54700	22.13	1.54	137	27	35	41.72%	32.68	1.56	236
1015	78	67	85.90%	79700	68.46	2.20	171	30	0	89.81%	102.51	2.23	241
1016	2	0	0.00%	68800	0.00	0.25	0	0	0	0.00%	0.00	0.25	0
1017	10	7	70.00%	68800	48.16	1.97	20	1	0	72.73%	71.65	2.00	22
1018	94	73	77.66%	70864	55.03	2.05	193	249	206	58.65%	59.52	1.88	1034
1019	13	7	53.85%	93246	50.21	1.99	26	20	0	81.82%	109.25	2.28	75
1020	9	8	88.89%	93310	82.94	2.33	21	1	0	90.00%	120.26	2.35	23
1021	220	163	74.09%	63763	47.24	1.96	431	9	29	66.67%	60.87	1.90	490
1022	3	2	66.67%	61900	41.27	1.88	6	0	0	66.67%	59.09	1.88	6
1023	167	124	74.25%	59413	44.12	1.92	320	62	49	66.91%	56.92	1.86	517
1024	76	64	84.21%	68805	57.94	2.09	159	18	190	28.87%	28.45	1.50	425
1025	8	5	62.50%	32925	20.58	1.51	12	29	0	91.89%	43.33	1.71	63
1026	4	2	50.00%	43900	21.95	1.54	6	26	0	93.33%	58.67	1.88	56
1027	65	0	0.00%	43900	0.00	0.25	16	24	8	24.74%	15.55	1.24	120
1028	143	99	69.23%	114138	79.02	2.30	329	36	28	65.22%	106.59	2.26	468
1029	113	79	69.91%	52800	36.91	1.81	205	-28	42	40.16%	30.36	1.53	194
1030	436	333	76.38%	85873	65.59	2.17	945	44	0	78.54%	96.58	2.19	1052
1031	296	117	39.53%	68300	27.00	1.64	487	8	0	41.12%	40.22	1.67	507
1032	127	93	73.23%	44529	32.61	1.74	221	7	0	74.63%	47.59	1.76	235
1033	294	212	72.11%	44947	32.41	1.74	512	11	0	73.11%	47.06	1.75	534
1034	11	6	54.55%	43900	23.95	1.58	17	2	0	61.54%	38.69	1.65	21
1035	761	339	44.55%	93310	41.57	1.88	1431	33	0	46.85%	62.60	1.91	1520
1036	63	57	90.48%	94600	85.59	2.36	148	329	0	98.47%	133.39	2.42	950
1037	357	342	95.80%	94600	90.63	2.40	856	321	0	97.79%	132.47	2.42	1640
1038	179	155	86.59%	66700	57.76	2.08	373	113	0	91.78%	87.66	2.13	621
1039	145	66	45.52%	56600	25.76	1.62	235	11	0	49.36%	40.01	1.66	260
1040	5	3	60.00%	56600	33.96	1.77	9	31	0	94.44%	76.55	2.04	73
1041	143	3	2.10%	52800	1.11	0.62	88	13	10	9.64%	7.29	0.98	163
1042	8	4	50.00%	52800	26.40	1.63	13	1	0	55.56%	42.01	1.69	15
1043	36	21	58.33%	48600	28.35	1.67	60	2	0	60.53%	42.12	1.69	64
1044	192	100	52.08%	52800	27.50	1.65	317	2	0	52.58%	39.75	1.66	322
1045	949	667	70.28%	48181	33.86	1.76	1674	36	0	71.37%	49.24	1.78	1749
1046	286	203	70.98%	47700	33.86	1.76	504	14	0	72.33%	49.41	1.78	533
1047	182	115	63.19%	44500	28.12	1.66	303	5	0	64.17%	40.89	1.68	313
1048	231	151	65.37%	44500	29.09	1.68	389	47	0	71.22%	45.39	1.73	481

Oshkosh Urban Area, 1990

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TAZ	1990 Total Occupied Units	1990 Owner-Occupied Units	1990 Percent Owner-Occupied	1990 Weighted Median Value	1990 Hybrid Housing Variable	2020 # of Veh. /Exist. HH	2020 # of Veh.	2020 # of New SF HHs	2020 # of New MF HHs	2020 Percent Owner-Occupied	2020 Hybrid Housing Variable	2020 # of Veh. /HH	2020 # of Veh.	
1049	281	239	85.05%	65306	55.55	2.06	578	5	0	85.31%	79.78	2.06	590	
1050	280	276	98.57%	71500	70.48	2.22	621	11	0	98.63%	100.98	2.22	647	
1051	37	36	97.30%	83800	81.54	2.32	86	57	0	98.94%	118.72	2.34	220	
1052	232	225	96.98%	83800	81.27	2.32	538	128	0	98.06%	117.67	2.33	839	
1053	11	11	100.00%	83800	83.80	2.34	26	90	0	100.00%	120.00	2.35	237	
1054	16	14	87.50%	66700	58.36	2.09	33	86	0	98.04%	93.64	2.17	221	
1055	174	82	47.13%	68606	32.33	1.74	303	51	99	41.05%	40.33	1.67	541	
1056	11	6	54.55%	69800	38.07	1.83	20	50	8	81.16%	81.12	2.08	143	
1057	33	18	54.55%	69518	37.92	1.83	60	28	0	75.41%	75.07	2.03	124	
1058	97	52	53.61%	56600	30.34	1.70	165	15	59	39.18%	31.76	1.55	265	
1059	234	0	0.00%	56600	0.00	0.25	58	0	5	0.00%	0.00	0.25	59	
1060	401	63	15.71%	67500	10.60	1.23	493	19	74	16.60%	16.04	1.25	619	
1061	477	253	53.04%	60611	32.15	1.74	828	25	0	55.38%	48.07	1.76	885	
1062	220	163	74.09%	49200	36.45	1.81	397	6	0	74.78%	52.68	1.81	410	
1063	158	70	44.30%	56600	25.08	1.61	254	7	157	23.91%	19.38	1.33	428	
1064	274	217	79.20%	49200	38.96	1.84	505	5	0	79.57%	56.06	1.85	516	
1065	87	45	51.72%	56736	29.35	1.69	147	-10	12	39.33%	31.95	1.55	138	
1066	0	0	ERR	0	ERR	0.00	0	0	0	0.00%	0.00	0.25	0	
1067	67	1	1.49%	45374	0.68	0.53	36	1	19	2.30%	1.49	0.61	53	
1068	97	0	0.00%	47800	0.00	0.25	24	0	2	0.00%	0.00	0.25	24	
1069	90	27	30.00%	47300	14.19	1.35	121	5	0	33.68%	22.82	1.40	133	
1070	551	160	29.04%	45846	13.31	1.32	727	28	0	32.47%	21.32	1.37	792	
1071	225	60	26.67%	53800	14.35	1.35	304	8	0	29.18%	22.48	1.39	324	
1072	491	199	40.53%	42690	17.30	1.43	703	22	0	43.08%	26.34	1.46	750	
1073	698	490	70.20%	46717	32.80	1.75	1219	35	0	71.62%	47.91	1.76	1291	
1074	294	237	80.61%	54600	44.01	1.91	563	11	0	81.31%	63.58	1.92	587	
1075	1	1	100.00%	57600	57.60	2.08	2	0	0	100.00%	82.48	2.09	2	
1076	11	7	63.64%	57600	36.65	1.81	20	0	0	63.64%	52.49	1.81	20	
1077	718	247	34.40%	41842	14.39	1.35	970	137	0	44.91%	26.91	1.47	1258	
1078	220	21	9.55%	54000	5.15	0.98	216	13	0	14.59%	11.28	1.12	262	
1079	295	72	24.41%	41162	10.05	1.21	356	30	0	31.38%	18.50	1.31	425	
1080	177	43	24.29%	53800	13.07	1.31	232	11	0	28.72%	22.13	1.38	260	
1081	49	12	24.49%	44800	10.97	1.24	61	3	0	28.85%	18.51	1.31	68	
1082	47	4	8.51%	45000	3.83	0.90	42	1	0	10.42%	6.71	0.96	46	
1083	46	3	6.52%	45000	2.93	0.83	38	6	0	17.31%	11.15	1.12	58	
1084	13	7	53.85%	45000	24.23	1.59	21	0	0	53.85%	34.70	1.59	21	
1085	0	0	ERR	0	ERR	0.00	0	0	160	0.00%	0.00	0.25	40	
1086	0	0	ERR	0	ERR	0.00	0	0	1	0.00%	0.00	0.25	0	a
1087	0	0	ERR	0	ERR	0.00	0	0	15	0.00%	0.00	0.25	4	
1088	18	1	5.56%	45000	2.50	0.79	14	7	4	27.59%	17.78	1.29	37	
1089	3	2	66.67%	45000	30.00	1.70	5	4	0	85.71%	55.23	1.84	13	
1090	10	3	30.00%	45000	13.50	1.32	13	0	0	30.00%	19.33	1.33	13	
1091	1	1	100.00%	45000	45.00	1.93	2	0	0	100.00%	64.44	1.93	2	
1092	23	0	0.00%	45000	0.00	0.25	6	0	7	0.00%	0.00	0.25	7	
1093	3	0	0.00%	45000	0.00	0.25	1	0	7	0.00%	0.00	0.25	2	
1094	16	2	12.50%	54000	6.75	1.07	17	0	0	12.50%	9.67	1.07	17	
1095	4	0	0.00%	45000	0.00	0.25	1	0	1	0.00%	0.00	0.25	1	
1096	0	0	ERR	0	ERR	0.00	0	0	0	0.00%	0.00	0.25	0	

Oshkosh Urban Area, 1990

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1097	159	1	0.63%	45000	0.28	0.42	67	0	30	0.53%	0.34	0.40	76	
1098	28	6	21.43%	45000	9.64	1.19	33	-5	40	1.59%	1.02	0.54	34	
1099	45	5	11.11%	45000	5.00	0.97	44	9	56	12.73%	8.20	1.02	112	
1100	98	17	17.35%	54000	9.37	1.18	116	16	0	28.95%	22.38	1.39	158	
1101	84	29	34.52%	43200	14.91	1.37	115	4	0	37.50%	23.20	1.40	124	
1102	127	52	40.94%	114800	47.00	1.95	248	7	0	44.03%	72.38	2.00	268	
1103	80	25	31.25%	114800	35.88	1.80	144	2	0	32.93%	54.13	1.83	150	
1104	82	31	37.80%	114800	43.40	1.91	156	5	0	41.38%	68.02	1.96	171	
1105	89	41	46.07%	114800	52.89	2.03	180	24	21	48.51%	79.74	2.06	277	
1106	225	131	58.22%	57600	33.54	1.76	396	8	0	59.66%	49.21	1.78	414	
1107	94	48	51.06%	57600	29.41	1.69	159	5	0	53.54%	44.16	1.72	170	
1108	41	33	80.49%	57600	46.36	1.95	80	1	0	80.95%	66.77	1.95	82	
1109	364	217	59.62%	48327	28.81	1.68	611	10	0	60.70%	42.00	1.69	632	
1110	554	384	69.31%	47497	32.92	1.75	969	35	0	71.14%	48.38	1.77	1040	
1111	14	14	100.00%	83800	83.80	2.34	33	10	0	100.00%	120.00	2.35	56	
1112	65	64	98.46%	83061	81.78	2.32	151	235	0	99.67%	118.55	2.34	701	
1113	145	134	92.41%	69269	64.01	2.15	312	14	168	45.26%	44.89	1.73	564	
1114	35	34	97.14%	69253	67.27	2.19	76	66	0	99.01%	98.19	2.20	222	
1115	0	0	ERR	0	ERR	0.00	0	16	127	0.00%	0.00	0.25	35	
1116	30	22	73.33%	72300	53.02	2.03	61	22	0	84.62%	87.61	2.13	111	
1117	514	337	65.56%	67887	44.51	1.92	987	15	0	66.54%	64.69	1.93	1023	
1118	260	186	71.54%	50900	36.41	1.80	469	43	0	75.58%	55.09	1.84	557	
1119	494	371	75.10%	42600	31.99	1.73	856	27	0	76.39%	46.60	1.75	910	
1120	82	44	53.66%	37200	19.96	1.50	123	43	298	20.57%	10.96	1.11	471	
1121	2	0	0.00%	37200	0.00	0.25	0	0	3	0.00%	0.00	0.25	1	
1122	0	0	ERR	0	ERR	0.00	0	0	68	0.00%	0.00	0.25	17	
1123	61	13	21.31%	37200	7.93	1.12	68	8	0	30.43%	16.21	1.26	87	
1124	232	117	50.43%	37200	18.76	1.47	340	13	0	53.06%	28.27	1.49	366	
1125	24	20	83.33%	83800	69.83	2.21	53	30	0	92.59%	111.11	2.29	124	
1126	62	59	95.16%	84485	80.40	2.31	143	340	0	99.25%	120.08	2.35	943	
1127	25	24	96.00%	83800	80.45	2.31	58	220	0	99.59%	119.51	2.34	574	
1128	233	225	96.57%	79500	76.77	2.28	531	75	28	89.29%	101.65	2.23	748	
1129	668	542	81.14%	83883	68.06	2.19	1465	22	0	81.74%	98.19	2.20	1520	
1130	204	27	13.24%	81647	10.81	1.24	252	12	74	13.45%	15.72	1.24	361	
1131	37	22	59.46%	60000	35.68	1.79	66	-22	-14	0.00%	0.00	0.25	0	a
1132	389	320	82.26%	60000	49.36	1.98	772	48	0	84.21%	72.35	2.00	875	
1133	53	25	47.17%	60000	28.30	1.67	88	4	0	50.88%	43.71	1.71	98	
1134	398	284	71.36%	43400	30.97	1.72	683	10	0	72.06%	44.78	1.72	703	
1135	291	157	53.95%	40000	21.58	1.53	446	16	0	56.35%	32.28	1.56	478	
1136	83	44	53.01%	41200	21.84	1.54	128	3	0	54.65%	32.24	1.56	134	
1137	201	82	40.80%	41200	16.81	1.42	285	11	0	43.87%	25.88	1.45	308	
1138	3	2	66.67%	41200	27.47	1.65	5	1	0	75.00%	44.25	1.72	7	
1139	0	0	ERR	60000	ERR	0.00	0	0	18	0.00%	0.00	0.25	4	
1140	1026	765	74.56%	54483	40.62	1.87	1916	7	23	73.11%	57.04	1.86	1963	
1141	675	481	71.26%	46247	32.95	1.75	1181	24	0	72.25%	47.85	1.76	1230	
1142	153	94	61.44%	45132	27.73	1.66	254	4	0	62.42%	40.34	1.67	262	
1143	121	94	77.69%	50536	39.26	1.85	224	0	0	77.69%	56.22	1.85	224	
1144	217	124	57.14%	44621	25.50	1.61	350	12	0	59.39%	37.95	1.64	375	

Oshkosh Urban Area, 1990

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1145	370	280	75.68%	53541	40.52	1.87	690	15	0	76.62%	58.75	1.88	722
1146	4	4	100.00%	57200	57.20	2.08	8	1	0	100.00%	81.91	2.08	10
1147	8	7	87.50%	83800	73.33	2.25	18	0	0	87.50%	105.00	2.25	18
1148	12	10	83.33%	83800	69.83	2.21	27	21	0	93.94%	112.73	2.30	76
1149	5	5	100.00%	80600	80.60	2.31	12	3	0	100.00%	115.42	2.32	19
1150	2	2	100.00%	83800	83.80	2.34	5	0	0	100.00%	120.00	2.35	5
1151	3	2	66.67%	83800	55.87	2.06	6	3	0	83.33%	100.00	2.22	13
1152	10	8	80.00%	60000	48.00	1.97	20	2	0	83.33%	71.60	2.00	24
1153	29	25	86.21%	93800	80.86	2.31	67	12	0	90.24%	121.22	2.35	96
1154	4	2	50.00%	68900	34.45	1.77	7	60	0	96.88%	95.58	2.18	140
1155	12	9	75.00%	56767	42.58	1.89	23	0	0	75.00%	60.97	1.90	23
1156	13	11	84.62%	57200	48.40	1.97	26	6	0	89.47%	73.29	2.01	38
1157	38	28	73.68%	57200	42.15	1.89	72	4	5	68.09%	55.77	1.85	87
1158	21	10	47.62%	56705	27.00	1.64	35	23	45	37.08%	30.11	1.52	136
1159	39	25	64.10%	52267	33.50	1.76	69	11	11	59.02%	44.17	1.72	105
1160	122	97	79.51%	57200	45.48	1.93	236	90	0	88.21%	72.25	2.00	424
1161	14	12	85.71%	66300	56.83	2.07	29	0	0	85.71%	81.38	2.08	29
1162	10	7	70.00%	66300	46.41	1.95	19	6	0	81.25%	77.14	2.04	33
1163	5	5	100.00%	66300	66.30	2.18	11	1	0	100.00%	94.94	2.18	13
1164	10	5	50.00%	66300	33.15	1.75	18	195	253	43.67%	41.46	1.68	771
1165	4	4	100.00%	77300	77.30	2.28	9	0	0	100.00%	110.69	2.29	9
1166	30	28	93.33%	76246	71.16	2.22	67	43	0	97.26%	106.19	2.26	165
1167	29	27	93.10%	92000	85.66	2.36	68	16	0	95.56%	125.89	2.38	107
1168	70	67	95.71%	76314	73.04	2.24	157	102	160	50.90%	55.63	1.84	613
1169	83	69	83.13%	90164	74.96	2.26	188	145	0	93.86%	121.19	2.35	536
1170	27	16	59.26%	66300	39.29	1.85	50	0	0	59.26%	56.26	1.85	50
1171	16	12	75.00%	66300	49.73	1.99	32	0	0	75.00%	71.21	1.99	32
1172	6	5	83.33%	77300	64.42	2.16	13	0	0	83.33%	92.24	2.16	13
1173	13	12	92.31%	92000	84.92	2.35	31	8	0	95.24%	125.47	2.38	50
1174	58	44	75.86%	92000	69.79	2.21	128	52	4	84.21%	110.94	2.29	261
1175	63	58	92.06%	92000	84.70	2.35	148	47	0	95.45%	125.76	2.38	262
1176	7	7	100.00%	66300	66.30	2.18	15	0	0	100.00%	94.94	2.18	15
1177	7	5	71.43%	66300	47.36	1.96	14	1	0	75.00%	71.21	1.99	16
1178	21	20	95.24%	66300	63.14	2.14	45	0	0	95.24%	90.42	2.15	45
1179	12	11	91.67%	66300	60.78	2.12	25	2	0	92.86%	88.16	2.13	30
1180	30	30	100.00%	69900	69.90	2.21	66	1	0	100.00%	100.10	2.22	69
1181	12	12	100.00%	69900	69.90	2.21	27	14	0	100.00%	100.10	2.22	58
1182	46	40	86.96%	69900	60.78	2.12	97	19	0	90.77%	90.86	2.15	140
1183	61	53	86.89%	92000	79.93	2.31	141	28	0	91.01%	119.90	2.34	209
1184	73	60	82.19%	79700	65.51								
1185	169	143	84.62%	66300	56.10								
1186	208	186	89.42%	69900	62.51								
1187	182	166	91.21%	81558	74.39			SFHH	MFHH	Total HH			
	24182					Total	42062	5850	3239	33271			59200
						Veh/HH	1.739					Veh/HH	1.779

APPENDIX B

Socio-economic Data by TAZ and Map

Base Year Data - 1990

SOCIOECONOMIC FORECASTS
Base Year Data - 1990

TAZ	TOTAL POP	TOTAL DUs	SINGLE FAMILY	MULTI FAMILY	AUTOS	TOTAL EMPLOYMENT
1	13	5	5	0	8	42
2	123	46	46	0	69	22
3	110	47	47	0	71	37
4	325	110	110	0	165	0
5	186	60	60	0	90	39
6	7	3	3	0	5	21
7	176	63	63	0	95	99
8	586	272	272	0	408	86
9	267	143	143	0	215	2
10	11	7	7	0	11	0
11	478	168	168	0	252	10
12	697	71	71	0	107	232
13	511	93	30	63	140	45
14	887	93	46	47	140	1,277
15	181	98	98	0	147	23
16	5	2	2	0	3	200
17	34	11	11	0	17	223
18	284	95	95	0	143	89
19	42	13	13	0	20	681
20	49	10	10	0	15	1,242
21	556	227	214	13	341	62
22	7	3	3	0	5	50
23	450	171	152	19	257	17
24	164	78	64	14	117	153
25	21	8	8	0	12	102
26	15	4	4	0	6	609
27	144	70	4	66	105	102
28	325	148	126	22	222	7
29	233	127	51	76	191	146
30	1149	453	416	37	680	114
31	697	300	192	108	450	364
32	329	134	134	0	201	94
33	709	305	305	0	458	135
34	26	13	13	0	20	581
35	1975	794	425	369	1191	304

Base Year Data - 1990

36	177	64	64	0	96	44
37	1032	376	376	0	564	28
38	465	190	190	0	285	67
39	331	154	124	30	231	178
40	25	6	6	0	9	153
41	266	166	16	150	249	4
42	16	9	9	0	14	0
43	109	38	38	0	57	46
44	449	194	145	49	291	52
45	2301	985	902	83	1478	98
46	647	300	274	26	450	137
47	460	187	187	0	281	38
48	517	237	219	18	356	431
49	717	286	286	0	429	33
50	732	288	288	0	432	53
51	114	38	38	0	57	2
52	719	234	234	0	351	15
53	32	11	11	0	17	68
54	42	16	16	0	24	32
55	407	191	81	110	287	6
56	21	12	7	5	18	84
57	78	30	30	0	45	105
58	225	102	62	40	153	254
59	312	239	0	239	359	169
60	882	443	64	379	665	206
61	1137	502	285	217	753	1,676
62	593	226	226	0	339	30
63	397	164	77	87	246	226
64	640	279	270	9	419	74
65	145	89	35	54	134	293
66	0	0	0	0	0	424
67	114	71	1	70	107	77
68	275	99	0	99	149	448
69	3899	95	54	41	143	1,386
70	1586	579	489	90	869	26
71	589	233	208	25	350	15
72	1272	513	464	49	770	170
73	1706	731	713	18	1097	327
74	716	305	298	7	458	60
75	4	1	1	0	2	2
76	16	11	11	0	17	1,197

Base Year Data - 1990

77	1591	761	510	251	1142	117
78	326	233	63	170	350	278
79	811	325	239	86	488	343
80	389	182	80	102	273	290
81	132	52	30	22	78	21
82	137	48	28	20	72	102
83	96	47	20	27	71	74
84	44	13	10	3	20	293
85	0	0	0	0	0	172
86	0	0	0	0	0	709
87	0	0	0	0	0	47
88	33	28	7	21	42	26
89	3	4	4	0	6	105
90	130	10	4	6	15	877
91	2	1	1	0	2	289
92	49	30	0	30	45	84
93	4	10	0	10	15	186
94	24	16	0	16	24	251
95	5	5	0	5	8	220
96	0	0	0	0	0	69
97	176	165	5	160	248	76
98	52	36	22	14	54	650
99	70	48	14	34	72	154
100	167	112	48	64	168	522
101	222	88	88	0	132	39
102	351	134	121	13	201	13
103	181	82	56	26	123	14
104	233	87	87	0	131	3
105	199	96	86	10	144	166
106	621	233	226	7	350	11
107	196	99	63	36	149	2
108	115	42	42	0	63	5
109	889	374	360	14	561	78
110	1333	583	560	23	875	32
111	37	14	14	0	21	9
112	173	67	67	0	101	4
113	461	149	142	7	224	2
114	111	35	35	0	53	4
115	0	0	0	0	0	270
116	68	30	30	0	45	317
117	1249	522	386	136	783	79

Base Year Data - 1990

118	669	273	260	13	410	46
119	1199	519	506	13	779	279
120	201	87	87	0	131	761
121	9	5	0	5	8	70
122	0	0	0	0	0	50
123	115	69	49	20	104	591
124	577	243	237	6	365	474
125	61	24	24	0	36	0
126	196	63	63	0	95	2
127	74	25	25	0	38	0
128	696	238	202	36	357	12
129	1941	679	572	107	1019	113
130	482	215	36	179	323	504
131	0	0	0	0	57	1,020
132	1170	433	383	50	672	38
133	24	53	26	27	36	160
134	959	408	376	32	612	74
135	750	307	297	10	461	209
136	181	86	66	20	129	125
137	471	212	204	8	318	346
138	9	4	4	0	6	390
139	0	0	0	0	0	656
140	2331	1044	760	284	1566	119
141	1590	694	694	0	1041	95
142	364	157	157	0	236	121
143	309	121	121	0	182	34
144	558	229	229	0	344	76
145	862	384	364	20	576	37
146	6	5	5	0	8	4
147	23	8	8	0	12	2
148	35	13	13	0	20	197
149	12	6	6	0	9	1,030
150	6	2	2	0	3	740
151	9	3	3	0	5	581
152	27	10	10	0	15	539
153	80	29	29	0	44	171
154	7	4	4	0	6	601
155	31	12	12	0	18	261
156	25	13	13	0	20	300
157	71	46	31	15	69	18
158	52	22	10	12	33	580

Base Year Data - 1990

159	84	42	30	12	63	9
160	314	134	134	0	201	27
161	48	14	14	0	21	8
162	31	10	10	0	15	0
163	11	6	6	0	9	0
164	32	10	10	0	15	0
165	8	4	4	0	6	3
166	70	31	31	0	68	2,225
167	84	29	29	0	44	9
168	200	72	72	0	108	37
169	203	92	92	0	138	39
170	83	27	27	0	41	0
171	54	16	16	0	24	3
172	18	6	6	0	9	0
173	36	15	15	0	23	0
174	132	67	49	18	101	14
175	170	68	68	0	102	125
176	25	7	7	0	11	0
177	23	8	8	0	12	0
178	64	21	21	0	32	4
179	35	14	14	0	21	0
180	87	31	31	0	47	0
181	32	12	12	0	18	4
182	100	50	50	0	75	25
183	139	75	75	0	113	0
TOTAL	64,882	25,306	20,377	4,929	38,057	36,905

Current Plans Scenario - 2020

SOCIOECONOMIC FORECASTS
Current Plans Scenario - 2020

TAZ	TOTAL POP	TOTAL DUs	SINGLE FAMILY	MULTI FAMILY	AUTOS	TOTAL EMPLOYMENT
1	11	5	5	0	11	42
2	112	46	46	0	102	22
3	163	69	69	0	158	36
4	294	110	110	0	240	0
5	165	60	60	0	132	37
6	20	10	10	0	22	21
7	626	246	165	81	531	98
8	698	325	325	0	781	83
9	1,371	708	708	0	1628	166
10	17	7	7	0	16	0
11	577	225	225	0	490	10
12	2,628	300	200	100	583	828
13	1,067	407	157	251	727	44
14	958	141	53	88	213	1,277
15	214	108	108	0	241	53
16	4	2	2	0	0	474
17	33	11	11	0	22	214
18	1,411	535	308	227	1002	230
19	95	33	33	0	75	748
20	49	10	10	0	23	1,401
21	567	258	229	29	490	67
22	6	3	3	0	6	81
23	669	278	186	92	517	33
24	525	284	82	202	425	157
25	84	37	37	0	63	116
26	103	30	30	0	56	561
27	190	101	24	77	120	107
28	402	207	135	72	505	9
29	222	127	51	76	194	136
30	1,097	480	443	37	1050	114
31	616	304	196	108	507	363
32	302	134	134	0	235	224
33	639	305	305	0	534	128
34	26	13	13	0	21	706
35	1,793	794	425	369	1520	306

Current Plans Scenario - 2020

36	838	337	337	0	816	44
37	1,730	678	678	0	1640	27
38	664	292	292	0	621	67
39	306	156	126	30	260	173
40	166	36	36	0	73	153
41	274	166	16	150	163	4
42	15	9	9	0	15	0
43	102	38	38	0	64	46
44	391	194	145	49	322	52
45	2,076	985	902	83	1749	97
46	585	300	274	26	533	137
47	413	187	187	0	313	38
48	537	278	233	45	481	501
49	638	286	286	0	590	33
50	667	291	291	0	647	53
51	251	94	94	0	220	2
52	1,027	360	360	0	839	14
53	260	101	101	0	237	102
54	213	93	93	0	202	70
55	685	335	144	191	567	146
56	118	72	58	13	148	528
57	138	61	61	0	124	105
58	332	171	67	104	265	250
59	309	239	0	239	59	168
60	828	493	82	412	619	269
61	1,030	502	285	217	885	1,676
62	536	226	226	0	410	30
63	653	322	77	245	428	226
64	563	279	270	9	516	84
65	121	89	35	54	138	292
66	0	0	0	0	0	420
67	144	87	1	86	53	77
68	247	99	0	99	24	411
69	3,879	95	54	41	133	1,385
70	1,473	579	489	90	792	26
71	530	233	208	25	324	15
72	1,156	513	464	49	750	170
73	1,561	733	715	18	1291	327
74	646	305	298	7	587	59
75	4	1	1	0	2	2
76	298	211	11	200	153	297

Current Plans Scenario - 2020

77	1,630	855	503	352	1258	114
78	336	233	63	170	262	272
79	808	336	219	117	449	342
80	354	188	78	110	260	290
81	123	52	30	22	68	20
82	123	48	28	20	46	102
83	97	55	18	37	66	74
84	342	113	10	103	96	282
85	493	267	0	267	40	53
86	0	0	0	0	0	1,162
87	26	15	0	15	4	41
88	44	29	8	21	37	26
89	7	7	7	0	13	105
90	128	10	4	6	13	877
91	2	1	1	0	2	287
92	54	30	0	30	7	83
93	13	10	0	10	2	188
94	52	36	0	36	17	229
95	6	5	0	5	1	220
96	0	0	0	0	0	69
97	204	189	0	189	76	73
98	104	63	1	62	34	594
99	86	57	8	49	64	152
100	218	132	48	84	153	500
101	204	88	88	0	124	38
102	324	134	121	13	268	13
103	158	82	56	26	150	14
104	218	87	87	0	171	3
105	390	204	65	140	371	161
106	562	233	226	7	414	11
107	175	99	63	36	170	2
108	103	42	42	0	82	5
109	795	374	360	14	632	77
110	1,226	589	566	23	1040	32
111	55	24	24	0	56	9
112	650	279	279	0	652	4
113	896	327	148	179	564	902
114	286	101	101	0	222	4
115	226	143	16	127	35	463
116	102	52	46	6	111	321
117	1,118	529	386	143	1023	79

Current Plans Scenario - 2020

118	681	303	290	13	557	46
119	1,096	521	508	13	910	311
120	902	423	87	336	471	250
121	74	18	0	18	1	70
122	108	68	0	68	17	41
123	224	136	49	87	180	129
124	532	245	239	6	366	395
125	120	54	54	0	124	0
126	1,343	402	402	0	943	2
127	672	245	245	0	574	50
128	910	347	311	36	774	11
129	1,777	690	583	107	1520	110
130	585	290	39	251	361	522
131	0	0	0	0	0	1,048
132	1,064	437	387	50	875	243
133	30	57	30	27	98	165
134	846	408	376	32	703	74
135	688	307	297	10	478	203
136	159	86	66	20	134	125
137	427	212	204	8	308	324
138	11	4	4	0	7	383
139	26	18	0	18	4	848
140	2,154	1,100	766	334	2015	160
141	1,426	699	699	0	1230	94
142	324	157	157	0	262	121
143	269	121	121	0	224	34
144	512	229	229	0	375	76
145	777	385	365	20	722	37
146	7	5	5	0	10	34
147	20	8	8	0	18	2
148	85	33	33	0	76	704
149	17	8	8	0	19	1,345
150	5	2	2	0	5	792
151	16	6	6	0	13	870
152	28	12	12	0	24	558
153	100	41	41	0	96	211
154	106	64	64	0	140	601
155	27	12	12	0	23	270
156	21	13	13	0	26	296
157	77	47	32	15	87	18
158	192	89	33	56	136	640

Current Plans Scenario - 2020

159	113	61	36	25	105	9
160	476	212	212	0	424	59
161	43	14	14	0	29	8
162	28	10	10	0	20	0
163	11	6	6	0	13	0
164	709	249	105	144	408	461
165	7	4	4	0	9	3
166	148	73	73	0	165	2,306
167	115	45	45	0	107	125
168	862	341	179	163	636	37
169	484	228	228	0	536	39
170	74	27	27	0	50	0
171	52	16	16	0	32	166
172	16	6	6	0	13	0
173	51	21	21	0	50	0
174	222	114	96	18	261	14
175	259	110	110	0	262	20
176	22	7	7	0	15	0
177	24	8	8	0	16	73
178	57	21	21	0	45	4
179	36	14	14	0	30	0
180	79	31	31	0	69	0
181	60	26	26	0	58	4
182	110	65	65	0	140	25
183	174	89	89	0	209	0
TOTAL	79,573	33,460	24,874	8,586	58,954	41,325

Uncontrolled Growth Scenario - 2020

SOCIOECONOMIC FORECASTS
Uncontrolled Growth Scenario - 2020

TAZ	TOTAL POP	TOTAL DUs	SINGLE FAMILY	MULTI FAMILY	AUTOS	TOTAL EMPLOYMENT
1	59	25	25	0	57	0
2	144	60	60	0	130	0
3	182	75	75	0	158	0
4	854	310	295	15	686	0
5	1,344	473	473	0	958	0
6	56	27	27	0	60	64
7	1,145	437	412	25	1,032	175
8	931	420	420	0	928	0
9	2,326	1,201	1,101	100	2,421	90
10	154	62	62	0	135	50
11	936	354	254	100	925	20
12	1,990	36	36	0	77	525
13	436	55	30	25	84	2,090
14	737	26	26	0	40	664
15	435	213	203	10	429	395
16	0	0	0	0	0	82
17	361	115	115	0	249	1,550
18	66	23	23	0	15	1,165
19	94	32	32	0	72	0
20	50	10	10	0	21	1,645
21	566	250	175	75	424	40
22	809	390	240	150	714	50
23	841	339	240	99	612	70
24	389	204	90	114	346	410
25	255	108	108	0	188	40
26	14	4	4	0	6	200
27	137	70	4	66	16	90
28	157	78	78	0	169	0
29	229	127	51	76	205	146
30	1,067	453	416	37	947	114
31	626	300	192	108	488	364
32	311	134	134	0	222	94
33	659	305	305	0	513	135
34	0	0	0	0	0	291
35	432	120	120	0	157	203

Uncontrolled Growth Scenario - 2020

36	1,655	646	646	0	1,567	124
37	1,829	696	696	0	1,637	5
38	459	196	176	20	371	660
39	251	124	124	0	201	178
40	29	6	6	0	9	110
41	282	166	16	150	88	4
42	16	9	9	0	13	0
43	105	38	38	0	60	46
44	403	194	145	49	318	52
45	2,141	985	902	83	1,677	98
46	603	300	274	26	505	137
47	426	187	187	0	304	38
48	471	237	219	18	389	391
49	657	286	286	0	580	33
50	680	288	288	0	622	33
51	894	326	326	0	762	0
52	985	335	226	109	683	105
53	106	40	40	0	94	101
54	141	60	35	25	108	0
55	1,372	651	626	25	1,392	0
56	61	36	4	32	36	253
57	56	24	24	0	46	16
58	210	102	62	40	166	0
59	0	0	0	0	0	0
60	21	12	12	0	15	26
61	505	180	163	17	311	1,547
62	553	226	226	0	398	0
63	401	164	77	87	254	0
64	581	279	270	9	506	38
65	125	89	35	54	147	293
66	0	0	0	0	0	396
67	121	71	1	70	36	50
68	255	99	0	99	24	300
69	3,885	95	54	41	121	1,346
70	1,519	579	489	90	728	26
71	547	233	208	25	304	15
72	1,192	513	464	49	704	170
73	1,606	731	713	18	1,221	327
74	667	305	298	7	564	60
75	4	1	1	0	2	2
76	16	11	11	0	20	97

Uncontrolled Growth Scenario - 2020

77	1,495	761	510	251	972	117
78	347	233	63	170	217	278
79	806	325	239	86	357	343
80	353	182	80	102	233	290
81	127	52	30	22	61	21
82	127	48	28	20	42	102
83	86	47	20	27	38	74
84	41	13	10	3	21	179
85	0	0	0	0	0	3
86	0	0	0	0	0	600
87	0	0	0	0	0	47
88	44	28	7	21	14	26
89	4	4	4	0	5	105
90	129	10	4	6	13	877
91	2	1	1	0	2	289
92	56	30	0	30	6	84
93	13	10	0	10	1	186
94	24	16	0	16	17	251
95	6	5	0	5	1	220
96	0	0	0	0	0	29
97	183	165	5	160	67	76
98	61	36	22	14	33	252
99	74	48	14	34	44	154
100	190	112	48	64	116	522
101	211	88	88	0	115	39
102	334	134	121	13	249	13
103	163	82	56	26	144	14
104	225	87	87	0	157	3
105	189	96	86	10	181	166
106	580	233	226	7	396	11
107	181	99	63	36	159	2
108	106	42	42	0	80	5
109	819	374	360	14	612	78
110	1,251	583	560	23	971	32
111	250	105	105	0	246	0
112	817	340	340	0	790	0
113	131	38	38	0	72	1,100
114	130	45	45	0	98	0
115	0	10	10	0	2	275
116	32	16	16	0	29	414
117	1,254	575	389	186	1,061	49

Uncontrolled Growth Scenario - 2020

118	633	273	260	13	470	46
119	1,127	519	506	13	858	279
120	191	87	87	0	123	216
121	21	5	0	5	0	70
122	0	0	0	0	0	14
123	117	69	49	20	69	158
124	544	243	237	6	341	160
125	749	328	328	0	673	25
126	1,482	430	430	0	1,007	0
127	508	180	180	0	422	45
128	586	215	215	0	503	0
129	1,000	376	356	20	827	0
130	34	8	8	0	19	475
131	0	0	0	0	66	653
132	1,339	533	483	50	985	0
133	29	53	26	27	89	128
134	872	408	376	32	684	74
135	710	307	297	10	447	209
136	164	86	66	20	128	125
137	441	212	204	8	286	346
138	11	4	4	0	5	390
139	0	12	12	0	3	642
140	1,796	890	840	50	1,770	205
141	1,459	694	694	0	1,183	95
142	334	157	157	0	254	121
143	278	121	121	0	224	34
144	528	229	229	0	351	76
145	798	384	364	20	692	37
146	8	5	5	0	8	4
147	1,187	454	454	0	1,064	0
148	1,151	432	407	25	990	163
149	28	13	13	0	28	1,360
150	5	2	2	0	5	1,050
151	28	10	10	0	23	731
152	24	10	10	0	20	514
153	132	53	53	0	126	211
154	37	22	22	0	47	1,575
155	5	2	2	0	4	485
156	22	13	13	0	26	300
157	68	40	40	0	70	0
158	234	105	55	50	177	222

Uncontrolled Growth Scenario - 2020

159	79	42	30	12	69	0
160	310	134	134	0	236	4
161	1,515	478	478	0	1,041	0
162	893	315	315	0	684	0
163	633	325	325	0	706	8
164	123	42	42	0	88	1,993
165	209	120	120	0	275	988
166	85	41	41	0	89	864
167	187	71	46	25	148	455
168	682	262	212	50	552	0
169	427	195	195	0	435	0
170	720	256	256	0	550	0
171	910	273	273	0	593	0
172	818	299	299	0	682	0
173	72	29	29	0	64	525
174	206	103	103	0	230	0
175	356	147	147	0	338	0
176	205	62	62	0	135	0
177	187	62	62	0	131	0
178	197	71	71	0	153	0
179	221	84	84	0	177	50
180	195	74	74	0	162	0
181	213	88	88	0	196	0
182	243	139	139	0	296	35
183	688	339	339	0	779	0
TOTAL	84,518	33,459	29,504	3,955	61,963	41,325

SOCIOECONOMIC FORECASTS
Concentrated Development Scenario - 2020

TAZ	TOTAL POP	TOTAL DUs	SINGLE FAMILY	MULTI FAMILY	AUTOS	TOTAL EMPLOYMENT
1	0	0	0	0	0	0
2	0	0	0	0	0	0
3	0	0	0	0	0	0
4	124	45	45	0	98	0
5	180	63	63	0	139	0
6	4	2	2	0	4	64
7	31	12	12	0	27	175
8	266	120	120	0	286	0
9	147	76	76	0	171	40
10	29	12	12	0	27	0
11	11	4	4	0	9	20
12	1,990	36	36	0	78	404
13	343	5	5	0	10	420
14	757	26	26	0	48	664
15	108	53	53	0	116	0
16	0	0	0	0	0	82
17	125	40	40	0	79	0
18	61	23	23	0	46	75
19	94	32	32	0	63	0
20	30	10	10	0	23	166
21	804	355	355	0	702	40
22	290	140	140	0	263	50
23	1,442	579	560	19	1145	90
24	1,306	674	360	314	1222	280
25	728	308	8	300	176	45
26	14	4	4	0	6	745
27	137	70	4	66	17	180
28	66	33	33	0	79	0
29	1,382	767	291	476	1319	850
30	1,634	694	515	179	1393	114
31	1,297	624	192	432	815	364
32	335	144	134	10	252	94
33	659	305	305	0	532	135
34	0	0	0	0	0	947
35	3,643	1,654	829	825	3012	413

Concentrated Development Scenario - 2020

36	246	96	96	0	227	52
37	383	146	146	0	350	0
38	577	246	246	0	514	40
39	555	274	124	150	415	178
40	130	27	27	0	48	110
41	282	166	16	150	102	49
42	24	14	14	0	23	0
43	160	58	58	0	97	46
44	403	194	145	49	321	52
45	2,141	985	902	83	1741	98
46	603	300	274	26	530	137
47	426	187	187	0	312	38
48	696	350	257	93	597	491
49	657	286	286	0	590	33
50	1,152	488	338	150	1016	3
51	140	51	51	0	119	0
52	76	26	26	0	60	76
53	106	40	40	0	94	40
54	82	35	35	0	73	0
55	54	26	26	0	57	0
56	32	19	19	0	40	40
57	688	294	294	0	555	16
58	802	409	118	291	494	540
59	458	344	0	344	85	0
60	876	506	92	414	359	866
61	905	414	247	167	626	1,885
62	958	392	242	150	670	440
63	783	389	77	312	385	563
64	1,124	540	340	200	919	399
65	125	89	35	54	103	303
66	0	0	0	0	0	434
67	121	71	1	70	18	447
68	255	99	0	99	24	562
69	3,986	143	102	41	212	1,651
70	1,519	579	489	90	753	26
71	547	233	208	25	312	15
72	1,192	513	464	49	726	170
73	1,606	731	713	18	1261	327
74	667	305	298	7	617	60
75	4	1	1	0	2	2
76	0	0	0	0	0	1,697

Concentrated Development Scenario - 2020

77	1,495	761	510	251	1030	117
78	347	233	63	170	229	278
79	940	380	219	161	546	343
80	353	182	80	102	239	290
81	127	52	30	22	65	21
82	127	48	28	20	43	102
83	86	47	20	27	39	74
84	1,000	320	10	310	510	179
85	0	208	0	208	51	400
86	0	0	0	0	0	830
87	0	0	0	0	0	52
88	44	28	7	21	22	36
89	4	4	4	0	7	115
90	129	10	4	6	13	877
91	2	1	1	0	2	289
92	56	30	0	30	7	84
93	13	10	0	10	2	186
94	24	16	0	16	17	251
95	6	5	0	5	1	226
96	0	0	0	0	0	135
97	222	200	0	200	84	76
98	143	84	18	66	86	652
99	102	66	12	54	51	154
100	230	135	48	87	154	522
101	211	88	88	0	120	39
102	334	134	121	13	262	13
103	163	82	56	26	148	24
104	225	87	87	0	166	3
105	425	216	66	150	439	176
106	580	233	226	7	411	11
107	181	99	63	36	167	22
108	106	42	42	0	82	5
109	819	374	360	14	629	78
110	1,251	583	560	23	1021	32
111	48	20	20	0	47	0
112	96	40	40	0	93	0
113	35	13	13	0	27	0
114	14	5	5	0	10	0
115	0	570	570	0	141	50
116	281	126	51	75	213	1,374
117	1,250	573	386	187	1012	121

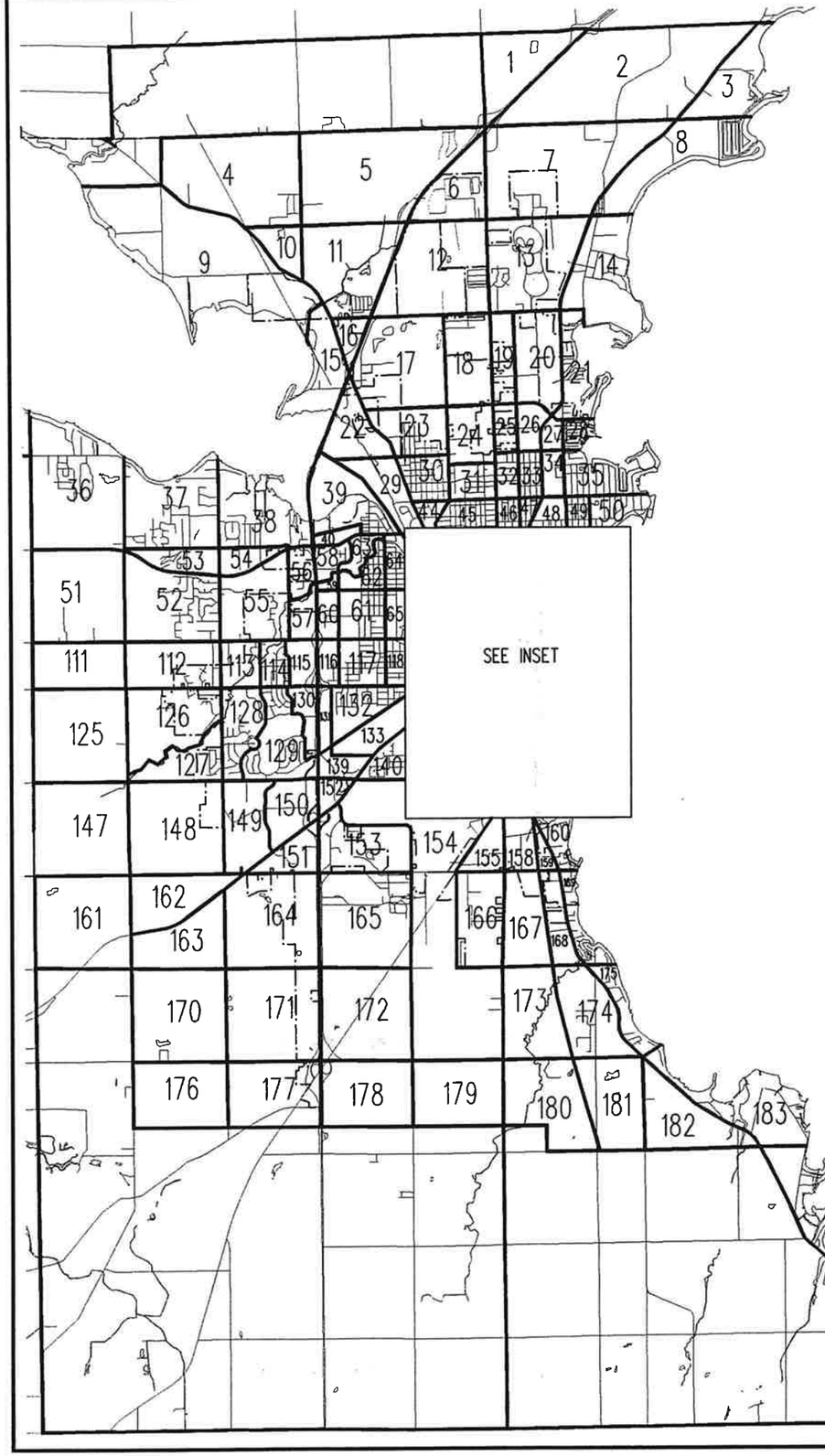
Concentrated Development Scenario - 2020

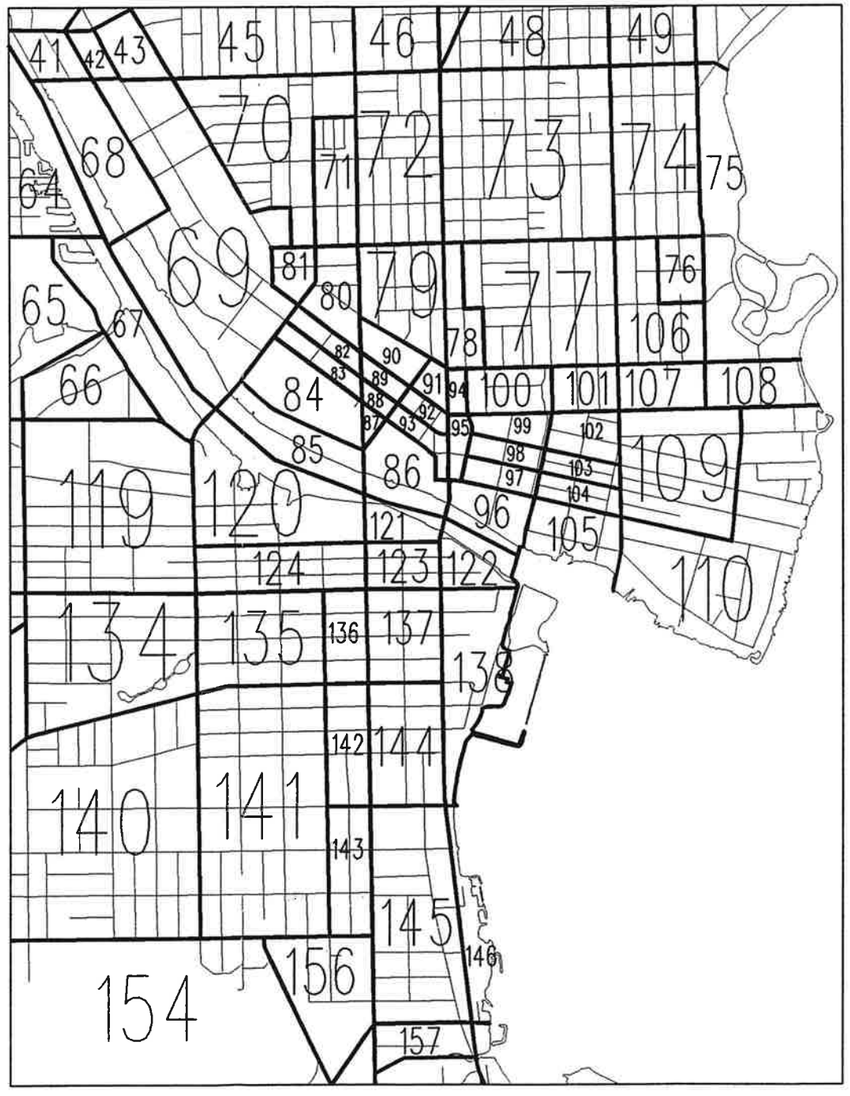
118	633	273	260	13	494	46
119	1,127	519	506	13	901	279
120	851	387	87	300	580	710
121	174	41	0	41	10	70
122	0	75	0	75	19	106
123	117	69	49	20	78	591
124	544	243	237	6	357	474
125	87	38	38	0	85	0
126	104	30	30	0	70	0
127	85	30	30	0	70	0
128	39	15	15	0	33	0
129	2,467	928	706	222	2040	69
130	1,400	687	687	0	1461	0
131	0	0	0	0	0	1,453
132	2,597	1,034	684	350	2056	733
133	47	53	26	27	89	817
134	872	408	376	32	701	74
135	710	307	297	10	472	209
136	164	86	66	20	133	125
137	441	212	204	8	301	346
138	11	4	4	0	7	390
139	0	96	12	84	92	1,601
140	3,007	1,490	1,040	450	2736	497
141	1,459	694	694	0	1216	95
142	334	157	157	0	261	121
143	278	121	121	0	224	34
144	528	229	229	0	370	76
145	798	384	364	20	718	37
146	8	5	5	0	10	4
147	62	24	24	0	54	0
148	84	32	32	0	70	0
149	28	13	13	0	31	0
150	5	2	2	0	5	255
151	28	10	10	0	21	0
152	24	10	10	0	20	1,229
153	82	33	33	0	77	80
154	37	22	22	0	39	892
155	5	2	2	0	4	1,895
156	22	13	13	0	26	300
157	238	140	140	0	283	0
158	535	240	15	225	395	1,033

Concentrated Development Scenario - 2020

159	79	42	30	12	74	0
160	310	134	134	0	260	4
161	137	43	43	0	90	0
162	41	15	15	0	28	0
163	49	25	25	0	55	0
164	123	42	42	0	73	0
165	87	50	50	0	115	0
166	85	41	41	0	90	0
167	121	46	46	0	109	25
168	1,021	392	392	0	881	75
169	1,143	521	370	152	1027	0
170	17	6	6	0	11	0
171	78	23	23	0	46	0
172	107	39	39	0	84	0
173	72	29	29	0	68	0
174	6	3	3	0	7	0
175	266	110	110	0	258	0
176	39	12	12	0	26	0
177	81	27	27	0	52	0
178	85	31	31	0	66	0
179	89	34	34	0	71	0
180	63	24	24	0	53	0
181	92	38	38	0	85	0
182	69	39	39	0	84	0
183	282	139	139	0	321	0
TOTAL	79,621	34,138	24,108	10,030	56,436	41,324

OSHKOSH AREA
TRAFFIC ANALYSIS ZONES
(TAZ)





This map is neither a legally recorded map nor a survey and is not intended to be used as one. This drawing is a compilation of records information and data used for reference purposes only. ECWRPC is not responsible for any inaccuracies herein contained.

NORTH

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SCALE IN MILES

Prepared By
EAST CENTRAL WISCONSIN
REGIONAL PLANNING COMMISSION – DECEMBER 1996

APPENDIX C

Bicycle Route Suitability Ratings

PROPOSED BIKE ROUTE SYSTEM
Present Suitability

Existing streets and roadways have been evaluated for their existing suitability to function effectively as bike routes. Each segment has been assigned a value ranging from "0" for unsuitable to "4" for good to excellent. A description of each value is provided below. The values are somewhat subjective and are based on the perceived comfort level (or perhaps more appropriately a stress index) for the Class A and high Class B bicyclist, one who would be expected to predominantly utilize the backbone collector and arterial street system on a regular basis. Although the value derived for each segment is subjective, it considers pavement width, traffic volumes and speeds, on-street parking, vehicular turn movements and other conflicts which contribute to the perceived safety of the bicyclist.

0 Unsuitable Segments

Segments generally exhibiting a combination of narrow pavement and/or traffic lanes, high traffic volumes and/or speeds, and inability of bicyclists to avoid imminent danger.

1 Very Low Comfort Level (Very High Stress) Segments

Segments generally exhibiting one or a combination of narrower than desirable pavement and/or traffic lanes, high traffic volumes, and multiple turn movements, contributing to a high level of potential use conflicts between bicyclists and motor vehicles. Generally very competitive conditions with individual bike movement dictated by the movement of motor vehicles.

2 Low Comfort Level (High Stress) Segments

Segments generally exhibiting one or a combination of narrower than desirable pavement and/or traffic lanes and relatively high traffic volumes, requiring a consistently high level of concentration and awareness on the part of the bicyclist. Generally competitive conditions with the bicycle considered part of the traffic stream.

3 Moderate Comfort Level (Moderate Stress) Segments

Segments generally exhibiting slightly narrower than desirable pavement and/or traffic lanes but relatively low traffic volumes and/or adequately wide shared lanes with on-street parking. Bicyclists generally perceive relatively safe biking conditions if they maintain a high level of concentration and awareness.

4 High Comfort Level (Low Stress) Segments

Segments exhibiting a combination of adequate design width, low traffic volumes and speeds, and function as minor neighborhood collectors and/or local streets.

6th Ave (Ohio-Main) (36' c/g)

2 2-lane with parking on both sides; although parking is random most of the time, this street presents competitive biking challenges when heavily parked due to lack of width; if parking is removed from one side of the street, it should be considered an option to 9th Ave between Ohio and Knapp and 5th Ave between Knapp and Westfield

9th Ave (Oregon-Oakwood Rd and beyond)

2 **Oregon-Knapp (46' c/g)**; 2-lane with parking both sides; less than desirable width and relatively heavy traffic; OK but competitive; 10th Ave a block south is a good alternative for a bike route; city also looking at feasibility of developing one-way pairs out of 8th Ave and 9th Ave for this segment

0 **Knapp-Sawyer (42' c/g)**; used as 4-lane but so narrow it is not striped; presently unsafe for bicycling due to lane widths and heavy traffic

0 **Sawyer-Westfield (42' c/g)**; used as 4-lane but so narrow it is not striped; presently unsafe for bicycling due to lane widths and heavy traffic

1 **Westfield-Koeller (64' c/g)**; includes turn lanes; heavy traffic congestion

1 **Koeller-Washburn (64' c/g)**; includes turn lanes; significant congestion and conflicts with motor vehicles for bicyclists in the Koeller/Hwy 41 ramps/Washburn area

3 **Washburn-Westhaven Dr (48' c/g)**; 4-lane; narrower than desirable but still suitable for present and projected traffic volumes

3 **Westhaven Dr-Oakwood Rd (48' c/g)**; 4-lane; narrower than desirable but still suitable for present and projected traffic volumes

2 **Oakwood Rd-points west (20')**; 2-lane rural section with 2' unpaved shoulders but graded wider; next improvement should include 24' pavement and 6' paved shoulders

20th Ave (Oregon-Oakwood Rd)

2 **Oregon-Koeller (48' c/g)**; 4-lane; narrower than desirable with heavy traffic volumes during periods of the day; competitive but acceptable

2 **Koeller-Oakwood Rd (48' c/g)**; 4-lane; narrower than desirable with higher speed makes for competitive cycling; lower traffic than segments to east; acceptable

24th Ave (Oregon-Main) (36')

2 2-lane with paved shoulder used for parking on north side; parking not allowed on south side; pavement condition is marginal

Algoma Blvd (Main to West Corp Limits)

3 **Main-Wisconsin (36' c/g); Wisconsin-Elmwood Ave (32' c/g); Elmwood Ave-New York Ave (30' c/g); New York Ave-Congress Ave (32' c/g)**; 2-lane one way; parking one side; old striped bike lane adjacent to campus; adequate

2 **Congress Ave-Packer (36' c/g)**; 2-lane two-way travel; no parking one side; wide lanes; minor arterial into city; competitive

1 **Packer-Snell**; paved shoulders; higher traffic speeds; very competitive; should bike/ped trail be constructed along the river, this segment would no longer need to be used by commuter bicyclists

Bauman (Josslyn-Taft Ave)

3 low volume local street; poor pavement condition currently reduces its use as a bike route

Bowen (Ceape Ave-CTH A)

3 **Ceape Ave-Sterling Ave (34' c/g)**; 2-lanes; alternating parking one side; wide travel lanes; adequate

3 **Sterling Ave-Murdock Ave (42' c/g)**; 2-lanes; parking both sides but little occurs; adequate

3 **Murdock Ave-CTH A (48' c/g)**; 4-lanes; no parking; narrower than desirable but still suitable for present and projected traffic volumes

Campbell Rd (Ohio-Taft Ave) (40' c/g)

4 Wide 2-lane with little to no parking; good

Ceape Ave (Main-Rosalia)

3 **Main-Bowen (40' c/g)**; one-way eastbound to Bowen; two travel lanes; parking on one side; adequate

4 **Bowen-Rosalia (40' c/g)**; local street with on-street parking; two travel lanes; adequate

Congress Ave (Elmwood Ave-Fox R)

3 **Elmwood Ave-Algoma Blvd (36' c/g)**; a little narrower than desirable but a relatively short segment

2 **Algoma Blvd-Fox R (52' c/g)**; bridge area is competitive

2 **Fox R-Sawyer (78' c/g)**; complex intersection with some inherent conflicts

CTH A (Bowen-Snell Rd/City of Neenah)

0 Presently 22' to Snell Rd and 24' further north; needs paved shoulders at time of upgrade; heavy bike commuter route

CTH E (Oakwood Rd-points west)

2 24' 2-lane high speed traffic; wide travel lanes and 10' wide unpaved shoulders; program for future paved shoulders as additional development occurs

CTH I (Ripple Ave (SCL)-CTH N)

2 22' 2-lane rural segment with 2' unpaved shoulders graded wider; high speed and volume traffic; consider paved shoulders with next upgrade

CTH K (Oakwood Rd-points west)

2 2-lane rural segment with 22' pavement and 2' unpaved shoulders graded wider; high speed traffic; program for future paved shoulders as additional development occurs

CTH N (CTH I-Hwy 26)

2 Wide 2-lane rural segment with wide unpaved shoulders; high speed traffic; consider paved shoulders with next upgrade

Elmwood Ave (Murdock Ave-Algoma Blvd)

4 **Murdock Ave-Congress Ave) (32' c/g)** Wide 2-lane with little to no on-street parking; good

3 **Congress Ave-New York Ave (36' c/g)**; 2-lane w/ parking on one side; adequate

2 **New York Ave-Algoma Blvd (28' c/g)**; 2-lane w/ parking one side only; narrow

Fernau Ave (Main-Snell Rd)

4 Main-Jackson (32' c/g); good

- Jackson-Snell (NOT BUILT YET)

Fillmore (Sawyer-Josslyn)

3 low volume local street; poor pavement condition currently reduces its use as a bike route

Fond du Lac Rd (Hwy 45)(24th Ave-Ripple Ave/NFdL)

2 **24th Ave-Waukau Ave (48' c/g)**; 4-lane; narrower than desirable competitive minor arterial entry into city from south

1 **Waukau Ave-Ripple Ave (30' w/10' unpaved shoulders)**; 2-lane; increased traffic speeds; paved shoulders would be a big improvement

0 **Ripple Ave-N Fond du Lac**; 2-lane high speed/high volume w/unpaved shoulders

Hazel (Murdock Ave-Washington Ave)

4 **Murdock Ave-Merritt Ave (42' c/g)**; wide two lane with little to no on-street parking; good

4 **Merritt Ave-Washington Ave (28' c/g)**; low volume residential; short segment

High Ave (Congress-Main)

3 **Congress-Wisconsin (36' c/g)**; 2 lanes one way; parking along right side; good width for bikes to share parking lane; old striped bike lane along left side adjacent to campus

3 **Wisconsin-Jackson (40' c/g)**; 2 lanes one way; parking along right side; good width for bikes to share parking lane

2 **Jackson-Division (40' c/g)**; 2 lanes one way; short term parking presently allowed on both sides reduces suitability for biking; short segment

1 **Division-Main (40' c/g)**; highly competitive urban biking but a relatively short segment

Irving Ave (Elmwood-Hazel)

2 **Elmwood-Wisconsin (32' c/g)**; parking one side only; short segment

3 **Wisconsin-Main (36' c/g)**; alternating parking one side; wide travel lanes; adequate

3 **Main-Hazel (40' c/g)**; parking both sides; primarily residential area with little on-street parking occurring; access to Mercy Medical Center; adequate

Jackson (Algoma Blvd-Fox R)

1 **Algoma Blvd-Marion Ave (48' c/g); Marion Ave-bridge (46' c/g)**; competitive urban bicycling

Josslyn (Fillmore Ave-Witzel Ave)

3 Local street which could provide a good alternative to Sawyer Ave; deteriorated pavement condition restricts desirability as bike route

Knapp (Witzel-20th Ave)

3 **Witzel Ave-Durfee Ave (34' c/g)**; short segment w/no parking

3 **Durfee Ave-4th Ave (40' c/g)**; 4th Ave-9th Ave (38' c/g) 2-lane with parking on one side; adequate

4 **9th Ave-20th Ave (40' c/g)**; wide 2-lane with little to no parking use; good

Koeller (Oshkosh Ave-STH 44)

0 **Oshkosh Ave-Taft Ave (30' w/unpaved shoulders)**; 2-lanes with poor pavement condition and unpaved shoulders; consideration should be given to developing a paralleling off-road bike/ped path at time of upgrade if adequate ROW is available

0 **Taft Ave-Witzel Ave (22' w/unpaved shoulders)**; 2-lanes with deteriorated pavement and unpaved shoulders; 80' ROW may allow off-road path, which should be considered when segment is upgraded

2 **Witzel Ave-9th Ave (48' c/g)**; 4-lane; narrower than desirable and heavy traffic; competitive

3 **9th Ave-Hwy 44 (52' c/g)**; 4-lane; built to design standards for shared road facility; heavy traffic; competitive

Leonard Pt Rd (Omro Rd-Lake Butte des Morts)

3 Relatively wide rural section with unpaved shoulders; probably adequate as a semi-rural bike route

Main St (6th Ave-Snell Rd)

1 **6th Ave-Fox R bridge (48' c/g)**; 4-lane; higly competitive urban bicycling

1 **Fox R-Ceape Ave (48' c/g)**; 4-lane; highly competitive urban bicycling

1 **Ceape Ave-Algoma Blvd (56' c/g)**; 4-lane; highly competitive urban bicycling

3 **Algoma Blvd-New York Ave (48' c/g)**; 2-lane; parking both sides through the business district; wide parking lane provides adequate space for bicyclists; competition for space near intersections

3 **New York Ave-Murdock (38' c/g)**; 2-lane; alternating parking one side

4 **Murdock Ave-Libbey Ave (44' c/g)**; wide 2-lane with little to no on-street parking; good

4 **Libbey Ave-Snell Rd (32' c/g)**; wide 2-lane with little to no on-street parking through industrial park; good

Menominee Dr (Murdock Ave-Hazel)

4 Wide 2-lane with little to no on-street parking; some segments have no parking; good; note a paved path in adjacent Menominee Park essentially parallels Menominee Dr and Hazel St

Murdock Ave (High Ave-Menominee Dr)

3 **Algoma Blvd-Jackson (48' c/g)**; 4 travel lanes; slightly narrower than desirable and relatively heavy traffic but still usable

3 **Jackson-Main (59' c/g)**; 4 travel lanes w/center turn lane; functional

0 **Main St-Evans (42' c/g)**; 4 travel lanes with narrow pavement; lack of width makes this segment presently undesirable as a bike route

4 **Evans-Menominee Dr (42' c/g)**; wide 2 lanes with little to no on-street parking; good

New York (High Ave-Menominee Dr)

4 **High Ave-Algoma Blvd (40' c/g)**; two lane; short segment; little traffic

3 **Algoma Blvd-Jackson (34' c/g)**; Jackson-Bowen (36' c/g); alternating parking one side; wide travel lanes

3 **Bowen-Menominee Dr (42' c/g)**; 2-lane; parking both sides but little occurs

Oakwood Rd (Lake Butte des Morts-Waukau Rd)

3 **Lake Butte des Morts-Omro Road**; narrow 2-lane local road with narrow unpaved shoulders; serves local traffic only; next upgrade should include wider shoulders and travel lanes

0 **Omro Rd-Wildwood Rd (24' w/ 1' unpaved shoulder); Wildwood Rd-Raddison Ave (24' w/ 2' unpaved shoulder); Raddison Ave-Village Ln (22' w/ 2 unpaved shoulder)**; narrow 2-lane road with narrow shoulders; presently unsafe for bicyclists and pedestrians

4 **Village Ln-Waukau Rd (48' w/cg)**; wide 2-lane with C/G and no to little on-street parking; very good at present and would still be good if striped for 4-lanes in the future

Ohio (Fox R-20th Ave)

2 **Fox R bridge-South Park Ave (40' c/g)**; 2-lanes with parking; generally adequate but more competitive north of 11th Ave as traffic volumes increase and on-street parking is more concentrated

2 **South Park Ave-20th Ave (36' c/g)**; 2-lanes w/random parking; adequate

Omro Rd (Washburn-Leonard Pt Rd) (24')

1 2-lane rural section with 6' unpaved shoulders; neighborhood collector serving elementary school; paved shoulders should be part of next pavement upgrade

Oregon (Fox R-Ripple Ave (SCL))

1 **Fox R bridge (42')**; 4 lanes; highly competitive

2 **Fox R bridge-24th Ave (44' c/g)**; 2-lanes with parking; generally adequate but more competitive north of South Park Ave as traffic volumes increase and on-street parking is more concentrated

2 **24th Ave-Ripple Ave (SCL) (48' c/g)**; 4-lane with C/G; relatively high traffic volumes; traffic speeds increase near south end of this segment

Oshkosh Ave (Sawyer Ave-Omro Rd)

1 **Sawyer Ave-Koeller St (44' c/g)**; 4-lane heavily travelled arterial with significantly narrow width to safely accommodate all but the most experienced bicyclists

1 **Koeller Rd-USH 41 (44' c/g)**; USH 41-Omro Rd (60' c/g); particularly difficult for bicyclists near Hwy 41 interchange area due to vehicle turn movements and traffic volumes

Otter St (Bowen St-Main St)

3 **Bowen-Court (38' c/g); Court-State (44' c/g); State-Main (40' c/g)**; one-way westbound to Main; two travel lanes; OK but competitive near Main St due to traffic turn movements

Pearl (Wisconsin-Main)

2 Wisconsin-Jackson (36' c/g); Jackson-Commerce (46' c/g); Commerce-Main (42' c/g); may provide a more bicycle friendly environment than the High Ave-Algoma Blvd one-way pair

Proberezny Rd (20th Ave-Hwy 26)(33' w/ 6' unpaved shoulders)

3 3-lanes with unpaved shoulders; generally low traffic

Ripple (RR tracks-FdL Rd)(20' w/ 2' unpaved shoulders)

4 Nice rural country lane with little traffic

Rosalia (Washington Ave-Ceape Ave)(40' c/g)

4 Local traffic with little on-street parking; good for bikes

Sawyer Ave (Oshkosh Ave-9th Ave)

1 **Oshkosh Ave-Rush Ave (50' c/g; blvd)**; 2-lane with center boulevard; parking allowed but little occurs; street is not presently well suited as a bike route because marked 4-lane segments exist on each end and this segment is often driven as a narrow 4-lane; pavement in poor condition

2 **Rush Ave-Witzel Ave (48' c/g)**; 4-lane pavement; fairly heavy traffic and narrower than desirable pavement makes segment competitive

3 **Witzel Ave-9th Ave (48' c/g)**; 4-lane pavement; narrower than desirable pavement but less traffic than segment to north adequate

Smith Ave (Vinland- Wisconsin)(48' c/g)

4 Wide local with controlled on-street parking; good for bikes; street passes front of Oshkosh North High School

Snell Road (CTH A-STH 110)

1 **CTH A-Main St (22' w/ 3' unpaved shoulders**; narrower rural highway with narrow unpaved shoulders; significant truck traffic

1 **Main St-USH 45 (22' w/ 0' unpaved shoulders (graded wider))**; wide pavement with wide unpaved shoulders; heavy truck traffic

2 **USH 45-Vinland (22' w/ 2' unpaved shoulders (graded wider))**; wide pavement with wide unpaved shoulders; heavy truck traffic

2 **Vinland-STH 110 (24' w/ 3' unpaved shoulders (graded wider))**; wide pavement with wide unpaved shoulders; heavy truck traffic; higher speed traffic; prison is major employer

South Park Ave (Koeller/Proberezny Rd-Oregon)

1 **Koeller/Proberezny Rd-20th Ave (66' c/g)**; generally 4-12' lanes; higher speeds make for competitive conditions

2 **20th Ave-Ohio (48' c/g)**; 4-lane with C/G; OK but higher speeds near west end of segment

0 **Ohio-Oregon (44' c/g)**; 2-lane eastbound, 1-lane westbound with parking;eastbound lanes uncomfortably narrow for most bicyclists

Taft (Campbell-Koeller)(48' c/g)

4 Wide 2-lane with little to no parking; good

Vinland (Murdock-Snell)

4 **Murdock-Smith (48' c/g)**; wide 2 lanes with little to no on-street parking; good

2 **Smith-Snell Rd (22' w/ 3' unpaved shoulders)**; 2 lane rural section with unpaved shoulders; fairly wide pavement but too narrow for striped bike lanes; direct route to prison from downtown

Washburn (STH 21-Waukau Rd)

1 **STH 21-Witzel Ave 22' w/ 6' unpaved shoulders)**; wide high speed 2-lane with wide unpaved shoulders and some C/G sections along west side of roadway; high traffic volumes

3 **Witzel Ave-9th Ave (52' c/g)**; wide 4-lane w C/G meeting design standards; adequate but competitive due to traffic volumes and speeds

3 **9th Ave-Dickerson (52' c/g)**; wide 4-lane w C/G meeting design standards; presently adequate

2 **Dickerson-20th Ave (24' w/ 10' unpaved shoulders)**; wide high speed 2-lane with wide unpaved shoulders; competitive

3 **20th Ave-STH 44 (52' c/g)**; wide 4-lane w C/G meeting design standards; adequate

2 **STH 44-Waukau Ave (48' c/g)**; 4-lane w C/G; slightly narrower than desirable; entrance to outlet mall

Washington Ave (Rosalia-Main)

3 **Rosalia-Jefferson (36' c/g)**; alternating parking one side but not much occurs; wide travel lanes

1 **Jefferson-Main (49' c/g)**; turn lanes; competitive urban bicycling; short segment

Waukau Ave (Oakwood Rd-Washburn)

2 **Oakwood Rd-short distance east of STH 44**; 4-lane with C/G

3 **East of STH 44-Washburn St**; narrow rural section with narrow shoulders; deteriorating pavement conditions; traffic volumes presently low

Westfield (Oshkosh Ave-Witzel Ave)

4 **Oshkosh Ave-Taft Ave (48' c/g)**; wide 2-lane with little to no parking; good

4 **Taft Ave-Witzel Ave (42' c/g)**; wide 2-lane with little to no parking; good; construction of a short missing segment would allow this route to be extended south to 9th Ave

Westhaven Dr (20th Ave-9th Ave)(40 c/g);

4 Wide 2-lane residential street with little to no parking; good; lack of a bridge over Sawyer Creek is the only obstacle that prevents this route from being extended northward to Witzel Ave

Wisconsin (Smith Ave-Fox R)

4 **Smith Ave-Murdock Ave**; wide 2-lane with little to no on-street parking; good

3 **Murdock Ave-Irving Ave**; alternating parking on one side but little to no on-street parking present; pavement widths typically 40' with some narrower (32') pavement segments at present time

3 **Irving Ave-Church Ave (32' c/g)**; short segment w/ no parking

2 **Church Ave-High Ave (44' c/g)**; 4-lane; competitive due to traffic volumes

2 **High Ave-Fox R bridge (46' c/g)**; 4-lane; competitive due to traffic volumes

Witzel Ave (Campbell Rd S-Oakwood Rd and beyond)

2 **Campbell Rd S-Washburn (48' c/g)**; 4 travel lanes; slightly narrower than desirable and heavy traffic volumes but still usable

2 **Washburn-Oakwood Rd and beyond (24' w/ 10' unpaved shoulders)**; 2-lane high speed traffic; wide travel lanes and wide unpaved shoulders

APPENDIX D

Summary of Proceedings - Plan Advisory Committee Meetings

APPENDIX D

Summary of Proceedings - Plan Advisory Committee Meetings

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Monday, October 21, 1996
East Central Offices
132 Main Street
Menasha, Wisconsin

Attendance: Lurton Blassingame, Dan Esslinger, Ray Grigar, Gary Hanson, Joe Hollister, Mark Huddleston, Susan Kepplinger, Tom King, Jackson Kinney, Jill McAllister, Kevin McGee, Bernie Miller, Ronald Miller, Jenny Nelson, Kelley O'Connor, Dennis Schwab, Ted Sehmer, Diania Tweed, Pete Van Airsdale, Jerry Wesolowski

Staff: Walt Raith, Ann Z. Schell, Ken Theine

The meeting was called to order at approximately 9:30 a.m..

1. **Introductions.** Mr. Theine welcomed the attendees and introductions were made.

2. **Description of Long-Range Land Use/Transportation Plan requirements.** Mr. Theine explained the that the plan under development is a requirement of the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and that the effort is occurring in concert with the sewer service area plan for the Oshkosh area. He recognized that the plan is late, due on October 1, but there is value in developing the two plans with consistent data. He also noted that the current goal of completion by the end of the year is very ambitious, but that it is most important to have a good project.

3. **Background and current status of Oshkosh Urbanized Area planning effort.** Ms. Schell informed the committee that there has been considerable work done on the long range land use and transportation plan. An interim plan required by FHWA was adopted in January of 1995, along with a document which outlined the goals, objectives, and policies. (Summaries of previous reports were mailed to the committee prior to the meeting.) The main focus of the current effort is to determine the deficiencies of the transportation system and make recommendations to deal with them.

Staff explained that there are three future growth scenarios are being developed to compare the effects of land use patterns on the transportation system. Time only allows for full analysis of the continued trend scenario, but further analysis on the other two will occur after plan adoption. One scenario will consider the pattern of growth between 1960 and 1970, before sewer service regulations were established lending some control to development patterns, and project to 2020 based on that less dense 1960-1970 trend. The other scenario will look at a denser form of development and less growth in the outskirts. All three scenarios will use the same population and employment projection

control totals for the urbanized area, with variation in the distribution within the area. Mr. Raith interjected that the plan would also include a financial element, as ISTEA requires that all plans be financially constrained, justifying projects' realistic chances of being funded and in what manner. Also, proposed capacity expansion projects require a Major Investment Study (MIS) which examines all possible means of addressing the capacity need.

4. Role of the transportation model in the planning process. Ms. Schell introduced Mr. Raith for the discussion on the role of the transportation model in the planning process. Mr. Raith explained that staff has been working with WisDOT for some time, developing and calibrating the TRANPLAN model for the Oshkosh urbanized area. The model is now operating and will be used to measure the effects of projected growth on the highway network. Projections of population, households, vehicles, and five categories of employment are used by the model to generate and attract vehicle trips which are loaded onto the functionally classified highway network. The model will show where the system fails and allows for alternative improvements, such as additional capacity or new highway segments, to be made to the network to test their effectiveness. The model also provides information concerning improvement costs and some information on vehicle emissions. Mr. Raith said that the model is a tool to assist in alternative testing.

5. Direction of process toward completion of the plan and role of this committee. Ms. Schell noted that each of the attendees was included in this process because of previous involvement in the long range planning process with particular interest in the Oshkosh area, and some because of interest expressed in Oshkosh area issues. The role of this committee is advisory, to review data and products presented by staff as well as to suggest improvement alternatives for testing.

6. Future committee meetings - schedule and location. Four additional meetings are anticipated for this committee. Meetings will be held at 9:30 a.m. at the Oshkosh City Hall in room 404. A tentative schedule for the future meetings was presented as follows:

Review of Forecasts	November 5
Model Runs & Deficiencies	November 19
Presentation of Alternatives	December 3
Recommendations	December 17

7. Other business. None.

The meeting was adjourned at approximately 10:30 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Tuesday, November 5, 1996
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Lurton Blassingame, Jerry Bougie, Ray Edelstein, Dan Esslinger, Mark Huddleston, Ken Jaworski, Susan Kepplinger, Jackson Kinney, Jerry Konrad, Jill McAllister, Kevin McGee, Kurt Miller, Jenny Nelson, Ted Sehmer, Diania Tweed, Jerry Wesolowski

Staff: Betty Nordeng, Walt Raith, Ann Z. Schell, Ken Theine

The meeting was called to order at approximately 9:30 a.m..

1. **Introductions.** Ms. Schell welcomed the attendees and introductions were made.

2. **Questions or concerns relating to October 21 meeting.** There were no questions or concerns expressed. Ms. Schell gave a very brief summary of the purpose of the October 21 meeting and noted that the summary of proceedings was included in the packets for this meeting.

3. **Presentation and discussion of forecasts.** Ms. Schell said that the main purpose of today's meeting was to present the socioeconomic forecasts which have been produced in concert with the sewer service area planning and which supply input to the transportation model, a transportation planning tool. She then introduced Ms. Nordeng to present the forecasts and describe the forecasting process. Ms. Nordeng distributed sets of graphs which show trends in population components including natural aging of the population and overall regional growth rate of the Oshkosh area in comparison to that of the East Central region and the entire state. She explained that the population and housing unit projections are based off of census figures from 1970, 1980, and 1990, and the DOA county projections. It is assumed that the county population will increase at a decreasing rate, with growth in housing lagging by approximately 20 years. As the model input variables include a separate consideration of single and multi-family housing, multi-family household projections were also trended, with the conclusion of using a moderated version of the historically trended numbers. Mr. Sehmer supported the declining fertility rate assumptions as the school district's estimates show a lower number of preschool age children than those in the same number years in the early grades. Ms. Kepplinger expressed a need to see the assumptions that went into the projections and questioned the projections concerning household generation.

Employment projections are also required by the transportation model. Population projections developed by staff show a fairly substantial decline in the projected rate of employment growth, reflecting the aging of the population. The projections actually show a decline in employment from 2015 to 2020. This decline was discussed at some

length. Discussion included the possibility of more commuters filling the available jobs in the Oshkosh area, a possible national employment shortage, or unforeseen policy changes in policy causing persons to work to an older age.

Ms. Nordeng then explained that the area-wide projections were broken down to the Traffic Analysis Zone (TAZ) level primarily using local plans. Items discussed included the extent of downtown redevelopment that is expected and the location of multi-family units. It was also noted that the residential development on the northwest side of Oshkosh (TAZ #9) would be expected to have significantly more units by 2020 than those shown for that TAZ.

Mr. Theine distributed the methodology used to determine vehicle projections for TAZs in the Oshkosh area. He described the correlation between the proportion of owner occupied dwelling units and their structural value to the number of vehicles owned by households in a given TAZ, with the figures based off of the existing relationship, 1990 tract data, of these variables. Ms. Kepplinger noted an anomaly in the area surrounding the university where structural values are low, but vehicle ownership is very high. Mr. Theine noted that some adjustment may be needed for these kind of anomaly situations and that this particular situation could be checked through data from the university.

Discussion continued on several details of the TAZ projections including the following issues: the future of the existing Mercy Medical site, the future school site in TAZ #9, the likelihood of residential growth in TAZ #12 which includes the prison, and projected employment decreased in TAZs 98 and 99.

It was agreed that East Central staff would write up the methodology and assumptions for the projections and that East Central staff and couple of the committee members would meet on Friday, November 8 to work on some details of the TAZ projections.

4. Application of forecasts. Ms. Schell explained that staff has done a preliminary model run using the projections that were distributed, and introduced Mr. Raith to give a summary of the preliminary run and to explain the glitches experienced thus far. Mr. Raith explained that the model had been calibrated to the 1994 ground counts. The socioeconomic forecasts were used to run the model with the existing network. This will ultimately show where deficiencies can be expected. He noted that the external trips are not yet included in the run and that even without, sections of Hwy 41, including the Lake Butte des Morts bridge are reaching capacity. The Wisconsin Avenue bridge is also showing some future capacity problems. Mr. Raith showed a number of examples of output from the model.

5. Expectations of the next meeting. It is anticipated that future traffic on the existing network run will be refined by the next meeting so that system deficiencies and can be discussed. The socioeconomic forecasts will be refined as input to that run. Ms. Schell noted that staff would be asking for proposed improvements for testing at the next meeting on November 19.

6. Other business. None.

The meeting was adjourned at approximately 11:00 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Tuesday, November 19, 1996
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Lurton Blassingame, John Casper, Dan Esslinger, Ray Grigar, Mark Hoines, Mark Huddleston, Susan Kepplinger, Jackson Kinney, Stan Kline, Jerry Konrad, Tony Lang, Jill McAllister, Kevin McGee, Kurt Miller, Jenny Nelson, Ted Sehmer, Diania Tweed, Gerald Wesolowski

Staff: Betty Nordeng, Walt Raith, Ann Z. Schell, Ken Theine

The meeting was called to order at approximately 9:35 a.m..

1. Introductions. Ms. Schell welcomed the attendees and introductions were made.

2. Questions or concerns relating to previous meetings. No concerns were expressed except for those contained under the next agenda item, pertaining to the forecast revisions.

3. Discussion of adjustments and corrections to forecasts. Forecast data set and TAZ maps, which were included in the mailings, were distributed to those who needed them. Ms. Schell explained that the green data set, mailed out recently, supersedes the blue one sent out with the agendas. Ms. Nordeng summarized the adjustments made to arrive at the latest version, mainly adjusting the prison population according to Department of Corrections projections, and correcting errors detected in review.

Ms. Kepplinger submitted a memo from the City of Oshkosh - Department of Community Development expressing some concerns and questions on the data. The items were addressed. The first item of concern was the number of vehicles projected in the University area. Staff indicated that rather than create exceptions in the vehicle forecasting methodology, it would be better to deal with the University as a special generator. Mr. McGee suggested a methodology to adjust the individual TAZ vehicle projections that fall outside the norm. Again, it was determined that since the number of vehicles was not the end in the process, but only one variable to determine trips, it is best to use the transportation model as it is traditionally intended to be used and to address anomalies as special generators. Ms. Kepplinger asked for a list of the special generators used in the model. Another concern noted on the City's memo was the reuse of the existing Mercy Hospital site. During discussion on the topic, it was noted that to increase the number of multi-family units in that TAZ, units would need to be taken from other TAZs, as the projections are disaggregated from a control total. Mr. Sehmer commented that perhaps too many multi-family units were projected in TAZ #164. A consensus was reached and it was agreed that 114 multi-family units would be moved from TAZ #164 to #76.

Additional items of concern in the City memo were discussed and clarified including the increase in population in TAZ #12, which houses the prison, without a corresponding change in employment. It was clarified that the increase in employment had been addressed already, while the population was inadvertently overlooked, and that they are now both correct. Staff agreed to check the vehicle projection calculations to determine if an error existed in the last iteration. Ms. Kepplinger asked to see a map which shows the various boundaries, City, TAZ area, and the urban area. Staff agreed to supply such a map. It was confirmed that vehicle projections were recalculated for all TAZs when the number of DUs was revised. Questions on the rationale not considering employment in the process of projecting vehicles were raised. Staff explained that vehicles are counted at the place of residence and would be double counted if employment was considered. Employment is a separate variable and acts as a portion of the attraction end of the auto trips.

4. Presentation and discussion of model run and network deficiencies. Mr. Raith gave a description of the various "levels of service" (LOS) and proceeded to show plots of the output from the base year model run and the future model run. The future run uses the forecasted socioeconomic data to generate traffic which is in turn loaded onto the existing network. This process shows where deficiencies could be expected in 2020. He explained that some deficiencies exist presently in the network, particularly the Wisconsin Street Bridge, currently operating at LOS F. While portions of Hwy 41 are currently operating at LOS C, the projected traffic pushes the Lake Butte des Morts bridge to LOS D, and a number of ramps on either side of the bridge to LOS F. Much of the frontage road system also show up as LOS D. Mr. Raith noted that the goal is to maintain LOS C.

5. Input from committee on projects for model testing. Ms. Schell said that the main purpose of this meeting is to gather suggestions from participants to address the deficiencies in alternative analysis. A number of suggestions were made. Ms. Kepplinger asked if peak parking restrictions were considered in the capacity calculations. It was agreed that they should be and that would be checked. Mr. Sehmer suggested that improvements to Witzel and increasing the speed limit would reduce traffic near the hwys 21/41 interchange. It was noted that Hwy 21 is a more appropriate route for that traffic than a county trunk highway. Ms. McAllister expressed an interest to model the extension of Clairville Road to connect with Leonard Point Road and STH 21. Mr. Kinney noted that the decline of the frontage roads along Hwy 41 from LOS C to LOS D, and the ramps to LOS F, and suggested that an improvement on the order of extending Menard to Osborne, Southland to Keller, Westfield through south of Witzel, or a new 5th St. between the bank and the Ramada could serve as a relief valve to the frontage roads and the existing intersections along the frontage road. Mr. Wesolowski asked what was driving the problem shown for the Butte des Morts bridge. Is it the 700 housing units added to the north, or increasing through traffic. Staff said they could make a determination on that matter. The issue of the timing of bridge openings in the downtown was also discussed. Mr. Theine noted that the issue is addressed annually, but the operational authority is left to the judgement of the bridge operator.

It was agreed that the Wisconsin Street bridge issue could be modeled both as a four lane facility and with the creation of a one way pair, 8th and 9th, west of Main.

Mr. Sehmer stated that Hwy 21 traffic was unnecessarily delayed becuase the signal loops

are too far back on the ramps at the hwys 21/41 interchange, leaving the green too long on the ramps. Mr. Theine noted that this is done to compensate for geometric problems. Mr. Sehmer feels that it is a philosophy issue that needs to be addressed by WisDOT.

Mr. Kinney recommended that Hwy 110 be entered into the future network as a 4-lane urban section from Hwy 41 to Murdock and a 4-lane expressway from Hwy 41, north to Hwy 116.

It was also noted that the hwys 41/26 ramps should be realigned to a diamond configuration in the future network.

6. Discussion of potential Major Investment Study (MIS) requirement.. Ms. Schell noted that the Intermodal Surface Transportation Efficiency Act (ISTEA) requires an MIS for all for all major capacity expansion projects on access controlled highways. The MIS is intended to provide a detailed analysis of all possible modal alternatives to highway construction. It would appear that the Butte des Mort bridge situation would require such a study. Ms. Schell noted that in the interest of time, we would be taking advantage of an option to include a placekeeper project in the plan, with the intention of doing the MIS at a later date.

7. Expectations of the next meeting. Ms. Schell said that staff has an enormous amount of work to accomplish prior to the next meeting, December 3. It is anticipated that even if the work schedule should slip, there would be plenty information for the meeting, and that it will be held. Staff hopes to have some alternative runs completed for committee review at that time.

8. Other business. None.

The meeting was adjourned at approximately 11:25 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Tuesday, December 3, 1996
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Lurton Blassingame, John Casper, Dan Esslinger, Mark Huddleston, Susan Kepplinger, Jackson Kinney, Ken Jaworski, Jill McAllister, Kevin McGee, Kurt Miller, Ronald Miller, Kelley O'Connor, Dennis Schwab, Ted Sehmer, Gerald Wesolowski

Staff: Betty Nordeng, Walt Raith, Fred Scharnke, Ann Z. Schell

The meeting was called to order at approximately 9:35 a.m.

1. **Introductions.** Ms. Schell welcomed the attendees and introductions were made.

2. **Questions or concerns relating to previous meetings.** Mr. Raith addressed a request that was made for a list of the special generators used in the model. He explained that a special generator is simply an area of special circumstance where traffic is generated outside of the defined rates. The university is an example. Instead of creating a list of such anomalies and adding or subtracting trips, WisDOT chose to alter the number of dwelling units and/or vehicles in the relevant zone to make the base year generations match the ground counts. Because this method was used, listing the special generators is not actually possible as was originally expected. Ms. Kepplinger requested that these anomalies be somehow documented in the report. That was agreed.

   Mr. Sehmer asked about the recent adjustment to dwelling units in TAZ #164, and the number of units that were left in the TAZ, as they relate to an area elementary school. It was explained that the number of multi-family units was reduced in this area because the number was viewed as being high and more units were needed in TAZ #76 for the redevelopment of an existing structure. What was needed to cover the need in TAZ #76 was taken from the TAZ #164 number. The existence of a control total for number of units requires this type of adjustment. It was not felt that this particular shift was inappropriate.

   Ms. Kepplinger asked if the map showing the City limits, the TAZ area boundary, and socio-economic projection area was available. Ms. Nordeng showed the committee the map which had been developed to meet that request. Several members asked for a smaller copy. Staff said they would try to produce it in a smaller format and include it in the next mailing.

3. **Presentation and discussion of alternative model runs.** Mr. Raith distributed a list of projects that are included on the networks to be presented. First, the "existing + committed network" includes all those projects which are programmed for construction: 4

lanes on Koeller, Witzel to STH 21; 4 lanes on Washburn, Witzel to STH 21; 4 lanes on Jackson (USH 45), Church to Murdock; Osborn extended west to Koeller; Fernau Avenue extended east to Main (USH 45); and USH 41 interchange improvements at STH 110, STH 21, STH 44, and STH 26. Second, the "planned network" includes some additional projects developed to address the cited deficiencies in the network, including: 4 lanes on Algoma (STH 110), Murdock to STH 116; 4 lanes on the Wisconsin Avenue bridge; Clairville Road extended to STH 21 and Leonard Point Road; Westfield Street extended south to 20th Street; and Westhaven Street extended north to STH 21.

Mr. Raith explained that the modelled projects generally improved the deficiencies to an acceptable level, with the exception of the Wisconsin Avenue bridge and the Butte des Morts bridge. Even with four lanes on the Wisconsin Avenue bridge, it is shown to function at LOS F., with improvement from a volume to capacity ratio of 1.69 to just over 1. The four-laning of STH 116 yielded a minor improvement of the Butte des Mort bridge.

Mr. Kurt Miller explained that a select link analysis isolates the activity on a particular link to show where trips on that link come from. The select link analysis on the Butte des Mort bridge shows that only 3,000 of the approximately 74,000 daily trips relate to TAZ #9, an area north of the bridge expected to experience significant residential growth. The vast majority of the trips are through trips on USH 41. Mr. Miller said that a select link analysis would also be done on Jackson Street to determine the origins of trips in that corridor.

Mr. Raith said additional analysis would be done and he entertained suggestions for other improvements to be modelled. No other suggestions were given.

4. Discussion of transit element of plan. Ms. Schell noted that much of the transit element of the long range plan was completed in the previous stages. The document addressing goals, objectives, and policies addressed transit. It is expected that the best way to address transit in the long term is with a policy approach. She stated that once the proposed land use plan is mapped, she would sit down with Mr. Huddleston to generally discuss the appropriate service needs, but that the bulk of the element would maintain the policy orientation.

5. Discussion of bicycle and pedestrian element of plan. Ms. Schell explained that the bicycle and pedestrian plan had been adopted in draft form in December of 1994 and was now undergoing retirement. She introduced Mr. Scharnke to discuss the effort. Mr. Scharnke stated that the goal of the bicycle and pedestrian planning effort is to establish a system that allows bicycle and pedestrian projects to compete for funding on equal footing with highway improvements. The plan is intended to have bicycle and pedestrian accommodations considered as a part of highway improvements. He noted that there is some accident data analysis included in the draft plan and that, interestingly, LaCrosse and Oshkosh show a higher motor vehicle-bicycle accident rate, perhaps due to higher usage by university students. In Oshkosh there is an estimated 500,000 bicycle trips per year, translating to approximately 1,000,000 miles traveled. He also said that the focus of the plan is bicycling and walking as modes of transportation, rather than recreation. He cited a map distributed by the Chamber which shows trails with primarily a recreational use. He reviewed the policies that were developed in earlier stages of the long range

planning effort, including the map from the bicycle/pedestrian plan. The routes shown in the plan generally follow the collector system. This was developed without specific attention to individual conditions on the system, but rather as a flag to consider accommodation at a time when roadway improvements within the corridor are being considered at the local level. Mr. Scharnke reminded the committee that a work trip bicycle commuter will be looking for a route which is the most direct, just as an auto commuter.

Mr. Scharnke asked for suggestions to included in the final drafting of the plan. Mr. Sehmer suggested two places where a pedestrian/bicycle overpass should be considered in relation to schools: over 9th Avenue, 1/2 mile east of USH 41, near Franklin Elementary School; and across STH 110 between the Grundy development and the new school in that area. He mentioned that there is also a problem on Jackson Street, north of Murdock, but was not suggesting that an overpass was needed. There was some discussion of the policy relationship between sidewalks and school busing requirements. Mr. McGee described the danger to bicyclists and pedestrians in crossing the bridges in downtown Oshkosh, specifically at the intersections of Oshkosh/Sawyer and Witzel/Ohio.

Mr. Scharnke said that one approach would be to include a need for action from municipalities more clearly in the recommendations of the plan. He stated that the plan does need fine tuning and that anyone with suggestions should call him soon. Mr. Blassingame asked if local bicycle groups could have input. Mr. Scharnke said that would be welcome and that they should call him. Some discussion occurred concerning the practicality of accommodating bicycles on the Butte des Morts bridge. Also it was noted that the map should show Witzel's need for bicycle accommodation another mile to the west.

6. **Expectations for next meeting.** Ms. Schell explained that the next meeting was intended to address recommendations and that it seems unlikely at this time that staff would be that far along. Staff will present work to date at the next meeting on December 17 and that another meeting would likely be necessary in January.

7. **Other business.** None

The meeting was adjourned at approximately 11:00 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Tuesday, December 17, 1996
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Michael Burayidi, John Casper, Mark Hoines, Mark Huddleston, Susan Kepplinger, Jerry Konrad, Tony Lang, Jill McAllister, Kevin McGee, Kurt Miller, Ronald Miller, Jenny Nelson, Ted Sehmer, Diana Tweed, Gerald Wesolowski

Staff: Betty Nordeng, Walt Raith, Ann Z. Schell

The meeting was called to order at approximately 9:35 a.m..

1. **Introductions.** Ms. Schell welcomed the attendees and introductions were made.

2. **Questions or concerns relating to previous meetings.** Ms. Schell distributed a map that was requested at a previous meeting depicting the minor civil division (MCD) boundaries, the Traffic Analysis Zone (TAZ) area, and the area used in the development of projections for the sewer service area plan. Discussion ensued regarding the location of the Metropolitan Area Boundary (MAB), which is the official required study area under the Intermodal Surface Transportation Efficiency Act (ISTEA) and the area to be used in the financial constraint analysis of the plan. Ms. Schell explained that the MAB represents the area anticipated to be urban in character 20 years from now. It was agreed that since the TAZ area is larger than the MAB, there should be no problem as long as the MAB is considered in the financial constraint of the plan's recommendations.

   Mr. Wesolowski asked if the bicycle route map, distributed at an earlier meeting, actually delineated the routes where bicycle facilities should be considered as improvement projects arise. He noted that if a specific route is not designated for a bicycle facility, a project in that right-of-way will not be considered by the State for the inclusion of bicycles in the design or state or federal funding. Ms. Schell noted that the map that was distributed was from the draft plan, completed two years ago, and that Mr. Scharnke is out this morning getting a more detailed look at the streets. Mr Raith added that there is a policy included in the plan that asks for consideration of bicycles and the feasibility of including bicycle and/or pedestrian facilities in every project. He stated that the map depicted spacing of bicycle facilities, and was intended to be corridor recommendations.

3. **Continued discussion of alternative model runs.** Mr. Kurt Miller described alternatives that were requested to be modeled at a previous meeting. First, an alternative that adds lanes to a section of Wisconsin Avenue from Church to Irving, Irving to Main, and Main to Murdock. The result of this rather extensive roadway improvement was a decrease in traffic on Jackson Street of about 10%, which happened to improve its level of service to "C" in the year 2020. The committee felt that the small reduction in traffic on Jackson would not justify a project of that magnitude.

Mr. Miller also presented the results of a model run which created a one-way pair of 8th and 9th Streets between Main and Rugby streets. While it was agreed that this would be difficult to sell to the residents, the improvement and the cost factors, partly due to the City's retention of the railroad right-of-way, warrants its continued consideration. In addition to the one-way testing, it was agreed that Ninth should also be modeled as a four-lane facility, with comparisons made between the alternatives.

Discussion continued concerning the need for financial constraint of the plan. Mr. Hoines explained that each proposed project in the plan needs to have a funding source cited, but deficiencies which require more study do not. Mr. Raith noted examples of projects that will require more study including the proposed Clairville Road extension and the 9th Street corridor. There was also discussion on the deficiency of the Wisconsin Street bridge and the availability of funds for bridge replacement on the basis of capacity. Mr. Wesolowski said he would check on the likelihood of such a project being funded in the out years.

4. Review of analysis and discussion of land use scenarios. Ms. Schell explained that two of the land use scenarios are purely conceptual, bare no resemblance to reality, and should not be viewed in terms of land use recommendations. She explained that the uncontrolled growth scenario was developed by quantifying the growth from 1960 and 1970 in terms of infill and contiguous urban development vs. non-contiguous, low density development (sprawl). It was determined that from 1960 to 1970, 66 percent of the dwelling units were developed in a sprawl fashion. To create the uncontrolled growth scenario, this trend was continued with the growth from 1970 to present and projected to 2020. The concentrated development scenario, in contrast, took all the population growth from 1960 to a projection for 2020, and contained it all in a higher density contiguous development and infill. These two scenarios were constructed purely for illustrative purposes, to make the point that there are difference which appear over time. If we were to look only at the growth from the present to 2020, distributed in different land use patterns, the amount of growth is too small to illustrate the difference. Another scenario depicts existing development with projected 2020 population distributed based on the results of the sewer service area planning effort.

Ms. Schell described the differences when the three scenarios were run in the transportation model on the same existing network. Relative to each other, there were no surprises in that the concentrated development was consistently more efficient, had lower vehicle miles traveled (VMT), fewer accidents, lower costs, etc. The uncontrolled growth was quite the opposite with higher maintenance and construction costs, higher VMT, emissions, and accident rates.

An analysis measuring the scenarios, relatively against the adopted goals, objectives and policies adopted as a part of this planning process in January of 1995 was also discussed. A matrix was distributed which displayed the efforts of East Central staff in rating each scenario against the adopted objectives and policies. Ms. Schell briefly summarized a similar situation where the compact development consistently indicated a more efficient land use pattern. Some objectives were not relatively rankable because of insufficient information available in the simple scenario definitions. Discussion ensued concerning the implications of dense development. It was made clear that "dense" was not in terms of a large urban area, but consistent with early Oshkosh development. Staff noted that

the deterioration of urban areas has more to do with the inefficient use of resources to serve sprawling areas and abandonment of older urban areas, than with the dense nature of the older development. Mr. Sehmer took issue with the ranking of the scenarios. It was reiterated that the scenarios were only intended to illustrate a difference in the development implications of policy over time, and that they did not imply recommendations beyond the already adopted policies.

5. Discussion of financial element. Mr. Raith distributed spreadsheets that showed historic (1988-1994) expenditures by municipality for highway maintenance and construction, as well as data on road and lane miles and statistics on expenditures per mile and per capita. He also distributed a table showing projected revenue in applicable programs in the Metropolitan Planning Area to the year 2020. Discussion pertained to the requirements of ISTEA and balancing revenues and costs. ISTEA requires that the financial elelment only reflect those projects within the MAB and that any revenue or expenditure outside the boundary not be included in the total. Some discussion followed regarding the methodology to separate the metropolitan planning area from the full study area analysis. There is a need to consider local expenditures within the MAB, rather than for an entire town.

6. Schedule next meeting. Ms. Schell explained the intention to send out a draft report to committee members, WisDOT, and FHWA sometime in the first full week of January, allow a week for review and meet with the committee sometime late in the week of January 13th. Shortly thereafter, a public informational meeting will be held. A public hearing will be held immediately prior to the quarterly meeting or the East Central Wisconsin Regional Planning Commission on January 31. Any comment received in the comment period will be relayed to the Commission for consideration in their approval of the plan at that time.

7. Other business. None.

The meeting was adjourned at approximately 11:40 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
9:30 a.m.
Friday, January 17, 1997
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Lurton Blassingame, John Casper, Dan Esslinger, Mark Hoines, Susan Kepplinger, Jackson Kinney, Tony Lang, Jill McAllister, Kevin McGee, Kurt Miller, Jenny Nelson, Kelley O'Connor, Diana Tweed, Gerald Wesolowski

Staff: Betty Nordeng, Walt Raith, Ann Z. Schell

The meeting was called to order at approximately 9:35 a.m..

1. **Introductions.** Ms. Schell welcomed the attendees and introductions were made.

2. **Questions or concerns relating to previous meetings.** Mr. Kurt Miller presented some results of a modeling effort which increased the capacity of Ninth Avenue to a four lane facility. The projections showed an increase in traffic on Ninth over those as a two lane facility, however it's level of service (LOS) did improve from LOS D to LOS C with four lanes. With four lanes on Ninth, parallel arterials experience a reduction in projected volumes. Traffic is reduced slightly on the Wisconsin Street bridge, and increased on the other two downtown bridges. This new data fits in with the recommendation in the draft plan which calls for more study in the corridor.

3. **Review of draft document.** Discussion began with committee members noting discrepancies between the Executive summary and the recommendations section of the report. Staff agreed that the Executive Summary needed to more closely and thoroughly reflect all of the recommendations in the later section. It was also noted that deficiencies did not relate directly to the recommendations. A closer examination of Wisconsin Street and Irving Street prompted a need to check the source of the deficiency map, Exhibit 25. Staff will check that map. Ms. Tweed also expressed a desire to see the recommendations tied back to the goals and objectives presented earlier in the document. Staff agreed to include a matrix, or some other means, to display the goals and objectives met by each recommendation.

There was also discussion concerning the sixteen elements required to be addressed by ISTEA. Ms. Tweed stated that State guidance requires specific designation of each of the sixteen elements. It was agreed that they were all addressed, but that staff needed to do something to better delineate them within the document. A general update of the railroad section is also needed.

Ms. Tweed asked if all the projects were included in the financial element. Mr. Raith stated that all the major projects were included individually, and others such as ongoing resurfacing and maintenance are lumped together. Ms. Tweed noted that the bicycle projects were not

included. Ms. Schell asked if a factor could be applied to the highway projects in general to account for the added expense of bicycle facilities. She said that would be adequate.

Mr. McGee expressed a need to include reference to the intention of WisDOT to continue to monitor traffic volumes on Jackson Street each year. He feels that there is not trend established to justify the projected volumes. Staff agreed to add such language.

The $17 million dollar difference between revenues and expenses shown in the financial section was discussed. It was agreed that this difference should be either explained as an insignificant amount considering the basis of the projections and the time frame involved, or used to project the funding of something else discussed, such as bicycle/pedestrian facilities.

A couple of alterations to the recommendations were suggested by the City planning staff. One alternative on the Wisconsin Street bridge should be included in the Wisconsin Street bridge discussion, that being the removal of the pedestrian facilities on one side to accommodate an additional vehicle lane. Also the bridge should show up as a need regardless of its likelihood of being funded. Also, in reference to the Main Street project, a rear lot parking study was recommended. It is more appropriate to refer to a parking study, rather than limit it to rear lots.

Ms. McAllister noted that the jurisdiction on two of the listed projects should include the Town of Algoma: Oakwood Road and Westhaven Drive.

Other miscellaneous comments included a request to include V/C ratios in the discussion of LOS; an apparent error at the bottom of page 111, stating a total revenue expectation of nearly $600 million that should appear as $400 million; a change of the termini of the Fernau project from Snell to Hwy 110; and a need to include the Metropolitan Planning Area Boundary on Exhibit 1. It was also called to staff's attention that there is a problem with the minutes included in Appendix D. The December 3 and December 17 minutes are actually minutes of the same meeting.

4. Upcoming meetings. Ms. Schell stated that this draft has been available for public comment and that a public information meeting would be held on Monday, January 20, from 4:00 to 6:00 p.m., and a public hearing is scheduled immediately prior to the quarterly meeting of the commission on Friday, January 31, at 1:00 p.m.. The Commission would be considering the plan for approval that day.

The meeting was adjourned at approximately 11:40 a.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
4:00 to 6:00 p.m.
Monday, January 20, 1997
Oshkosh City Hall, Room 404
Oshkosh, Wisconsin

Attendance: Don Arne (Winnebago County Board), Eugene Tronell (Winnebago County Board), James Michelson (Oshkosh Area Friends of Recreational Trails)

Staff: Betty Nordeng, Walt Raith, Fred Scharnke, Ann Z. Schell

The meeting was opened at approximately 4:00 p.m.

Because of the small group, the meeting was conducted in an informal discussion manner. Staff gave a summary of the process used in the development of the **Long Range Transportation/Land Use Plan for the Oshkosh Urban Area**, and reviewed the results of the various analyses. Mr. Raith reviewed the modelling process and highway project recommendations. Mr. Scharnke described the existing conditions in terms of bicycle suitability and stated that a primary recommendation is to achieve consideration of bicycles and pedestrians in all phases of highway project planning. He noted that retrofitting would be unlikely, but rather facilities would likely be added when a highway reconstruction project is undertaken.

There was general discussion with no specific concerns or problems with the plan or its recommendations expressed by the attendees.

The discussion concluded at approximately 5:00 p.m.. Staff remained in attendance until 6:00 p.m.

SUMMARY OF PROCEEDINGS

Oshkosh Area Long-Range Transportation
Plan Advisory Committee
1:00 p.m.
Friday, January 31, 1997
County Board Room
Winnebago County Courthouse
Oshkosh, Wisconsin

Staff Present: Betty Nordeng, Walt Raith, Ann Z. Schell

The public hearing was opened by Ms. Schell at 1:00 p.m.

With no comments received on the plan, the public hearing was closed by Ms. Schell at approximately 1:25 p.m.

APPENDIX E

Resolution of Adoption

RESOLUTION NO. 4-97

ADOPTION OF THE LONG-RANGE TRANSPORTATION/LAND USE PLAN FOR THE OSHKOSH URBAN AREA

WHEREAS, the East Central Wisconsin Regional Planning Commission, as the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, is responsible for carrying out cooperative, comprehensive and continuing urban transportation for this area; and

WHEREAS, in accordance with the federal Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), the MPO must update and adopt long-range transportation plans which conform to ISTEA's metropolitan planning requirements by December 18, 1994; and

WHEREAS, in recognition of the reemphasis given to the land use relationship and to multimodality by ISTEA, it was administratively realized that the allotted time frame was inadequate to complete the full long-range plan update within the guidance of the ISTEA regulations and WisDOT's Translinks 21 guidance for the coordinated State/Metropolitan Planning Organization planning process; and

WHEREAS, WisDOT issued its guidance for the preparation of interim and long-range transportation plan updates consistent with U.S. Department of Transportation, Federal Highway Administration and Federal Transit Administration Code of Federal Regulations, Section 540.316, 49CFR, Part 613, Metropolitan Planning rule, effective November 29, 1993; and

WHEREAS, the Commission adopted the Long-Range Transportation/Land Use Plan for the Fox Cities, Oshkosh and Fond du Lac Urban Areas: Interim Status Report in December of 1994; and

WHEREAS, the Federal Highway Administration and the Federal Transit Administration issued a deadline of the end of 1996 for the final long range plan document; and

WHEREAS, this document, in combination with other referenced documents prepared as components of the long-range transportation/land use plan, including Issues Identification; Goals, Objectives and Policies; and the Bicycle and Pedestrian Plan, and Interim Status Report, meets the requirements set out in ISTEA regulations; NOW THEREFORE

BE IT RESOLVED BY THE EAST CENTRAL WISCONSIN REGIONAL PLANNING COMMISSION:

Section 1: That the Commission adopt the Long-Range Transportation/Land Use Plan for the Oshkosh Urban Area.

Section 2: That this report be forwarded to the Wisconsin Department of Transportation and the Federal Highway Administration.

Effective Date: January 31, 1997
Submitted By: Transportation Committee
Prepared By: Ann Z. Schell, Assistant Director

Norman Weiss, Chair

APPENDIX F

Documentation of Public Involvement Notices

STATE OF WISCONSIN, }ss.
Winnebago County

Anton J. Rutzen Jr. being duly sworn on oath, says that he is the Operations Manager of The OSHKOSH NORTHWESTERN, the official City paper, a daily newspaper published in the City of Oshkosh, in said County; and that the annexed printed notice taken from said paper, has been published in such paper on the following dates

January 13, 1997

NOTICE OF PUBLIC INFORMATIONAL MEETING

A PUBLIC INFORMATIONAL MEETING WILL BE HELD TO DISCUSS THE DRAFT LONG-RANGE TRANSPORTATION/LAND USE PLAN FOR THE OSHKOSH AREA. The East Central Wisconsin Regional Planning Commission, as the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, has drafted the plan in accordance with the Intermodal Surface Transportation Efficiency Act (ISTEA). The draft plan applies recently adopted land use and transportation policies to three land use scenarios, reestablishes a transportation model as a tool in traffic analysis, makes recommendations to assist in future land use and transportation decisions, and presents a financial capacity review. The public informational meeting will include a presentation and question and answer period. The meeting is scheduled for:

4:00-6:00 p.m.
Monday, January 20, 1997
Room 404
Oshkosh City Hall
215 Church Avenue
Oshkosh, Wisconsin

Copies of the draft report will be available for review after January 15, 1997 in the following locations: Oshkosh Public Library - main and south branch, the Oshkosh Community Development Office, and Algoma Town Hall.

Published Jan. 13, 1997

Anton J. Rutzen Jr.

Subscribed and sworn to before me this Fourteenth day of January A.D., 19 97

David J. Grey
No. _____ Notary Public, Wisconsin

OSHKOSH NORTHWESTERN COMPANY

Printer's Fee, $ 40.59

MY COMMISSION EXPIRES JANUARY 10, 2000

STATE OF WISCONSIN,
Winnebago County } SS.

Anton J. Peitzer, Jr. being duly sworn on oath, says that he is the Operations Manager of The OSHKOSH NORTHWESTERN, the official City paper, a daily newspaper published in the City of Oshkosh, in said County; and that the annexed printed notice taken from said paper, has been published in such paper on the following dates

January 13, 26, 1997

NOTICE OF PUBLIC HEARING

A PUBLIC HEARING WILL BE HELD TO ACCEPT COMMENT ON THE DRAFT LONG-RANGE TRANSPORTATION/LAND USE PLAN FOR THE OSHKOSH AREA. The East Central Wisconsin Regional Planning Commission, as the Metropolitan Planning Organization (MPO) for the Oshkosh Urbanized Area, has drafted the plan in accordance with the Intermodal Surface Transportation Efficiency Act (ISTEA). The draft plan applies recently adopted land use and transportation policies to three land use scenarios, reestablishes a transportation model as a tool in traffic analysis, makes recommendations to assist in future land use and transportation decisions, and presents a financial capacity review. The hearing will be held at the following time and location:

1:00 p.m.
Friday, January 31, 1997
County Board Room
Winnebago County Courthouse
415 Jackson Street
Oshkosh, Wisconsin

Copies of the draft report will be available for review after January 15, 1997 in the following locations: Oshkosh Public Library - main and south branch, the Oshkosh Community Development Office, and Algoma Town Hall. Written comment will be accepted until January 30, 1997 at ECWRPC, 132 Main Street, Menasha, Wisconsin 54956. FAX (414) 751-4771.

Published Jan. 13 & 26, 1997

Anton J. Peitzer Jr.

Subscribed and sworn to before me this Twenty-Eighth day of January A.D., 19 97

David J. Grey
Notary Public, Wisconsin

No. _____

OSHKOSH NORTHWESTERN COMPANY

Printer's Fee, $ 73.86

MY COMMISSION EXPIRES JANUARY 10, 2000